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WORLD INTELLECTUAL PROPERTY ORGANIZATION
GENEVA

SPECIAL UNION FOR THE INTERNATIONAL PATENT CLASSIFICATION (IPC UNION)

COMMITTEE OF EXPERTS

Forty-Second Session
Geneva, February 9 to 12, 2010

REPORT

adopted by the Committee of Experts

INTRODUCTION

1. The Committee of Experts of the IPC Union (hereinafter referred to as "the Committee") held its forty-second session in Geneva on February 9 to 12, 2010. The following members of the Committee were represented at the session: Australia, Austria, Brazil, Canada, China, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Germany, Ireland, Israel, Italy, Japan, Mexico, Netherlands, Norway, Portugal, Republic of Korea, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Turkey, United Kingdom, United States of America (32). Latvia and Ukraine were represented as observers. The Eurasian Patent Organization (EAPO) and the European Patent Office (EPO) were also represented. The list of participants appears as Annex I to this report.

2. The session was opened by Mr. Yo Takagi, Assistant Director General, WIPO, who welcomed the participants.

OFFICERS

3. The Committee unanimously elected Mr. Heiko Wongel (EPO) as Chair, and Mr. Anders Bruun (Sweden) and Mr. Félix Paquet (Canada) as Vice-Chairs.

4. Mr. Antonios Farassopoulos (WIPO) acted as Secretary of the session.

ADOPTION OF THE AGENDA

5. The Committee unanimously adopted the agenda, which appears as Annex II to this report.

DISCUSSIONS, CONCLUSIONS AND DECISIONS

6. As decided by the Governing Bodies of WIPO at their tenth series of meetings held from September 24 to October 2, 1979 (see document AB/X/32, paragraphs 51 and 52), the report of this session reflects only the conclusions of the Committee (decisions, recommendations, opinions, etc.) and does not, in particular, reflect the statements made by any participant, except where a reservation in relation to any specific conclusion of the Committee was expressed or repeated after the conclusion was reached.

REPORT ON THE TWENTY-NINTH SESSION OF THE ASSEMBLY OF THE IPC UNION

7. The Committee noted an oral report by the Secretariat on the twenty-ninth session of the Assembly of the IPC Union. The Assembly had been informed of the decision of the Committee at its forty-first session to simplify the structure of the IPC by integrating the two levels of the IPC into one structure as from January 1, 2011. The Assembly of the IPC Union had noted the relevant decisions of the Committee in the absence of any objections or comments.

REPORT ON THE FIRST AND THE SECOND SESSIONS OF THE WORKING GROUP ON CLASSIFICATION OF THE FIVE IP OFFICES

8. The Committee noted a short oral report by the EPO on behalf of the five IP offices: European Patent Office (EPO), Japan Patent Office (JPO), Korean Intellectual Property Office (KIPO), State Intellectual Property Office of the People's Republic of China (SIPO) and United States Patent and Trademark Office (USPTO) (hereinafter referred to as “Five IP Offices”). This report was a complement to a more detailed presentation given on the Common Hybrid Classification project (CHC) during the second IPC Workshop held immediately before the session of the Committee.

9. The Working Group on Classification of the Five IP Offices held its first two sessions in June and October 2009. During these sessions, agreement had been reached to launch four pilot projects and to start discussion on the procedure concerning pilot projects. Consensus had since been obtained on a fifth pilot project. The table of these projects is available on the e-forum on classification of the Five IP Offices (www.wipo.int/ip5ef).

AMENDMENTS TO THE IPC

10. Discussions were based on Annex 6 to project file CE 422 containing amendments to the IPC approved by the IPC Revision Working Group (hereinafter referred to as "the Revision Working Group"), in light of the comments submitted by Japan and the United States of America concerning projects A 018 and C 452 respectively (see Annexes 7 and 8 to project file CE 422).

11. The Committee adopted, with some modifications, the proposed amendments, which appear in the Technical Annexes to this report. It was decided that these amendments would be included in the next version of the IPC, with the simplified structure, which would enter into force on January 1, 2011.

12. It was noted that Rapporteur of project A 018 proposed some amendments to the English version already approved by the Working Group at its twenty-second session in response to the questions raised by the Working Group at that session. Having noted that these proposed amendments to the already approved English version of the scheme were a satisfactory response to the questions raised by the Working Group, the Committee agreed to adopt the amendments in both English and French.

13. The Committee noted a request submitted by Rapporteur of project C 452 (Nano-technology) to introduce the project into the next version of the IPC (IPC-2011.01). It was recognized that the Working Group, at its twenty-second session, had approved the English version of the project, but did not invite a French version for adoption by the Committee. It was expected that normally the Working Group would have considered a French version at its twenty-third session in May-June 2010.

14. Having noted the strong desire of entry into force of the new scheme in 2011, the Committee adopted the English version of the project, and, as a very exceptional case, invited the corresponding French version for electronic adoption by French-speaking offices by the end of March 2010, in order to allow the new scheme to be introduced into IPC-2011.01.

15. The Committee emphasized that this approach should only be applied to this very exceptional case, and should not be interpreted as an experimental case for future practice. The Committee was grateful to France for preparing the French version of the project with such a short notice.

16. It was noted that there would be no Revision Concordance List (RCL) for project C 452, since there would be no reclassification of existing symbols, but only addition of new symbols. Therefore, no Working Lists would be created based on which the normal reclassification activities would be carried out. In that respect, overlap among family members would exist if offices conduct classification in B82Y without Working Lists.

17. It was, therefore, agreed to create new project QC 014 with the EPO as Rapporteur to further investigate how to proceed with classification in this project, in order to avoid duplication of work. Offices were invited to indicate how they would classify in this area, e.g., by administrative allocation of symbols based on a concordance from an internal scheme or by doing keyword searching. The EPO was also invited to provide search strategies, e.g. the EPO "ECLA + ICO + CK" approach, for this project, in order to help offices to identify their documents that would need the addition of B82Y symbols. Offices unable to provide XML result lists were invited to provide lists of documents in other format (e.g. Word, Excel), and the International Bureau was requested to investigate the possibilities to create corresponding XML files to be submitted to the Master Classification Database (MCD).

18. The Committee finally decided that all adopted projects would be introduced in IPC-2011.01 before completion of reclassifications in several of these projects. Meanwhile, warnings in new areas where reclassification is incomplete would be included, with links to information on the patent collections not yet reclassified and to the schemes that should be used for searching those patent collections.

19. It was noted that due to technical reasons, Japan, would have difficulties in classifying the front file in the areas affected by revision projects A 014 and A 020 to A 022 during a certain period after January 2011-. It was agreed that during this period, Japan would provide front file classification data by using some concordance and would afterwards send corrections to the MCD when the IPC data would be corrected.

20. It was further agreed that new project CE 423 would be created on the e-forum, in order to collect reclassification status information from offices, such as a list of projects where reclassification was not yet completed, the internal target date for completion, etc.

REQUESTS FOR REVISION OF THE IPC

Project C 456 – Environmentally Sound Technologies (ESTs)

21. The Committee noted the conclusion of the twenty-second session of the Working Group that "the use of a scheme to index ESTs would result in the need to distinguish between 'good' and 'bad' technologies and that today's 'good' technologies could become tomorrow's 'bad' technologies" (see Annex 12 to project file C 456). The Committee therefore agreed on the creation of a complete list of entries in the Catchword Index (CI) under the term EST. The Working Group was invited to further elaborate the proposal submitted by Germany in Annex 6 of the project file and to finalize it at its twenty-third session in May-June 2010. The International Bureau was invited to publish also separately the approved CI list with references to EST places in the IPC, in a readily accessible manner, e.g., from the IPC homepage.

22. The Committee noted that the EPO was developing an indexing scheme for Climate Change Mitigation Technologies (CCMT), using a neutral methodology which identifies technologies without judgment on their effectiveness. This scheme is currently being developed and would be used in a similar way as the ECLA indexing scheme on Nano-technologies. The Committee invited the EPO to present this scheme, when completed, to the Working Group which would then make an evaluation to be further considered by the Committee.

Other Revision Requests

23. The Committee considered two revision requests submitted by China (see Annexes 27 and 28 to project file WG 020). The Delegation of China informed the Committee about the history and necessity of these two revision requests, in particular in view of the large file size of the PCT minimum documentation classified in group G06F 3/023 (around 16,000 patent documents), although the growth rate had recently decreased in this group. Opposition was expressed by some offices, in particular in view of the lack of resources for performing reclassification work. In view of the overall lack of support, these requests were not accepted.

24. Finally the request submitted by Sweden (see Annex 29 to project file WG 020) was approved and project C 457 was created therefor.

INTRODUCTION OF A NEW TYPE OF UNIVERSAL INDEXING/TAGGING SCHEME IN THE IPC

25. Discussions were based on project file CE 413. It was recalled that the Committee at its forty-first session had invited the Rapporteur to "review and amend all paragraphs of the *Guide* relative to multiple classification and indexing, aiming at simplification".

26. It was decided to amend paragraphs 93 and 94 of the *Guide to the IPC* in order to allow classification of chemical compounds, mixtures or compositions when only their use is the subject of inventions (see Annex III to this report). Paragraph 107 of the *Guide* was intended to cover different exceptional practices. The practice followed in B82Y was not entirely covered by this paragraph, necessitating a redrafting of the paragraph. It was decided instead to delete paragraph 107 from the *Guide* and to improve the notes in the relevant subclasses. In this respect, projects M 723 to M 725 were created for subclasses A01P, A61P and A61Q, respectively, with Mexico as Rapporteur, project M 726 for subclass C12S, with Sweden as Rapporteur, and projects M 727 for subclass B82Y, with the EPO as Rapporteur. The Rapporteurs were invited to review the existing notes and to investigate whether examples of classifications should be included, in particular, using the terms invention/additional information without changing the current classification practice. The Working Group was invited to start considering these reviews at its twenty-third session.

27. Finally, the International Bureau was invited to review the use of the term "subject of invention" in the *Guide* and to either clarify its use or to replace it as needed. This review should be considered at the next revision of the *Guide*.

MASTER CLASSIFICATION DATABASE AND RECLASSIFICATION STATUS REPORT

28. Discussions were based on Annexes 1 and 2 to project file QC 013 prepared by the EPO containing two reports on the MCD i.e., revision statistics and coverage statistics, respectively.

29. The Committee noted that 92% of the patent documents in the MCD published before 2006 had been attributed valid advanced level symbols and that this percentage has not changed since the report given in 2009. Furthermore, 98% of the patent documents in the MCD published in 2009 had received valid advanced level symbols.

30. The Committee was grateful to the EPO for preparing reports on the MCD and on reclassification status, and invited the EPO to regularly submit updated statistics in the same way to the e-forum under project QC 013.

31. The Committee decided to create new project QC 015, with the EPO as Rapporteur, to investigate the reasons why reclassification was not complete, e.g., within a particular revision period for a particular revision project. The EPO was invited to provide more detailed reclassification statistics with indication of countries and their responsibilities.

IMPLEMENTATION OF THE NEW SIMPLIFIED STRUCTURE AND PROCEDURE OF THE IPC

32. Discussions were based on Annex 35 to project file CE 404 containing a rapporteur report prepared by the International Bureau relating to implementation aspects of the new simplified structure and procedure of the IPC.

33. The Committee noted that WIPO Circular C. IPC 200 with a questionnaire had been sent to all offices applying the IPC for classification of their published documents. The purpose of the questionnaire was to survey industrial property offices about their intentions to apply either main groups only or the full simplified IPC after January 1, 2011. The Committee also noted the summary of replies to the questionnaire in said Annex 35 to the project file.

34. In that summary, six out of 43 offices which had submitted replies intended to use main groups of the IPC after January 1, 2011, and 32 offices intended to use the full IPC. Three offices would use both main groups only and the full IPC depending on technical fields, one office would use subclass symbols, and one office had not yet decided on this matter.

35. The Committee requested its members to submit replies to the questionnaire, if they had not yet done so, and invited the International Bureau to continue collecting replies in order to prepare an updated survey on the use of the simplified IPC. Annex 35 to project file CE 404 would be updated in a dynamic way upon receipt of new replies.

36. It was also noted that the majority of offices agreed that the previous versions of the core level, i.e. 2006, 2009 and 2010, would only be available in the archived PDF files after January 1, 2011.

37. In view of the replies to the questionnaire and to the positive feedback given by the users of the IPC and by patent information providers during the second session of the IPC Workshop, the Committee finally adopted the new simplified structure of the IPC and confirmed that the new structure would enter into force with the relevant publication of the IPC in January 2011.

38. The Committee recalled that, at its last session in February 2009, the Working Group had been requested to take measures to improve its efficiency. The Committee was pleased to note the evidence, which was indicated in said Annex 35 and was based on a statistical comparison analysis on the work completed by the Working Group in 2008 and 2009, that the Working Group was working in a more efficient manner, as expected by the Committee.

39. With respect to its request for enhancement of discussion on the e-forum, the Committee was informed that the International Bureau, during the year to come, would study the possibilities of improving the e-forum by integrating some new functions specified in said Annex 35 in order to allow more efficient discussions on the e-forum as well as during the Working Group sessions. The Committee appreciated the initiative by the International Bureau on the e-forum development and invited the International Bureau to inform the Committee on future progress.

40. In order to accelerate the revision work of IP5 projects, the Five IP Offices were requested to allow members of the IPC Union to have “guest” access to the IP5 e-forum. The EPO, on behalf of the Five IP Offices, indicated that this issue would be brought to the attention of the Five IP Offices in its coming session in March 2010, and that the Committee would be informed as soon as a decision was made.

AMENDMENTS TO BASIC IPC DOCUMENTS, TO IPC RELATED WIPO STANDARDS AND TO MASTER FILES

41. The Committee recalled that at its forty-first session in February 2009, it had requested the International Bureau and the Quality Control Task Force (QCTF) to review all basic IPC documents, WIPO Standards and Master Files and to propose the necessary amendments relating to the abolishment of its core and advanced levels to be adopted at its forty-second session.

42. Discussions were based on project file CE 421 containing amendments to the *Guide*, the Guidelines for Revision of the IPC, the IPC Revision Policy and Procedure, the Working Procedure of the IPC Revision Working Group, the Guidelines for Determining Subject Matter Appropriate for Obligatory and Non-obligatory Classification and the Guidelines for Determining Where to Classify Patent Documents Within the IPC, prepared by the International Bureau, and comments submitted by Canada, France, Japan, Mexico, Slovakia, Sweden and the United States of America.

43. The Committee adopted, with some amendments, the basic IPC documents, which appear in Annexes III to VII to this report.

44. The Committee also adopted the introduction of a French definition of the term “fluent”, prepared by Canada, into the Glossary of the *Guide*. It was agreed to create new maintenance project M 728, with Canada as Rapporteur, in order to standardize the use of the term “fluent” in the French version of the scheme.

45. It was indicated that, in the future, amendments to the *Guide* should be made whenever needed. Any proposal for revision of the *Guide* should be submitted to project CE 421 and then considered by the Committee.

46. Concerning the Master Files, discussions were based on Annexes 1 and 5 to project file QC 010 containing a proposal on the amendments to Master Files and Internet Publication and a summary of discussions of the QCTF prepared by the International Bureau.

47. The Committee adopted the said Annex 1, subject to amending the last two paragraphs of section 2.4.1: “has no ‘validity date to’ attribute” instead of “has ‘no validity date to’ attribute”.

48. It was confirmed that the “core predecessor” information in the validity file was merely for compatibility reasons, that it should not be used for any systematic roll-up of symbols in patent databases and that existing rolled up symbols would be removed from the MCD (see also paragraph 49 below).

49. With respect to the WIPO Standards, discussions were based on Annexes 5 and 6 to project file QC 011, containing consolidated proposals for amending WIPO Standards ST.8 and ST.10C, prepared by the International Bureau. The Committee agreed with the proposals by the International Bureau, subject to some amendments, in line with the adopted modifications of the *Guide* (see Annexes VIII and IX to this report).

50. It was indicated that changes in the presentation of version indicators on patent documents could be needed. However, the Committee noted that these changes would require modifications in many of the associated IT systems and were therefore not desirable at present.

MCD OPERATIONS AMENDMENTS

51. Discussions were based on Annex 4 to project file QC 012 containing a report proposed by the EPO regarding implementation of changes for IPC-2011.01 in the MCD and related products.

52. The Committee confirmed that the already rolled-up core level symbols should be removed from the MCD and adopted the proposed rules to be used for identifying those core level symbols that were created by the roll-up process. The Committee confirmed that, having applied the above rules, the option of rolling the symbols up to the corresponding main groups should be used for the remaining symbols that were not main group symbols. It was also agreed that, once the deletion activity was completed around September/October 2010, the “roll-up” process would no longer be performed on new documents.

53. With respect to the IPC revision process, it was noted that the Working Lists for the 2011.01 revision would be produced in mid-2010, using the existing programs and would contain rolled-up core level symbols. Starting from the end of 2010, storage of results for the 2011.01 version would take place using amended programs without roll-up.

54. It was noted that the distribution of reclassification work should be based on an algorithm that would take into account the specific requirements of each revision project. The QCTF had been asked to work out the details in order to define a set of parameters which could be varied when determining the distribution of Working Lists between offices. New project QC 017 on the e-forum would be created for this purpose.

TREATMENT OF NON-RECLASSIFIED PATENT DOCUMENTS IN THE MASTER CLASSIFICATION DATABASE

55. Discussions were based on Annexes 8 and 9 to project file CE 381 containing a proposal prepared by Sweden relating to the concept of a default reclassification of non-reclassified patent documents, and a counter proposal, prepared by the United States of America, respectively.

56. With respect to the proposed concept of default transfer by Sweden, it was decided to create pilot projects to evaluate the results of this approach. For these pilot projects, it was agreed to select some completed revision projects which had not so many documents to be reclassified (e.g. project A006) and to invite the Rapporteur of project CE 381 to further evaluate the concept of default transfer using the remaining not yet reclassified documents of these projects.

57. It was recalled that the QCTF had proposed a new reclassification approach (see Annex 7 to project file QC 002). According to the proposal, the reclassification process would be divided into three stages, each stage having fixed duration. The duration of the stages would vary from project to project according to the amount of documents to be reclassified and would be determined by the Committee. An office should be able to reclassify families including a national document already in phase 1, if these families were not reclassified after the entry into force of the relevant scheme, even if these families did not belong to the Working Lists of that office.

58. The Committee agreed with the new reclassification approach proposed by the QCTF. It was also agreed that an early physical meeting of the QCTF would be necessary to settle the details in view of the development of the web reclassification service by the International Bureau. The Committee noted, with appreciation, the proposal by the EPO to host such a meeting in mid-April 2010.

59. It was indicated that the information whether a patent document had been cited could be used for prioritizing the reclassification work. It was also indicated that the publication date (i.e. age of patent documents) could also be used for this purpose. It was noted that offices which had other suggestions or constructive proposals were invited to submit their comments to the project QC 015 (see also paragraph 31 above).

IPC REVISION POLICY AND CONSISTENCY OF APPLICATION

60. Discussions were based on Annex 16 to project file CE 405 containing a rapporteur report and a proposal prepared by the EPO.

61. The Committee adopted, with some amendments, the proposed template for revision requests, which appears in Annex IV to this report.

62. With respect to the item “Consistency of Application of the IPC”, new project QC 016 was created. The International Bureau was requested to prepare a template for submission of examples of documents with problematic classification symbols.

63. The Delegation of the EPO informed the Committee that a new procedure for operational quality control of classification into ECLA was currently being tested in a small number of pilot fields and the report would be provided when the first results would be available. The EPO was invited to submit the report to the e-forum in project QC 016.

NEXT SESSION OF THE COMMITTEE

64. The Committee noted the following tentative dates for its next regular session:

Geneva, February 21 to 25, 2011.

65. This report was unanimously adopted by the Committee by electronic means on March 5, 2010.

[Annexes follow]

ANNEXE I/ANNEX I

LISTE DES PARTICIPANTS/ LIST OF PARTICIPANTS

I. ÉTATS MEMBRES/MEMBER STATES

(dans l'ordre alphabétique des noms français des États/ in the alphabetical order of the names in French of the States)

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III. ORGANISATIONS INTERGOUVERNEMENTALES/ INTERGOVERNMENTAL ORGANIZATIONS

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Victor I. SURIKOV, Principal Specialist, Automation Department, Moscow

IV. BUREAU/OFFICERS

Président/Chair:	Heiko WONGEL (OEB/EPO)
Vice-présidents/Vice-Chairs:	Anders BRUUN (Suède/Sweden) Félix PAQUET (Canada)
Secrétaire/Secretary:	Antonios FARASSOPOULOS (OMPI/WIPO)

V. BUREAU INTERNATIONAL DE L'ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE (OMPI)/INTERNATIONAL BUREAU OF THE WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)

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Koichi MATSUSHITA administrateur principal de la classification des brevets de la Section de la classification internationale des brevets (CIB)/Senior Patent Classification Officer, International Patent Classification (IPC) Section

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ANNEX II

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9.	Master Classification Database and reclassification status report See project QC 013.	28 – 31
10.	Implementation of the new simplified structure and procedure of the IPC See project CE 404.	32 – 40
11.	Amendments to basic IPC documents, to IPC related WIPO Standards and to Master Files See projects CE 421, QC 010 and QC 011.	41 – 50 (III, IV, V, VI, VII, VIII, IX
12.	MCD Operations Amendments See project QC 012.	51 – 54

[Annex III follows]

ANNEX III

INTERNATIONAL PATENT CLASSIFICATION

GUIDE (version 2011)

10bis. Following the reform of the IPC (see paragraphs 11 to 13, below), for the editions that were in force from January 1, 2006, to December 31, 2010, the Classification was divided into core and advanced levels. Each edition of the core level was indicated by the year of entry into force of that edition. IPC-2006 was in force from January 1, 2006, to December 31, 2008, and IPC-2009 entered into force on January 1, 2009. Each new version of the advanced level of the IPC was indicated by the year and the month of the entry into force of that version, for example, IPC-2008.01. From January 1, 2011, onwards, the division of the Classification into core and advanced levels was discontinued and each new version of the IPC is indicated by the year and the month of the entry into force of that version, for example, IPC-2011.01.

14. *However, in view of the complications to maintain two independent levels with different revision procedures and publication cycles, the IPC Union decided, in 2009, to discontinue the publication of separate levels of the IPC. In order to satisfy the needs of the users of the core level, it was decided that these users could classify the patent documents they publish using main groups (see paragraph 22, below) of the Classification.*

19. The Classification represents the whole body of knowledge which may be regarded as proper to the field of patents for invention, divided into eight sections. Sections are the highest level of hierarchy of the Classification.

(a) **Section Symbol** – Each section is designated by one of the capital letters A through H.

(b) **Section Title** – The section title is to be considered as a very broad indication of the contents of the section. The eight sections are entitled as follows:

A HUMAN NECESSITIES
B PERFORMING OPERATIONS; TRANSPORTING
C CHEMISTRY; METALLURGY
D TEXTILES; PAPER
E FIXED CONSTRUCTIONS
F MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING
G PHYSICS
H ELECTRICITY

(c) *[Deleted]*

(d) **Subsection** – Within sections, informative headings may form subsections, which are titles without classification symbols.

Example: Section A (HUMAN NECESSITIES) contains the following subsections:
AGRICULTURE
FOODSTUFFS; TOBACCO
PERSONAL OR DOMESTIC ARTICLES
HEALTH; AMUSEMENT

III. HIERARCHICAL STRUCTURE OF THE CLASSIFICATION

Principle of hierarchy; The option of classifying in main groups only

29. [*Deleted*]

The option of classifying in main groups only

30. Industrial property offices that do not have sufficient expertise for classifying to a detailed level have the option to classify in main groups only.

32. *[Deleted]*

Use and Interpretation of References

40. Some points of detail concerning the use and interpretation of references:

(a) A reference is usually placed at the end of the title to which it belongs. If the title consists of two or more parts, the reference is placed after the last part to which it relates. Exceptionally, a reference does not relate to all parts preceding it, but in such cases this is evident from the context.

Example: A47C CHAIRS (seats specially adapted for vehicles B60N 2/00); SOFAS; BEDS (upholstery in general B68G)

(b) A reference following the title of a subclass or group relates to all the hierarchically inferior places.

(c) *[Deleted]*

(d) *[Deleted]*

(e) Where a group is quoted, it is usually the most relevant group but not necessarily the only relevant group. In particular, groups hierarchically related to a group quoted should also be borne in mind.

(f) Where two or more items of subject matter are referred to the same place, they are separated by a comma, the classification symbols of that place being given only at the end of that reference.

Example: A01M 21/00 Apparatus for destruction of unwanted vegetation, e.g. weeds (biocides, plant growth regulators A01N 25/00)

(g) References relating to different items of subject matter referred to different places are separated by a semicolon and are to be read independently.

Example: A01K 1/00 Housing animals; Equipment therefor (building construction, features of buildings E04; ventilating buildings F24F)

An exception is where a substantial part of their wording is the same; in this case, the common wording is given once and the different symbols are separated by a comma.

Example: A01H 3/00 Processes for modifying phenotypes (4/00 takes precedence; influencing the growth of plants without producing new plants, non-chemically A01G 7/00, chemically A01N 25/00 to 65/00)

Chemical Compounds

93. When the subject of the invention concerns a chemical compound per se (organic, inorganic or macromolecular), it is classified in section C according to its chemical structure. When it also concerns a specific field of use, it is also classified in the place provided for that field of use, if such field of use constitutes an essential technical characteristic of the subject. However, when the chemical compound is known and the subject of the invention concerns only the application of the compound, it is classified in the place covering the field of use as invention information while the chemical structure may also be classified in the place for the chemical compound per se.

Chemical Mixtures or Compositions

94. When the subject of the invention concerns a chemical mixture or composition per se, it is classified in a place according to its chemical composition if such a place exists, for example, C03C (glass), C04B (cements, ceramics), C08L (compositions of organic macromolecular compounds), C22C (alloys). If such a place does not exist, it is classified according to its use or application. If the use or application also constitutes an essential technical characteristic of the subject of the invention, a mixture or composition is classified according to both its chemical

composition and its use or application. However, when the chemical mixture or composition is known and the subject of the invention concerns only its use, it is classified in the place covering the field of use as invention information while the mixture or composition may also be classified in the place for the chemical mixture or composition per se.

107 *[Deleted]*

HYBRID SYSTEMS; INDEXING SCHEMES

108. In specific areas of the Classification, hybrid systems have been introduced in order to improve the effectiveness of the Classification.

158. The version indicator of the IPC has to be placed in round brackets after the abbreviation "Int.Cl.", if the document is classified, at least partly, in main groups only. Most offices classify a given document in either the full IPC or main groups only (see Examples (a) and (b) in paragraph 161, below). When classifying in the full IPC, the version indicator of each IPC symbol (see paragraph 42(b), above), is placed in round brackets after the symbol. It should however be noted that all version indicators earlier than (2006.01) should be replaced by (2006.01).

159. When classifying in main groups only, IPC symbols are printed or displayed in regular font style (i.e., non-italics), and when classifying in the full IPC, IPC symbols are printed or displayed in italics.

161. Sample representations of IPC classification symbols and indicators are given below for the same document when classified in the full IPC, in main groups only or both in the full IPC and in main groups.

(a) When classified in the full IPC:

Int.Cl.
B28B 5/00 (2006.01)
H04H 20/12 (2008.01)
H01H 33/65 (2009.01)

Where:

B28B 5/00	indicates invention information (bold font style) classified in the full IPC (italics font style);
H04H 20/12	indicates invention information (bold font style) classified in the full IPC (italics font style);
H01H 33/65	indicates additional information (regular font style, i.e., non-bold) classified in the full IPC (italics font style).

(b) When classified in main groups only:

Int. Cl. (2011.01)
B28B 5/00
H04H 20/00
H01H 33/00

Where:

B28B 5/00	indicates invention information (bold font style) classified in main groups only (regular font style, i.e., non-italics);
H04H 20/00	indicates invention information (bold font style) classified in main groups only (regular font style, i.e., non-italics);
H01H 33/00	indicates additional information (regular font style, i.e., non-bold) classified in main groups only (regular font style, i.e., non-italics).

(c) When invention information is classified in the full IPC and additional information in main groups only:

Int. Cl. (2011.01)
B28B 5/00 (2006.01)
H04H 20/12 (2008.01)
H01H 33/00

Where:

B28B 5/00	indicates invention information (bold font style) classified in the full IPC (italics font style);
H04H 20/12	indicates invention information (bold font style) classified in the full IPC (italics font style);
H01H 33/00	indicates additional information (regular font style, i.e., non-bold) classified in main groups only (regular font style, i.e., non-italics).

174. If the chosen group includes a precedence reference to another group, for example, if the chosen group is in the form "7/16 ….. (7/12 takes precedence)", it may be necessary to search the group taking precedence as well as the chosen group, i.e., in the example the group 7/12 as well as 7/16, since documents including in addition to the subject of group 7/16 that of group 7/12 will be classified in the latter. If, on the other hand, the subject in question includes that of group 7/12 as well as that of group 7/16, it is not generally necessary to search group 7/16.

Example:	C08F	2/04	Polymerisation in solution (C08F 2/32 takes precedence)
	C08F	2/32	Polymerisation in water-in-oil emulsions

Polymerisation characterised by taking place in a particular solvent may be found in either of these places, and therefore it should be necessary to search in both these places; however, if the polymerisation in question cannot take place in a water-in-oil emulsion it should not be necessary to search C08F 2/32.

177. In the areas of the IPC, where multiple classification or indexing is applied, it is recommended to use for searching first a combination of classification symbols or classification symbols and indexing codes associated therewith so as to make a search query more specific. For obtaining complete search results, the search query could be broadened afterwards by using the most pertinent classification symbols alone.

185. Attention is drawn to the definitions of certain words and expressions which are set forth earlier in the Guide, for example, in paragraphs 53 to 65, above.

[Annex IV follows]

ANNEX IV

GUIDELINES FOR REVISION OF THE IPC

INTRODUCTION

1. A basic description of the IPC and its classification rules is given in the "Guide to the IPC". The purpose of the present document and its Appendices is to give complementary information for revising the IPC, particularly in regard of drafting classification schemes.

2. Details of the criteria for revision and of the working methods of different IPC bodies can be found in the following documents:

– "IPC Revision Policy and Procedure";

– "Working Procedure of the IPC Revision Working Group".

3. Detailed rules for classification can also be found in the following documents:

– "Guidelines for Determining Subject Matter Appropriate for Obligatory and Nonobligatory Classification (i.e., What to Classify Within Patent Document Disclosures Guidelines)";

– "Guidelines for Determining Where to Classify Patent Documents Within the IPC".

SECTION II – FEATURES OF THE IPC

Terminology

17. As far as possible the titles, notes and references of the schemes should give the information necessary for the correct interpretation of the scopes of their places. The Definitions are intended for giving a more detailed explanation of the scope, for example by giving illustrations or definitions of terms or by describing the relationship between related places. This additional information might increase the precision, particularly for novice users. Definitions should also be used for information that can be of use when searching places for related technical fields. Additional information about Definitions can be found in "Guidelines for Drafting Definitions".

23. If abbreviations are used that might not be familiar to IPC users the corresponding full text that they replace should be given together with the abbreviation at the hierarchically highest place where it appears in the scheme. Either the full text or its abbreviation could be in square brackets, depending on their readability or on the industrial practices in certain technical fields. Abbreviations that are used in the scheme should also be included, along with the full text that they replace, in the "Synonyms and Keywords" section of the Definitions.

28. Expressions within brackets should be avoided in schemes, except for references (which are placed within round brackets) and explanations or abbreviations [which are placed within square brackets].

Class and Subclass Indexes

59. Only main group symbols should be used in the indexes.

SECTION III – STRATEGIES AND SPECIFIC INSTRUCTIONS FOR REVISION

66. Deleted

Subdivision or Reorganization?

74. Normally, for each group proposed to be subdivided, either the file should contain at least an average of 200 patent documents of the PCT minimum documentation (with one document per patent family) or the rate of growth of the PCT minimum documentation should be at least 50 patent documents for the most recent year for which statistics are considered.

75. When proposing new groups, it should be expected that as an average 50 to 100 patent documents (with one document per patent family) from the PCT minimum documentation should be covered by each such new group.

Hybrid Systems

87. A hybrid system includes one or more classification groups and one or more indexing codes for specified aspects that are associated with these groups.

89. Deleted

Residual Places

110. Residual subgroups should be avoided. It is preferable to make use of hierarchy instead. As an example, a subdivision of this type:

1/08 . Movable tools
1/10 . . Rotating tools
1/12 . . Reciprocating tools

is preferable to this type:

1/08 . Rotating tools
1/10 . Reciprocating tools
1/12 . Other movable tools

[Appendices follow]

APPENDIX III

CHECK LIST FOR USE WHEN REVISING THE IPC

KINDS OF REVISION

Subclass Revision

8. Consideration should be given to the following questions:

(a) Whether the scope of the subclass is clearly defined; particular reference being given to:

- the subclass title;
- notes in different places in the subclass;
- references in different places in the subclass;
- the subclass Definitions, including the glossary therein;
- the class title with associated notes.

(b) Whether the subdivision into main groups enables efficient searches.

(c) Whether there is subject matter falling within the scope of the subclass which is not provided for or is not specifically referred out.

(d) The existence or necessity of residual groups, application-oriented groups or “details” groups.

(e) Whether each main group falls within the scope of the subclass.

(f) The possible overlap between main groups.

(g) The usefulness of subdividing the subclass scheme into distinct parts using guidance headings.

(h) Whether any corrections are needed in the Catchword Index.

APPENDIX V

REQUEST FOR REVISION OF THE IPC

Class(es) or subclass(es):

1. Description of the area to be revised:

2. The request will be evaluated according to the following criteria:

Reasons for revision			
a	Subdivision of IPC groups having an excessive file size	Av.- file size	
b	High rate of growth of the PCT minimum documentation	Growth rate / y	
c	Due to changes in technology the classification structure has become inefficient for searching. A gain in efficiency is expected with the proposed new scheme		
d	Clarification of wordings in order to improve consistency in classifying or to avoid overlap with other places of the IPC		
e	A high number of searches are executed in the technical field (i.e. a high number of patent applications or a high number of searches for other purposes)	patent appl.	other searches
f	New technology not specifically covered in the current IPC		
Factors influencing the cost and effort of the project			
g	Appropriate subdivisions already exist in a local classification scheme and can be easily brought into the IPC	Scheme(s)	No. of subgroups
h	Reclassification effort: No. of families to reclassify:	Mechanically, using existing data	Intellectually

Additional Remarks

Proposing Office:

Date: Signature:

[Annex V follows]

ANNEX V

IPC REVISION POLICY AND PROCEDURE

REVISION POLICY

1. The main goal of the revision of the IPC is to improve the IPC as an effective search tool for the retrieval of patent information contained in large international patent collections, and to improve its efficiency as a tool for investigating the state of the art in given fields of technology.

2. Other goals of the revision of the IPC is to improve the IPC as:

(a) an instrument for the orderly arrangement of patent documents in order to facilitate access to technological and legal information contained therein;

(b) a basis for selective dissemination of information to all users of patent information;

(c) a basis for the preparation of industrial property statistics which in turn would permit the assessment of technological development in various areas.

3. The data needed for serving the purposes referred to in paragraphs 1 and 2, above, are available from the Master Classification Database. This database contains the IPC data of patent documentation classified according to the latest edition of the IPC.

4. Revision of the IPC should be undertaken when needed in order to accommodate the IPC to the excessive file size and high rate of growth of the PCT minimum documentation classified in IPC groups, to accommodate new technologies, to change the classification structure in areas where it has become inefficient for searching or to increase the quality of the IPC by clarifying its text.

5. The possibility of meeting the search needs in a certain area of the IPC by another search technique, for example, specialized databases should be taken into consideration before commencing revision in that area.

6. Indexing schemes, associated with respective classification schemes, could be created, where desirable for efficient searching.

REVISION PROCEDURE

7. The revision procedure of the IPC is supported by the IPC management system, namely RIPCIS, which is used for introduction of amendments, preparation of proposals to be considered by IPC bodies, preparation of Technical Annexes of reports, on line consideration on the progress of revision and maintenance projects, and display of the “discussion”, “approved” and “adopted” views of the IPC.

8. IPC revision proposals could relate to one or more of the following categories:

(a) Subdivision of IPC groups having an excessive file size and a high rate of growth of the PCT minimum documentation;

(b) Change of the classification structure where it has become inefficient for searching;

(c) Clarification of wordings in order to improve consistency in classifying.
A revision of this type would not need any subsequent reclassification of patent documents.

9. For each group proposed to be subdivided, either the file should contain at least an average of 200 patent families of the PCT minimum documentation or the rate of growth of the PCT minimum documentation should be at least 50 patent families for the most recent year for which statistics are considered.

10. When proposing new groups, it should be expected that as an average 50-100 patent families from the PCT minimum documentation should be covered by each such new group.

11. The quantitative criteria indicated in paragraphs 9 and 10, above, should be applied in a flexible manner and the Committee of Experts (CE), when considering revision proposals, is authorized to depart from these criteria when this is justified by cost/benefit reasons.

12. Any revision proposal should be accompanied by a revision request explaining the reasons for the revision and indicating to which of the revision categories the proposal relates. The revision request should also contain the numerical data concerning the file size and rate of growth of the PCT minimum documentation for the Category-a proposals (see paragraph 8, above), citations of patent documents illustrating proposed new groups and information on the testing of the proposal. The revision request, including the revision proposal, should be submitted to the IPC electronic forum.

13. The preliminary testing of the proposed amendments to the IPC by an office-proponent should be a prerequisite for submitting a revision proposal. In respect of revision proposals which are concerned with the transfer of subject matter to new or existing classification places, the testing should include carrying out reclassification of at least 10% of the search file concerned.

14. If an office is not in a position to prepare a revision proposal but wishes to solve a classification problem in the IPC, it can submit only the revision request to the IPC electronic forum. Such a request should explain the reasons for its submission and indicate that the revision proposal cannot be elaborated by the office-proponent. The elaboration of the proposal will then be entrusted to an office-rapporteur if the revision request is accepted to the revision program.

15. The Common Hybrid Classification project was initiated by the Five IP Offices (EPO, JPO, KIPO, SIPO and USPTO) to eliminate unnecessary duplication of work, to improve international searching efficiency, to utilize the strengths of existing internal classification systems to enhance the IPC and to enhance patent examination efficiency and quality. The CE recognizes that the Common Hybrid Classification project will be the driving force behind the IPC revision in the years to come.

16. In view of the importance of the harmonization process of the internal classification systems of the Five IP Offices through the development of the IPC, any project resulting from the harmonization process of the internal classification systems of the Five IP Offices (including Trilateral Harmony projects) will be forwarded to the IB for automatic inclusion in the IPC revision program as having met the criteria set forth in paragraphs 9 through 13. The IB will immediately create an A (Trilateral) or F (Five IP Offices) project on the IPC electronic forum for consideration by the IPC Revision Working Group (WG). These projects will be treated with priority. Such projects will be considered during their IPC phase in order to check their compliance with IPC rules and to ensure the clarity and common international understanding of their content. Amendments to the submitted proposals that would require additional reclassification in respect to the original proposal should be considered only in exceptional cases, with good reasons and with the approval of the project originating office.

17. Additionally revision requests may be submitted by any other member or observer of the IPC Union. These requests should be evaluated by the CE to ensure that they comply with the revision policy and the revision criteria established by the CE and described in this document, determine the need for them and their priority. They should be submitted to the IPC e-forum at least three months before consideration for inclusion in the revision program by the CE. It should be noted that any new proposed scheme should take into account the local classification systems, in particular those of the Five IP Offices, in order to minimize the resources required for reclassification. Offices, in particular those having increased reclassification tasks, should comment on their ability to reclassify their documents for a proposed request prior to discussion at the CE.

18. Before accepting a revision request the availability of resources for reclassification of the PCT minimum documentation should be assured. If this is not the case and if, however, the project does satisfy the criteria, then the revision request will be put in abeyance until such resources become available.

19. Revision requests approved by the CE should be included in the IPC revision program. For each approved request, a project file should be created and an office-rapporteur should be appointed.

20. These projects are then forwarded to the IPC Revision Working Group (WG) for detailed consideration following a procedure described in document “Working Procedure of the IPC Revision Working Group”.

21. Once consideration of a project is completed by the WG, it is forwarded to the CE for final adoption. This adoption may take place either electronically or during an ordinary session of the CE, depending on the date of publication. This adoption will also be the last opportunity for checking the new scheme before publication. The CE should decide which amendments should be included in the following edition of the IPC.

22. Every effort will be made to reclassify the relevant PCT minimum documentation before the date of entry into force of a revised scheme. If such complete reclassification cannot be achieved, the CE may decide, in particular in case of active technologies, to publish the relevant scheme in order to allow front file classification. However, no new revision should be undertaken in that area before completion of the reclassification.

[Annex VI follows]

ANNEX VI

WORKING PROCEDURE OF THE IPC REVISION WORKING GROUP

1. The IPC Revision Working Group (WG) was created by the Committee of Experts (CE) and is working under its supervision.

2. The mandate of the WG is:

(a) Consideration of projects for revision and maintenance of the IPC (including the Catchword Index);

(b) Consideration of projects for creation or modification of definitions (D projects); and

(c) Other tasks given by the CE.

3. The following types of revision projects are considered by the WG:

(a) Projects resulting from the cooperation of the Five IP Offices (F projects);

(b) Trilateral Harmony projects resulting from the cooperation of the Trilateral Offices (A projects); and

(c) Projects forwarded by the CE (C projects).

4. All requests for revision of the IPC implying reclassification of patent documents should be submitted to the CE for approval.

5. The following types of maintenance projects (M projects) are considered by the WG:

(a) Correction of titles or hierarchal structure which do not necessitate reclassification of patent documents or involve only administrative movement of patent documents (no intellectual effort required); and

(b) Systematic corrections or introduction of new features in the IPC (e.g. removal of non-limiting references, introduction of residual main groups, etc.).

6. Changes to the IPC that result from maintenance should accurately reflect the patent documents currently classified in that area of the IPC and should not result in a change of scope of the places affected.

7. Projects for clarifying existing titles or creating definitions should, to the extent feasible while ensuring consistency of the terminology in the IPC, use the wording of titles or definitions within equivalent areas of ECLA, FI and USPC.

8. Requests for maintenance of type (a) above may be submitted directly to the WG. However, projects for systematic maintenance or introduction of new features should be submitted to the CE.

9. The following types of definition projects are considered by the WG:

(a) New or amended definitions needed because of adoption of a new revision project. These definitions should be considered in the framework of the corresponding revision project.

(b) Subclass or group definitions in those subclasses where definitions do not exist. Although the aim is ultimately to create definitions in all subclasses, priority should be given to those subclasses where problems are identified that could be resolved using definitions and to subclasses with high activity. Before introducing new definition projects, the availability of resources in all offices should be taken into account.

10. For each project considered by the WG (revision, maintenance or definition), a project file should be created on the IPC e-forum. The WG should appoint a Rapporteur and establish time frames for individual actions on the project (e.g. comments, Rapporteur reports). Between sessions of the WG, the IB or the Rapporteur of a particular project may establish additional time frames. Rapporteurs of F and A projects are appointed by the IB based on the requests of the Five IP Offices or Trilateral Offices, respectively.

11. The Rapporteurs are responsible for organizing discussions on projects through the IPC e-forum, making decisions as to when projects should be submitted for consideration by the WG, and preparing Rapporteur reports. The objective of Rapporteurs should be to accomplish as much work as possible by electronic communication, so that the project can basically be approved, in one of the authentic language versions, at a single session of the WG. In order to achieve efficient consideration by the WG, it is desirable that each Rapporteur prepare a Rapporteur Summary before the physical meeting of the WG.

12. Discussions on the IPC e-forum should try to settle most of the substantive and technical issues prior to a subsequent physical meeting of the WG. In particular when there are controversial issues on a project, two rounds of comments should be organized between sessions. During sessions some issues or parts of a project may be forwarded either to a subsidiary body or to a subgroup with limited participation. In case of technical questions raised during a session of the WG, Rapporteurs or other delegations should be able to consult the files of the relevant Five IP Offices or Trilateral Offices projects and also the technical experts in their respective offices. If such contacts are not feasible during the session, consideration should be given to solving an issue during the process of the report approval.

13. A volunteering office or the IB will prepare the first draft of the French version of a project when the project is at a rather advanced stage, e.g. once approximately 80 per cent of the proposal is approved, early enough after the session of the WG in order to allow time for comment by French-speaking Offices. The WG will discuss the French version whenever needed, in particular when deficiencies in the English version are discovered during the preparation of the French version. Should only the English version be complete at the end of the last WG session preceding the CE meeting, the French version might be directly forwarded to, and adopted by the CE, provided that the meeting dates are sufficiently far apart to leave time to prepare the French version with a view to adoption by the CE. In case of short and relatively simple projects, the French version might be prepared by a volunteering Office during a session of the WG.

14. Once a project is completed in English, the Rapporteur should prepare a proposal for a Revision Concordance List, if needed. Furthermore, the IB will check the impact of this project on cross references, on existing definitions and on the catchword index, and prepare proposals for necessary amendments, as required.

15. The CE should manage the overall workload of the WG to ensure an efficient revision process and quality of revision projects.

[Annex VII follows]

ANNEX VII

GUIDELINES FOR DETERMINING SUBJECT MATTER APPROPRIATE
FOR OBLIGATORY AND NON-OBLIGATORY CLASSIFICATION
(I.E., "WHAT" TO CLASSIFY WITHIN PATENT DOCUMENT DISCLOSURES)

--- classification is adequate.

~~GUIDELINES APPLY EQUALLY TO THE CORE AND THE ADVANCED LEVEL~~

~~All procedures for determining "invention information" and "obligatory classification" apply equally to both the core and the advanced level.~~

IDENTIFYING "INVENTION INFORMATION" TO BE CLASSIFIED

GUIDELINES FOR DETERMINING WHERE TO
CLASSIFY PATENT DOCUMENTS WITHIN THE IPC

--- of these constituents."

~~Supplementary and special rules are required to operate effectively in both the core and advanced level and utilize the "standard division policy between core and advanced level groups." This means at the very least, that the introduction of a special or supplementary rule in the advanced level or core levels should allow the documents that are classified in dependent subgroups of the advanced level to be rolled up to the same group that they would otherwise have been properly assigned to if only the core level were used in their initial classification.~~

SELECTING NON-OBLIGATORY, i.e., DISCRETIONARY CLASSIFICATIONS

[Annex VIII follows]

ANNEX VIII

HANDBOOK ON INDUSTRIAL PROPERTY INFORMATION AND DOCUMENTATION

STANDARD ST.8

STANDARD RECORDING OF INTERNATIONAL PATENT CLASSIFICATION (IPC)
SYMBOLS ON MACHINE-READABLE RECORDS

Editorial Note by the International Bureau

The Standards and Documentation Working Group (SDWG) of the Standing Committee on Information Technologies (SCIT) adopted this revision of Standard ST.8 at its x session on x. This revision of Standard ST.8 incorporates editorial amendments made necessary by certain modifications of the IPC structure as adopted by the Committee of Experts of the IPC Union at its 41st session in March 2009.

The amendments proposed in this revision are of editorial nature only and have no impact in the use of this Standard.

HANDBOOK ON INDUSTRIAL PROPERTY INFORMATION AND DOCUMENTATION

Ref.: Annex VIII - Standard ST.8, 42nd Session of the IPC Committee of Experts (IPC Union), 8 to 12 February, 2010
page: 3.8.2

STANDARD ST.8

STANDARD RECORDING OF INTERNATIONAL PATENT CLASSIFICATION (IPC) SYMBOLS ON MACHINE-READABLE RECORDS

Revision adopted by the SCIT Standards and Documentation Working Group at its x session on x

INTRODUCTION

1. This recording convention provides that symbols of the International Patent Classification (IPC) should be presented on machine-readable records for the exchange of information in machine-readable form in a fixed-length field in 50 positions, each part of the IPC symbol being recorded in specific positions and in the manner prescribed.

2. The examples given are intended to clarify the text and should not be considered as comprehensive.

RECORDING

3. For the recording of IPC symbols on machine-readable records a field of 50 positions should be assigned for each symbol, the 50 positions of the field to be used as follows:

Position(s)	*Content*	*Values*
1	Section	A,…,H
2,3	Class	01,…,99
4	Subclass	A,…,Z
5 to 8	Main Group (right aligned)	1,…,9999, blank
9	Separating character	/ (“Slash”)
10 to 15	Subgroup (left aligned)	00,…,999999, blank
16 to 19	For future use	4 blanks
20 to 27	Version indicator	YYYYMMDD date format
28	Classification level	C,A,S
29	First or later position of symbol	F,L
30	Classification value (invention or additional)	I,N
31 to 38	Action date	YYYYMMDD date format
39	Original or reclassified data	B,R,V,D
40	Source of classification data	H,M,G
41-42	Generating office	AA,…,ZZ (ST.3)
43-50	For future use	8 blanks

4. Unused positions in the IPC classification fields Group (positions 5-8) and Subgroup (positions 10-15) should be left blank. The only other positions that may be left "blank" are the ones reserved for "future use." All other positions must be assigned one of the acceptable "values" listed in the table of paragraph 3. Any zero appearing in the symbols should be recorded.

5. Considering the numerals appearing after the separating character, the most significant digit (including the case where it is zero, e.g., subgroup 02) should be in position 10. Any unused positions should be left blank.

6. Representation of the indicators

Positions 1 to 19: Recording of the parts of the IPC symbols

IPC symbols are defined in the latest version of the Guide to the IPC.

Positions 20 to 27: Version indicator

Although in the paper publications a version indicator may contain six digits, the version indicator in machine-readable records contains eight digits, namely YYYYMMDD with Y for year, M for month and D for day. It corresponds to the version indicator of the corresponding symbol.

Position 28 : Classification level

Offices are expected to classify each subject matter either in subclasses only, in main groups only or in the full IPC. However, these three different options need to be completely represented in the master classification database and thus a level indicator is needed. As of January 1, 2011, the previous designations for classification level indicators C (Core), A (Advance) and S (Subclass) are not applicable. The new designations for the classification level are as follows:

The letter S is used for classification in subclasses only,

the C for classification in main groups only, and

the A for classification in the full IPC.

A particular main group symbol in positions 1 to 19 may thus have the indicator C in position 28 if the Office uses only main group symbols for classifying, or A if the Office uses the full IPC.

Position 29: First or later position of symbols

The position of the first invention information classification can be recognized by this field. The letters F and L are used for first and later position, respectively.

Position 30: Classification value (invention or additional)

The difference between invention information and other information is important for the retrieval of the information. The letters I and N are used for the invention and additional information, respectively.

Positions 31-38: Action date

The date of assigning the classification symbol (action date) is represented by eight digits, namely YYYYMMDD. This date can be used to check if a classification needs to be reviewed after revision of the scheme, e.g., in case of creating new subdivisions.

Position 39: Original and reclassified data

Original data is the first data assigned to the document.

Reclassified data is data changed due to a change in the classification schemes.

Various data is data changed due to an incidental correction of the classification of an individual document, such as the correction of a mistake.

Deleted data is data which has to be deleted from the Master Classification Database, due to a change in assigning of classification symbols to a document.

The indication of the different types of data is marked by the letters B for the basic or original data, R for reclassified data, V for various incidental changes, and D for data to be deleted.

Position 40: Source of classification data

The following sources of classification data are foreseen:

- Intellectual classification by persons, value H for human generated data.
- Machine classification by the propagation of earlier intellectual classification through the use of common priorities in the patent application. The value M is used in this case and will facilitate later corrections.
- Classification symbols generated by software using automatic analysis of the content of the patent document. The letter G is used to indicate this source of generated data.

Positions 41-42: Generating Office

Since part of the original data and the reclassified data can be delivered by offices other than the publishing office, the information source of such data is recorded by a field of two characters. The country or office code CC, as defined by WIPO Standard ST.3, must be used.

7. Recording of complete IPC symbols

The full classification symbol must always be used when recording it on machine-readable records. The IPC section, class and subclass should be provided for each group or subgroup classification, even if previously provided with another group or subgroup classification in the same document.

See paragraph 2 of WIPO Standard ST.10/C for the recommended presentation of IPC classifications on machine displays or in printed documents.

8. A schematic representation of the contents of the 50 positions is as follows:

Section	Class		Subclass	Main Group				Separating character	Subgroup						Blanks			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

Version indicator								Classification level	First or later position of a symbol	Classification value	Action date							
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38

Original or reclassified data	Source of classification data	Generating office		Blanks							
39	40	41	42	43	44	45	46	47	48	49	50

Example

The following is one sample representation of IPC classification symbols assigned on June 1st 2011 and their indicators:

Int. Cl. (2011.01)

B28B 5/00 (2006.01)	***classification in the full IPC***	***invention information***
H04H 20/12 (2008.01)	***classification in the full IPC***	***invention information***
H01H 33/00	classification in main groups only	additional information

According to this Standard, this example would be recorded on machine-readable records as follows:

Record 1:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
B	2	8	B				5	/	0	0								

20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
2	0	0	6	0	1	0	1	A	F	I	2	0	1	1	0	6	0	1

39	40	41	42	43	44	45	46	47	48	49	50
B	H	E	P								

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Ref.: Annex VIII - Standard ST.8, 42nd Session of the IPC Committee of Experts (IPC Union), 8 to 12 February, 2010
page: 3.8.6

Record 2:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
H	0	4	H			2	0	/	1	2								

20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
2	0	0	8	0	1	0	1	A	L	I	2	0	1	1	0	6	0	1

39	40	41	42	43	44	45	46	47	48	49	50
B	H	E	P								

Record 3:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
H	0	1	H			3	3	/	0	0								

20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
2	0	0	6	0	1	0	1	C	L	N	2	0	1	1	0	6	0	1

39	40	41	42	43	44	45	46	47	48	49	50
B	H	E	P								

[End of Standard]

[Annex IX follows]

ANNEX IX

HANDBOOK ON INDUSTRIAL PROPERTY INFORMATION AND DOCUMENTATION

STANDARD ST.10/C

PRESENTATION OF BIBLIOGRAPHIC DATA COMPONENTS

Editorial Note prepared by the International Bureau

The Standard and Documentation Working Group (SDWG) of the Standing Committee on Information Technologies (SCIT) adopted the revisions of paragraphs 2 and 3 of Standard ST.10/C at its x session on x. These revisions incorporate editorial amendmants made necessary by certain modifications of the IPC structure as adopted by the Committee of Experts of the IPC Union at its 41st session in March 2009.

Industrial property offices are asked to implement the new versions of paragraphs 2 and 3 of Standard ST.10/C for all patent documents with a publication date from January 1, 2011, onwards. For patent documents published prior to that date, the previous text of paragraphs 2 and 3 of the Standard should continue to be used.The previous versions of paragraphs 2 and 3 of Standard ST.10/C, valid until December 31, 2010, are reproduced in the Annex to the new Standard ST.10/C.

HANDBOOK ON INDUSTRIAL PROPERTY INFORMATION AND DOCUMENTATION

Ref.: Annex IX, Standard ST.10/C, 42nd Session of the IPC Committee of Experts (IPC Union), 8 to 12 February, 2010
page: 3.10.3.2

STANDARD ST.10/C

PRESENTATION OF BIBLIOGRAPHIC DATA COMPONENTS

Revision adopted by the SCIT Standards and Documentation Working Group at its ?? session on ??

PRESENTATION OF DATES

1. For the representation of calendar dates according to the Gregorian calendar, which are printed or displayed in industrial property documents, in entries in official gazettes or in electronic records, WIPO Standard ST.2 is applicable.

PRESENTATION OF CLASSIFICATION SYMBOLS

2. The recommended abbreviation of the International Patent Classification is “Int.Cl.”. The current version indicator of the IPC (year, month) has to be placed in round brackets after the abbreviation “Int.Cl.”, if the document is classified, at least partly, in main groups only.

The recommended presentation of classification symbols in printed or formatted display form is as follows:

– classification symbols are presented in a tabular form, in such a manner as to facilitate machine transcription;

– when classifying in main groups only, IPC symbols are printed or displayed in regular font style, and when classifying in the full IPC, IPC symbols are printed or displayed in italics; and

– the invention information symbols are printed or displayed in bold font style and the additional information symbols in regular.

– when classifying in the full IPC, the version indicator for each IPC symbol, as indicated in paragraph 158 of the Guide to the IPC (year, month), is placed in round brackets after each IPC symbol.

3. Sample representations of IPC classification symbols and indicators are given below for the same document when classified in the full IPC, in main groups only or both in the full IPC and in main groups.

(a) When classified in the full IPC:

Int. Cl.
B28B 5/00 (2006.01)
H04H 20/12 (2008.01)
H01H 33/65 (2009.01)

Where: ***B28B 5/00*** indicates invention information (bold font style) classified in the full IPC (italics font style);
H04H 20/12 indicates invention information (bold font style) classified in the full IPC (italics font style);
H01H 33/65 indicates additional information (regular font style, i.e., non-bold) classified in the full IPC (italics font style).

(b) When classified in main groups only:

Int. Cl. (2011.01)
B28B 5/00
H04H 20/00
H01H 33/00

Where: **B28B 5/00** indicates invention information (bold font style) classified in main groups only (regular font style, i.e., non-italics);
H04H 20/00 indicates invention information (bold font style) classified in main groups only (regular font style, i.e., non-italics);
H01H 33/00 indicates additional information (regular font style, i.e., non-bold) classified in main groups only (regular font style, i.e., non-italics).

(c) When invention information is classified in the full IPC and additional information in main groups only:

Int. Cl. (2011.01)
B28B 5/00 (2006.01)
H04H 20/12 (2008.01)
H01H 33/00

Where: ***B28B 5/00*** indicates invention information (bold font style) classified in the full IPC (italics font style);
H04H 20/12 indicates invention information (bold font style) classified in the full IPC (italics font style);
H01H 33/00 indicates additional information (regular font style, i.e., non-bold) classified in main groups only (regular font style, i.e., non-italics).

IPC symbols are defined in the latest version of the Guide to the IPC.

This presentation is effective beginning with the January 1, 2011, version of the IPC.

[Technical Annexes follow]

TECHNICAL ANNEXES

List of projects contained in these Technical Annexes:

A009; **A012**; **A013**; **A014**; **A017**; **A018**; **A019**; **A020**; **A021**; **A022**; **A024**; **A025**; **A026**; **A027**; **A028**; **A029**; **C443**; **C447**; **C449**; **C452**; **C453**; **C455**; **D018**; **D039**; **D070**; **D077**; **D095**; **D100**; **D101**; **D102**; **D103**; **D106**; **D108**; **D109**; **D134**; **D136**; **D139**; **D140**; **D143**; **D172**; **D174**; **D175**; **D176**; **D177**; **D178**; **D180**; **D181**; **D187**; **D189**; **D190**; **D191**; **D193**; **D194**; **D195**; **D196**; **D197**; **D198**; **D199**; **D200**; **D201**; **D202**; **D203**; **D204**; **D205**; **D206**; **D207**; **D208**; **D209**; **M010**; **M014**; **M033**; **M034**; **M035**; **M036**; **M037**; **M038**; **M099**; **M101**; **M107**; **M701**; **M704**; **M705**; **M708**; **M715**; **M716**

ANNEX 1E A01M [Project-Rapporteur : A024/EP] <CE42>

CL C ***29/00 Scaring or repelling devices, e.g. bird-scaring apparatus***

AL D 29/02 (transferred to **A01M 29/16**,**A01M 29/18**)

AL D 29/04 (transferred to **A01M 29/20**)

AL N *29/06* · *using visual means, e.g. scarecrows, moving elements, specific shapes, patterns or the like*

AL N *29/08* · · *using reflection, colours or films with specific transparency or reflectivity*

AL N *29/10* · · *using light sources, e.g. lasers or flashing lights*

AL N *29/12* · *using odoriferous substances, e.g. aromas, pheromones or chemical agents*

AL N *29/14* · *using thermal effects*

AL N *29/16* · *using sound waves*

AL N *29/18* · · *using ultrasonic signals*

AL N *29/20* · · *with generation of periodically explosive reports*

AL N *29/22* · *using vibrations (**A01M 29/16** takes precedence)*

AL N *29/24* · *using electric or magnetic effects, e.g. electric shocks, magnetic fields or microwaves*

AL N *29/26* · · *specially adapted for birds, e.g. electrified rods, cords or strips*

AL N *29/28* · · *specially adapted for insects*

AL N *29/30* · *preventing or obstructing access or passage, e.g. by means of barriers, spikes, cords, obstacles or sprinkled water*

AL N *29/32* · · *specially adapted for birds, e.g. spikes*

AL N *29/34* · · *specially adapted for insects*

ANNEX 2E A23D [Project-Rapporteur : D194/DE] <CE42>

CL M **Title EDIBLE OILS OR FATS, e.g. MARGARINES, SHORTENINGS, COOKING OILS** (obtaining, refining, preserving **C11B**, **C11C**; hydrogenation **C11C 3/12**)

ANNEX 3E A23F [Project-Rapporteur : D195/DE] <CE42>

CL M **Title COFFEE; TEA; THEIR SUBSTITUTES; MANUFACTURE, PREPARATION, OR INFUSION THEREOF**

ANNEX 4E A23J [Project-Rapporteur : D196/DE] <CE42>

CL M **Title PROTEIN COMPOSITIONS FOR FOODSTUFFS; WORKING-UP PROTEINS FOR FOODSTUFFS; PHOSPHATIDE COMPOSITIONS FOR FOODSTUFFS**

CL M **1/00 Obtaining protein compositions for foodstuffs; Bulk opening of eggs and separation of yolks from whites**

AL M 1/04 · from fish or other sea animals

AL M 1/06 · from blood

ANNEX 5E A23K [Project-Rapporteur : M716/SE] <CE42>

CL M **Title FEEDING-STUFFS SPECIALLY ADAPTED FOR ANIMALS; METHODS SPECIALLY ADAPTED FOR PRODUCTION THEREOF**

CL M **3/00 Processes specially adapted for preservation of materials in order to produce animal feeding-stuffs**

AL M 3/02 · of green fodder (mechanical aspects of methods specially adapted for storing agricultural or horticultural crops **A01F 25/00**)

ANNEX 6E A23L [Project-Rapporteur : D070/GB] <CE42>

CL M 1/01 · General methods of cooking foods, e.g. by roasting or frying (methods specialized to particular food, see the relevant subgroups)

AL M 1/035 · · Emulsifiers

CL M 1/076 · Products from apiculture, e.g. royal jelly or pollen; Substitutes therefor

CL M 1/10 · containing cereal-derived products

CL M 1/16 · · Types of pasta, e.g. macaroni, noodles

CL M 1/19 · Cream substitutes

CL M 1/20 · Treatment of pulse, i.e. fruits of leguminous plants, for production of fodder or food; Preparation of products from legumes; Chemical means for rapid cooking of these foods, e.g. treatment with phosphates

CL M 1/221 · · Natural spices, flavouring agents, or condiments; Extracts thereof

AL M 1/222 · · · from fruit, e.g. essential oils

CL M 1/277 · · Removing colour by chemical reaction, e.g. bleaching

CL M 1/29 · Modifying nutritive qualities of foods; Dietetic products (**A23L 1/09** takes precedence; dietetic salt substitutes **A23L 1/22**)

CL M 1/305 · · · Amino acids, peptides or proteins

CL M 1/31 · Meat products; Meat meal

CL M 2/38 · Other non-alcoholic beverages

CL M 2/70 · Clarifying or fining of non-alcoholic beverages; Removing unwanted matter

CL M **3/00** **Preservation of foods or foodstuffs, in general, e.g. pasteurising, sterilising, specially adapted for foods or foodstuffs** (preserving foods or foodstuffs in association with packaging **B65B 55/00**)

ANNEX 7E A45D [Project-Rapporteur : D134/EP] <CE42>

AL M 1/04 · · by electricity

AL M 2/06 · · in the form of rods with base plate or base clamp

AL M 2/34 · · · with base clamp

AL M 2/36 · Hair curlers or hair winders with incorporated heating or drying means, e.g. electric, using chemical reaction

CL M **7/00** **Processes of waving, straightening or curling hair**

AL M 19/02 · Hand-actuated implements, e.g. hand-actuated spray heads

CL M **20/00** **Hair drying devices; Accessories therefor** (**A45D 2/00** takes precedence)

AL M 20/08 · · heated electrically

AL M 20/30 · · Electric circuitry specially adapted for hair drying devices

AL M 20/38 · · Arrangement of the electric heating means

CL M **27/00 Shaving accessories** (containers for handling shaving soap **A45D 40/00**; shaving mirrors **A45D 42/08**)

AL M 27/22 · Containers or carriers for storing shaving appliances

AL M 27/24 · · for storing razor blades, e.g. after use (devices for collecting used scalpel blades **A61B 17/3217**; devices for dispensing new razor-blades **B65D 83/10**)

AL M 27/42 · Shaving masks

CL M **29/00 Manicuring or pedicuring implements**

AL M 29/02 · Nail clippers or cutters

AL M 29/04 · Nail files, e.g. manually operated

AL M 29/11 · Polishing devices for nails

AL M 29/20 · · Boxes, cases, etuis or the like specially adapted therefor

AL M 33/18 · with special decorative arrangements or form

CL M **34/00 Containers or accessories specially adapted for handling liquid toilet or cosmetic substances, e.g. perfumes**

AL M **40/00 Casings or accessories specially adapted for storing or handling solid or pasty toilet or cosmetic substances, e.g. shaving soap, lipstick or make-up** (features common to containers for handling powdery or liquid toilet or cosmetic substances **A45D 33/00**-**A45D 37/00**; cosmetic or like preparations **A61K 8/00**, **A61Q**; sample tables or the like **G09F 5/00**)

CL M 40/26 · Appliances specially adapted for applying pasty paint, e.g. using roller, using a ball

CL M **42/00 Hand, pocket, or shaving mirrors**

AL M 44/08 · Protecting mantles; Shoulder-shields; Collars; Bibs

AL M 44/10 · Head-rests; Neck-rests

AL M 44/22 · Face shaping devices, e.g. chin straps; Wrinkle removers, e.g. stretching the skin (skin stretchers for shaving **A45D 27/38**)

CL N ***97/00 Hairdressing equipment or cosmetic treatment not provided for in other groups of this subclass***

ANNEX 8E A47 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title FURNITURE; DOMESTIC ARTICLES OR APPLIANCES; COFFEE MILLS; SPICE MILLS; SUCTION CLEANERS IN GENERAL**

ANNEX 9E A47J [Project-Rapporteur : M014/IB] <CE42>

CL M **39/00 Heat-insulated warming chambers; Cupboards with heating arrangements for warming kitchen utensils**

ANNEX 10E A47K [Project-Rapporteur : M010/IB] <CE42>

CL M **5/00 Holders or dispensers for soap, toothpaste, or the like** (lather making devices for shaving **A45D 27/02**; specially adapted for shaving soap or cosmetics **A45D 33/00**-**A45D 40/00**)

ANNEX 11E A61H [Project-Rapporteur : D106/US] <CE42>

CL M **Title PHYSICAL THERAPY APPARATUS, e.g. DEVICES FOR LOCATING OR STIMULATING REFLEX POINTS IN THE BODY; ARTIFICIAL RESPIRATION; MASSAGE; BATHING DEVICES FOR SPECIAL THERAPEUTIC OR HYGIENIC PURPOSES OR SPECIFIC PARTS OF THE BODY** (electrotherapy, magnetotherapy, radiation therapy, ultrasound therapy **A61N**)

CL M **1/00 Apparatus for passive exercising** (**A61H 5/00** takes precedence) **; Vibrating apparatus; Chiropractic devices, e.g. body impacting devices, external devices for briefly extending or aligning unbroken bones**

CL M **3/00 Appliances for aiding patients or disabled persons to walk about** (apparatus for helping babies to walk **A47D 13/04**)

AL M 3/06 ・ Walking aids for blind persons (replacing direct visual perception by another kind of perception **A61F 9/08**)

CL M **7/00 Devices for suction-kneading massage; Devices for massaging the skin by rubbing or brushing not otherwise provided for** (electro-medical massage devices applying electric current by contact **A61N 1/18**)

AL M 33/08 ・・ Air douches for hygienic purposes

CL M 33/14 ・ Devices for gas baths with ozone, hydrogen, or the like

CL M 39/04 ・ Devices for pressing such points, e.g. shiatsu

AL M 39/06 ・ Devices for heating or cooling such points within cell-life limits

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ANNEX 12E A61L [Project-Rapporteur : D108/US] <CE42>

CL M **Title** **METHODS OR APPARATUS FOR STERILISING MATERIALS OR OBJECTS IN GENERAL; DISINFECTION, STERILISATION, OR DEODORISATION OF AIR; CHEMICAL ASPECTS OF BANDAGES, DRESSINGS, ABSORBENT PADS, OR SURGICAL ARTICLES; MATERIALS FOR BANDAGES, DRESSINGS, ABSORBENT PADS, OR SURGICAL ARTICLES** (preservation of bodies or disinfecting characterised by the agent employed **A01N**; preserving, e.g. sterilising, food or foodstuffs **A23**; preparations for medical, dental or toilet purposes **A61K**)

CL M **2/00** **Methods or apparatus for disinfecting or sterilising materials or objects other than foodstuffs or contact lenses; Accessories therefor** (atomisers for disinfecting agents **A61M**; sterilisation of packages or package contents in association with packaging **B65B 55/00**; treatment of water, waste water, sewage or sludge **C02F**; disinfecting paper **D21H 21/36**; disinfecting devices for water closets **E03D**; articles having provision for disinfection, see the relevant subclasses for these articles, e.g. **H04R 1/12**)

AL M 2/28 · · Devices for testing the effectiveness or completeness of sterilisation, e.g. indicators which change colour (apparatus involving enzymes or micro-organisms **C12M 1/34**)

CL M **9/00** **Disinfection, sterilisation or deodorisation of air** (purifying air by respirators **A62B**, **A62D 9/00**; chemical or biological purification of waste gases **B01D 53/34**; air-conditioning systems incorporating sterilisation **F24F 3/16**)

CL M **17/00** **Materials for surgical sutures or for ligaturing blood vessels**

ANNEX 13E A61M [Project-Rapporteur : D109/US] <CE42>

CL M **1/00** **Suction or pumping devices for medical purposes; Devices for carrying-off, for treatment of, or for carrying-over, body-liquids; Drainage systems** (catheters **A61M 25/00**; tube connectors, tube couplings, valves or branch units, specially adapted for medical use **A61M 39/00**; devices for taking samples of blood **A61B 5/15**; saliva removers for dentists **A61C 17/06**; filters implantable into blood vessels **A61F 2/01**)

CL M 1/06 · Milking pumps

CL M 1/10 · Blood pumps; Artificial hearts; Devices for mechanical circulatory assistance, e.g. intra-aortic balloon pumps (heart stimulation **A61H 31/00**)

CL M 1/14 · Dialysis systems; Artificial kidneys; Blood oxygenators (semi-permeable membranes characterised by the material, manufacturing processes therefor **B01D 71/00**)

CL M 5/14 · Infusion devices, e.g. infusing by gravity; Blood infusion; Accessories therefor

CL M 5/24 · · Ampoule syringes, i.e. syringes with needle for use in combination with replaceable ampoules or cartridges, e.g. automatic

CL M 5/36 · with means for eliminating or preventing injection or infusion of air into body

CL M **11/00** **Sprayers or atomisers specially adapted for therapeutic purposes**

CL M **13/00 Insufflators for therapeutic or disinfectant purposes**

CL M **16/00 Devices for influencing the respiratory system of patients by gas treatment, e.g. mouth-to-mouth respiration; Tracheal tubes** (stimulating the respiratory movement by mechanical, pneumatic or electrical means, iron lungs combined with gas breathing means **A61H 31/00**)

CL M 16/04 · Tracheal tubes

CL M 16/22 · Carbon dioxide-absorbing devices

CL M **19/00 Devices for local anaesthesia; Devices for hypothermia** (**A61M 5/42** takes precedence)

CL M **25/00 Catheters; Hollow probes** (for measuring or testing **A61B**)

CL M **29/00 Dilators with or without means for introducing media, e.g. remedies** (stents **A61F 2/82**)

ANNEX 14E A62 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title LIFE-SAVING; FIRE-FIGHTING**

ANNEX 15E A63D [Project-Rapporteur : D136/GB] <CE42>

CL M **Title BOWLING-ALLEYS; BOWLING GAMES; BOCCIA; BOWLS; BAGATELLE; BILLIARDS**

CL M **3/00 Table alleys; Miniature bowling-alleys; Bowling games**

CL M 3/02 · Arrangement of devices for propelling or projecting the balls

CL M 15/08 · Cues

AL M 15/20 · Scoring or registering devices

ANNEX 16E A63H [Project-Rapporteur : M036/IB] <CE42>

AL M 3/06 · Air-filled or inflatable toy figures

AL M 3/42 · · · Manufacture of eyes

AL M 3/44 · · Dolls' hair or wigs; Eyelashes; Eyebrows

CL M **5/00 Musical or noise-producing devices for additional toy effects other than acoustical** (musical tops **A63H 1/28**; hand-thrown impact-exploded noise makers **F42B 4/16**)

AL M 13/15 · · · imitating drawing or writing

CL M **17/00 Toy vehicles, e.g. with self-drive; Accessories therefor**

AL M 17/385 · · · remotely controlled

AL M 19/36 · Model railway structures, e.g. kinds of arrangement of several units in containers, or on plates, or in combination with scenics for toy purposes

AL M 27/10 · Balloons

AL M 27/127 · Flying toys capable of landing or taking-off vertically; Flying tops

AL M 27/24 · · combustion engine or electric motor propelled

AL M **30/00 Remote-control arrangements specially adapted for toys, e.g. for toy vehicles** (remotely controlled steering mechanisms for toy vehicles **A63H 17/385**; for model railways **A63H 19/24**, **A63H 19/28**)

AL M 30/02 · Electrical arrangements

CL M **31/00 Gearing for toys**

AL M 33/18 · Throwing or slinging toys (spring toy guns **F41B 7/08**)

AL M 33/20 · Toys with parachutes; Toy parachutes

CL M 33/28 · Soap-bubble toys; Smoke toys (arrangements for producing smoke images or rings during smoking **A24F 13/30**)

CL M 33/30 · Imitations of apparatus, not otherwise provided for, e.g. telephones, weighing-machines or cash-registers

CL M 33/38 · Picture books with additional toy effects, e.g. pop-up or slide displays

AL M 33/40 · Windmills; Other toys actuated by air currents (driving mechanisms for toys actuated by steam or compressed air **A63H 29/16**)

AL M 33/42 · Toy models or toy scenery not otherwise provided for

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ANNEX 17E B01 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title PHYSICAL OR CHEMICAL PROCESSES OR APPARATUS IN GENERAL**

ANNEX 18E B01D [Project-Rapporteur : M705/GB] <CE42>

CL M Note B01D

1. This subclass covers :
   - evaporation, distillation, crystallisation, filtration, dust precipitation, gas

cleaning, absorption, adsorption;

- similar processes which are not concerned with, or limited to, separation (except in the case of absorption or adsorption).

2. In this subclass, the terms or expressions are used with the meaning indicated:
   - "filtration" and analogous terms include straining solids from fluids. Filtration is a process that normally uses a filter medium;
   - "filter medium" is a porous material or porous arrangement of material used to filter solids from fluids; **[5]**
   - "filtering element" is a section of filter medium in addition to parts to which the medium is demountably or permanently fixed, including other sections of medium, end caps, peripheral frames or edge strips, but excluding housings; **[5]**
   - "filter housing" is the fluid-constraining impervious vessel, whether open or closed, which contains, or is adapted to contain, one or more filtering elements or filter media; **[5]**
   - "filter chamber" is the space within a housing, where filtering elements or filter media are located. Partitions may divide a single housing into a plurality of chambers; **[5]**
   - "filtering apparatus" consists of filtering elements combined with housings, cleaning arrangements, motor or the like parts, which are characteristic of the particular type of apparatus. Ancillary devices such as pumps or valves are considered part of a filtering apparatus when inside the apparatus. Ancillary devices performing similar or different unit operation such as comminutors, mixers or non-filtering separators, whether or not inside the apparatus, are not considered part of a filtering apparatus. The term does not extend to apparatus, e.g. washing machines, of which the filter forms only a part. **[5]**
3. For apparatus used in drying or evaporation, class **F26** takes precedence over this subclass.
4. Group **B01D 59/00** takes precedence over the other groups of this subclass and over other subclasses in class **B01**.

CL M **29/00 Filters with filtering elements stationary during filtration, e.g. pressure or suction filters, not covered by groups B01D 24/00-B01D 27/00; Filtering elements therefor**

CL M **35/00 Filtering devices having features not specifically covered by groups B01D 24/00-B01D 33/00, or for applications not specifically covered by groups B01D 24/00-B01D 33/00; Auxiliary devices for filtration; Filter housing constructions**

CL M 35/06 · Filters making use of electricity or magnetism (ultrafiltration, microfiltration **B01D 61/14**; electrodialysis, electro-osmosis **B01D 61/42**; combinations of filters and magnetic separators **B03C 1/30**)

CL M **36/00 Filter circuits or combinations of filters with other separating devices** (devices for the removal of gas, e.g. air purge systems **B01D 35/01**; magnetic or electrostatic separators combined with filters **B03C**)

ANNEX 19E B03 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title SEPARATION OF SOLID MATERIALS USING LIQUIDS OR USING PNEUMATIC TABLES OR JIGS; MAGNETIC OR ELECTROSTATIC SEPARATION OF SOLID MATERIALS FROM SOLID MATERIALS OR FLUIDS; SEPARATION BY HIGH-VOLTAGE ELECTRIC FIELDS**

ANNEX 20E B03D [Project-Rapporteur : M036/IB] <CE42>

CL M **Title FLOTATION; DIFFERENTIAL SEDIMENTATION** (in combination with other separation of solids **B03B**; sink-float separation **B03B 5/28**)

AL M **1/00 Flotation**

CL M 1/001 · Flotation agents

AL M 1/08 · Subsequent treatment of concentrated product

AL M 1/10 · · Removing adhering liquid from separated materials

CL M 1/14 · Flotation machines (devices for feeding measured quantities of reagents **B01J 4/02**)

ANNEX 21E B04C [Project-Rapporteur : M036/IB] <CE42>

CL M **Title APPARATUS USING FREE VORTEX FLOW, e.g. CYCLONES** (exhaust or silencing apparatus for machines or engines having means for removing solid constituents of exhaust, using inertial or centrifugal separators **F01N 3/037**; cyclonic type combustion apparatus **F23**)

AL M 5/02 · Construction of inlets by which the vortex flow is generated

CL M **9/00 Combinations with other devices, e.g. fans** (with filters for separating particles from gases or vapour **B01D 50/00**; with dry electrostatic precipitation for separating particles from gases or vapour **B03C 3/15**)

CL M **11/00 Accessories, e.g. safety or control devices, not otherwise provided for**

ANNEX 22E B05 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title SPRAYING OR ATOMISING IN GENERAL; APPLYING LIQUIDS OR OTHER FLUENT MATERIALS TO SURFACES, IN GENERAL**

ANNEX 23E B05D [Project-Rapporteur : M033/IB] <CE42>

CL M **Title PROCESSES FOR APPLYING LIQUIDS OR OTHER FLUENT MATERIALS TO SURFACES, IN GENERAL** (apparatus for applying liquids or other fluent materials to surfaces **B05B**, **B05C**; conveying articles or workpieces through baths of liquid **B65G**, e.g. **B65G 49/02**)

ANNEX 24E B07 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title SEPARATING SOLIDS FROM SOLIDS; SORTING**

ANNEX 25E B07B [Project-Rapporteur : M033/IB] <CE42>

CL M **Title SEPARATING SOLIDS FROM SOLIDS BY SIEVING, SCREENING, OR SIFTING OR BY USING GAS CURRENTS; OTHER SEPARATING BY DRY METHODS APPLICABLE TO BULK MATERIAL, e.g. LOOSE ARTICLES FIT TO BE HANDLED LIKE BULK MATERIAL** (wet separating processes, sorting by processes using fluent material in the same way as liquid **B03**; combinations of dry separating apparatus with wet separating apparatus **B03B**; using liquids **B03B**, **B03D**; sorting by magnetic or electrostatic separation of solid materials from solid materials or fluids, separation by high voltage electric fields **B03C**; centrifuges or vortex apparatus for carrying out physical processes **B04**; hand sorting, postal sorting, sorting by switching or other devices actuated in response to detection or measurement of some feature of articles or samples of material **B07C**)

ANNEX 26E B07B [Project-Rapporteur : D077/GB] <CE42>

AL M 7/08 · using centrifugal force

CL M **13/00 Grading or sorting solid materials by dry methods, not otherwise provided for; Sorting articles otherwise than by indirectly controlled devices**

CL M **15/00 Combinations of apparatus for separating solids from solids by dry methods applicable to bulk material, e.g. loose articles fit to be handled like bulk material** (using gas currents **B07B 9/00**)

ANNEX 27E B09 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title DISPOSAL OF SOLID WASTE; RECLAMATION OF CONTAMINATED SOIL**

ANNEX 28E B09B [Project-Rapporteur : M033/IB] <CE42>

CL M Note B09B

1. This subclass covers only single or combined, e.g. multistage, operations not fully classifiable in a single other subclass. **[3]**
2. In this subclass, the following terms or expressions are used with the meanings indicated:
   - "disposal" means the discarding, e.g. dumping, or destroying of waste or its transformation into something useful or harmless; **[3]**
   - "solid waste" includes waste which, although it has liquid content, is for practical purposes handled as solid. **[3]**
3. Attention is drawn to the following places:

A23J 1/16	Obtaining proteins from waste water of starch-manufacturing plants or like wastes
A23K 1/06	Animal feeding-stuffs from distillers' or brewers' waste
A23K 1/08	Animal feeding-stuffs from waste products of dairy plants
A23K 1/10	Animal feeding-stuffs from kitchen waste
A43B 1/12	Footwear made of rubber waste
A61L 11/00	Disinfection or sterilisation methods specially adapted for refuse
A62D 3/00	Processes for making harmful chemical substances harmless, or less harmful, by effecting a chemical change in the substances
B01D 53/34	Chemical or biological purification of waste gases
B02C 18/00	Disintegrating by knives or other cutting or tearing members which chop material into fragments
B03B 7/00	Combinations of wet processes or apparatus with other processes or apparatus, e.g. for dressing ores or garbage
B03B 9/06	General arrangement of separating plant, e.g. flow sheets, specially adapted for refuse
B05B 15/04	Control of spray area of spraying plant, e.g. masking, side shields; Means for collection or re-use of excess material
B08B 15/00	Preventing escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area
B22F 8/00	Manufacture of articles from scrap or waste metal particles
B23D 25/14	Machines or arrangements for shearing stock while the latter is travelling otherwise than in the direction of the cut without regard to the exact dimensions of the resulting material, e.g. for cutting up scrap
B24B 55/12	Devices for recovering materials resulting from grinding or polishing **[7]**
B27B 33/20	Edge trimming saw blades or tools combined with means to disintegrate waste
B29B 17/00	Recovery of plastics or other constituents of waste material containing plastics
B30B 9/32	Presses for consolidating scrap metal or for compacting used cars
B62D 67/00	Systematic disassembly of vehicles for recovery of salvageable components, e.g. for recycling **[7]**

B63B 17/06	Refuse discharge from vessels, e.g. for ash
B63J 4/00	Arrangements of installations for treating waste water or sewage on vessels
B65F 1/00	Refuse receptacles
B65F 3/00	Vehicles particularly adapted for collecting refuse
B65F 5/00	Gathering or removal of refuse otherwise than by receptacles or vehicles
B65F 7/00	Cleaning or disinfecting devices combined with refuse receptacles or refuse vehicles
C03C 1/00	Ingredients generally applicable to manufacture of glasses, glazes or vitreous enamels **[5]**
C04B 7/24	Hydraulic cements from oil shales, residues or waste other than slag
C04B 11/26	Calcium sulfate cements made from phosphogypsum or from waste, e.g. purification products of smoke
C04B 18/04	Waste material or refuse used as fillers for mortars, concrete, artificial stone or the like
C04B 33/132	Waste materials or refuse used as compounding ingredients for clay-wares **[8]**
C05F	Fertilisers from waste or refuse **[7]**
C08B 16/00	Regeneration of cellulose **[7]**
C08J 9/33	Agglomerating foam fragments, e.g. waste foam **[7]**
C08J 11/00	Recovery of waste materials of macromolecular substances
C08L 17/00	Compositions of reclaimed rubber
C09K 11/01	Recovery of luminescent materials **[7]**
C10B 53/00	Destructive distillation, specially adapted for particular solid raw materials or solid raw materials in special form
C10B 57/00	Other processes not covered before; Features of destructive distillation processes in general
C10G 1/10	Production of liquid hydrocarbon mixtures from rubber or rubber waste
C10G 73/23	Recovery of used solvents **[7]**
C10L 5/46	Solid fuels essentially based on sewage, house or town refuse
C10L 5/48	Solid fuels essentially based on industrial residues and waste materials
C10M 175/02	Working-up used lubricants based on mineral oils
C11B 13/00	Recovery of fats, fatty oils, or fatty acids from waste materials
C11D 19/00	Recovery of glycerol from a saponification liquor
C12F 3/00	Recovery of by-products
C12F 3/08	Recovery of alcohol from press residues or other waste material
C12P 7/08	Biochemical production of ethanol from waste
C22B 7/00	Working-up raw materials other than ores, e.g. scrap, to produce non-ferrous metals or compounds thereof

C22B 19/28	Obtaining zinc or zinc oxide from muffle furnace residues
C22B 19/30	Obtaining zinc or zinc oxide from metallic residues or scraps
C22B 25/06	Obtaining tin from scrap
C25D 13/24	Regeneration of process liquids used in electrophoretic coating **[7]**
C25D 21/16	Regeneration of process solutions used in electrolytic coating
D01B	Mechanical treatment of natural fibrous or filamentary material to obtain fibres or filaments, e.g. for spinning
D01C 5/00	Carbonising rags to recover animal fibres
D01F 13/00	Recovery of starting material, waste material or solvents during the manufacture of artificial filaments or the like
D01G 11/00	Disintegrating fibre-containing articles to obtain fibres for re-use
D01H 11/00	Arrangements for confining or removing dust, fly, or the like
D06L 1/10	Regeneration of used chemical baths used for dry-cleaning or washing fibres, fabrics or the like
D21B 1/08	Dry treatment of waste paper or rags for making paper or for the production of cellulose
D21B 1/32	Defibrating waste paper
D21C 5/02	Processes for obtaining cellulose by working-up waste paper
D21C 11/14	Regeneration of pulp liquors by wet combustion
D21F 1/66	Re-use of pulp-water in wet end machines for making continuous webs of paper
D21H 17/01	Waste products added to the pulp or used in paper-impregnating material **[5]**
E03F	Sewers, cesspools
E04F 17/10	Arrangements in buildings for the disposal of refuse
F23G	Consuming waste by combustion
F23J	Removal or treatment of combustion products or combustion residues
G03C 11/24	Removing emulsion from waste photographic material
G03G 21/10	Collecting or recycling waste developer used in electrography, electrophotography, magnetography
G21F 9/28	Treating radioactively contaminated solids
H01B 15/00	Apparatus or processes for salvaging material from electric cables
H01J 9/52	Recovery of material from discharge tubes or lamps **[7]**
H01M 6/52	Reclaiming serviceable parts of waste cells or batteries
H01M 10/54	Reclaiming serviceable parts of waste accumulators. **[3]**

ANNEX 29E B21 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title MECHANICAL METAL-WORKING WITHOUT ESSENTIALLY REMOVING MATERIAL; PUNCHING METAL**

ANNEX 30E B21D [Project-Rapporteur : A018/JP] <CE42>

AL C *26/02 · by applying fluid pressure*

AL N *26/021 · · Deforming sheet bodies*

AL D 26/023 < Delete new entry >

AL N *26/025 · · · Means for controlling the clamping or opening of the moulds*

AL N *26/027 · · · Means for controlling fluid parameters, e.g. pressure or temperature*

AL N *26/029 · · · Closing or sealing means*

AL N *26/031 · · · Mould construction (**B21D 26/025**-**B21D 26/029** take precedence)*

AL N *26/033 · · Deforming tubular bodies (corrugating tubes by applying fluid pressure **B21D 15/03**, **B21D 15/10**)*

AL D 26/035 < Delete new entry >

AL N *26/037 · · · Forming branched tubes*

AL N *26/039 · · · Means for controlling the clamping or opening of the moulds*

AL N *26/041 · · · Means for controlling fluid parameters, e.g. pressure or temperature*

AL N *26/043 · · · Means for controlling the axial pusher*

AL N *26/045 · · · Closing or sealing means*

AL N *26/047 · · · Mould construction (**B21D 26/037**-**B21D 26/045** take precedence)*

AL N *26/049 · · · Deforming bodies having a closed end*

AL N *26/051 · · · Deforming double-walled bodies*

AL N *26/053 · · characterised by the material of the blanks*

AL N *26/055 · · · Blanks having super-plastic properties*

AL N *26/057 · · · Tailored blanks*

AL N *26/059 · · · Layered blanks*

ANNEX 31E B21F [Project-Rapporteur : M014/IB] <CE42>

CL M **11/00 Cutting wire** (hand-held metal-shearing or metal-cutting devices **B23D 29/00**; hand cutting tools with two jaws which come into abutting contact **B26B 17/00**)

ANNEX 32E B23 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title MACHINE TOOLS; METAL-WORKING NOT OTHERWISE PROVIDED FOR**

ANNEX 33E B26D [Project-Rapporteur : C443/DE] <CE42>

CL M **Title CUTTING; DETAILS COMMON TO MACHINES FOR SEVERING, e.g. BY CUTTING, PERFORATING, PUNCHING, STAMPING-OUT** (soil-working **A01B**; for growing crops or plants **A01D**, **A01G**; for fodder or straw **A01F**; for bulk butter **A01J**; for dough **A21C**; slaughtering **A22B**; for tobacco, cigars or cigarettes **A24**; marking-out, perforating or making buttonholes **A41H 25/00**; manufacturing footwear **A43D**; brushmaking **A46D**; surgery **A61B**; disintegrating, mincing or shredding in general **B02C**; cutting wire, making pins or nails **B21F**, **B21G**; of the kind used for metal **B23**; cutting by abrasive fluid jets **B24C 5/02**; hand-held cutting tools **B26B**; perforating, cutting-out, stamping-out or punching, or severing by means other than cutting **B26F**; for wood **B27**; for stone **B28D**; working of plastics or substances in a plastic state **B29**; making boxes, cartons, envelopes or bags, of paper or similarly worked materials, e.g. metal foil, **B31B**; article or web delivery apparatus incorporating cutting or line-perforating devices **B65H 35/00**; for leather or upholstery **B68**, **C14B**; for glass **C03B**; making matches **C06F**; for peat **C10F**; for sugar **C13B 45/00**; for textile materials **D06H**; civil engineering, building, mining, see section E; devices for withdrawing samples by cutting **G01N 1/04**; for light guides **G02B 6/25**; cutting processed photographic material **G03D 15/04**)

ANNEX 34E B29 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title WORKING OF PLASTICS; WORKING OF SUBSTANCES IN A PLASTIC STATE IN GENERAL**

ANNEX 35E B29K [Project-Rapporteur : M704/EP] <CE42>

AL M **1/00 Use of cellulose, modified cellulose or cellulose derivatives, e.g. viscose, as moulding material**

AL M **7/00 Use of natural rubber as moulding material**

AL M **9/00 Use of rubber derived from conjugated dienes, as moulding material**

AL M **19/00 Use of rubber not provided for in a single one of main groups B29K 7/00-B29K 9/00, as moulding material**

AL M **21/00 Use of unspecified rubbers as moulding material**

AL M **23/00 Use of polyalkenes as moulding material**

AL M **25/00 Use of polymers of vinyl-aromatic compounds as moulding material**

AL M **27/00 Use of polyvinylhalogenides as moulding material**

AL M **29/00 Use of polyvinylalcohols, polyvinylethers, polyvinylaldehydes, polyvinylketones or polyvinylketals as moulding material**

AL M **31/00 Use of polyvinylesters as moulding material**

AL M **33/00 Use of polymers of unsaturated acids or derivatives thereof, as moulding material** (**B29K 35/00** takes precedence)

AL M **35/00 Use of polymers of unsaturated polycarboxylic acids as moulding material**

AL M **45/00 Use of polymers of unsaturated cyclic compounds having no unsaturated aliphatic groups in a side-chain, e.g. coumarone-indene resins, as moulding material**

AL M **55/00 Use of specific polymers obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in a single one of main groups B29K 23/00-B29K 45/00, as moulding material**

AL M **59/00 Use of polyacetals as moulding material**

AL M **61/00 Use of condensation polymers of aldehydes or ketones, as moulding material**

AL M **63/00 Use of epoxy resins as moulding material**

AL M **67/00 Use of polyesters as moulding material**

AL M **69/00 Use of polycarbonates as moulding material**

AL M **71/00 Use of polyethers as moulding material**

AL M **73/00 Use of other polymers having oxygen as the only hetero atom in the main chain, as moulding material**

AL M **75/00 Use of polyureas or polyurethanes as moulding material**

AL M **77/00 Use of polyamides, e.g. polyesteramides, as moulding material**

AL M **79/00 Use of other polymers having nitrogen, with or without oxygen or carbon only, in the main chain, as moulding material**

AL M **81/00 Use of polymers having sulfur, with or without nitrogen, oxygen or carbon only, in the main chain, as moulding material**

AL M **83/00 Use of polymers having silicon, with or without sulfur, nitrogen, oxygen or carbon only, in the main chain, as moulding material**

AL M **85/00 Use of polymers having elements other than silicon, nitrogen, oxygen or carbon only, in the main chain, as moulding material**

AL M **86/00 Use of specific polymers obtained by polycondensation or polyaddition, not provided for in a single one of main groups B29K 59/00-B29K 85/00, as moulding material**

AL M **91/00 Use of waxes as moulding material**

AL M **95/00 Use of bituminous materials as moulding material**

AL M **96/00 Use of specified macromolecular materials not provided for in a single one of main groups B29K 1/00-B29K 95/00, as moulding material**

AL M **101/00 Use of unspecified macromolecular compounds as moulding material** (use of unspecified rubbers **B29K 21/00**)

AL M **103/00 Use of resin-bonded materials as moulding material**

AL M **201/00 Use of cellulose, modified cellulose or cellulose derivatives, e.g. viscose, as reinforcement**

AL M **207/00 Use of natural rubber as reinforcement**

AL M **209/00 Use of rubber derived from conjugated dienes, as reinforcement**

AL M **219/00 Use of rubber not provided for in a single one of main groups B29K 207/00-B29K 209/00, as reinforcement**

AL M **221/00 Use of unspecified rubbers as reinforcement**

AL M **223/00 Use of polyalkenes as reinforcement**

AL M **225/00 Use of polymers of vinyl-aromatic compounds as reinforcement**

AL M **227/00 Use of polyvinylhalogenides as reinforcement**

AL M **229/00 Use of polyvinylalcohols, polyvinylethers, polyvinylaldehydes, polyvinylketones or polyvinylketals as reinforcement**

AL M **231/00 Use of polyvinylesters as reinforcement**

AL M **233/00 Use of polymers of unsaturated acids or derivatives thereof, as reinforcement** (**B29K 235/00** takes precedence)

AL M **235/00 Use of polymers of unsaturated polycarboxylic acids as reinforcement**

AL M **245/00 Use of polymers of unsaturated cyclic compounds having no unsaturated aliphatic groups in a side-chain, e.g. coumarone-indene resins, as reinforcement**

AL M **255/00 Use of specific polymers obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in a single one of main groups B29K 223/00-B29K 245/00, as reinforcement**

AL M **259/00 Use of polyacetals as reinforcement**

AL M **261/00 Use of condensation polymers of aldehydes or ketones, as reinforcement**

AL M **263/00 Use of epoxy resins as reinforcement**

AL M **267/00 Use of polyesters as reinforcement**

AL M **269/00 Use of polycarbonates as reinforcement**

AL M **271/00 Use of polyethers as reinforcement**

AL M **273/00 Use of other polymers having oxygen as the only hetero atom in the main chain, as reinforcement**

AL M **275/00 Use of polyureas or polyurethanes as reinforcement**

AL M **277/00 Use of polyamides, e.g. polyesteramides, as reinforcement**

AL M **279/00 Use of other polymers having nitrogen, with or without oxygen or carbon only, in the main chain, as reinforcement**

AL M **281/00 Use of polymers having sulfur, with or without nitrogen, oxygen or carbon only, in the main chain, as reinforcement**

AL M **283/00 Use of polymers having silicon, with or without sulfur, nitrogen, oxygen or carbon only, in the main chain, as reinforcement**

AL M **285/00 Use of polymers having elements other than silicon, nitrogen, oxygen or carbon only, in the main chain, as reinforcement**

AL M **286/00 Use of specific polymers obtained by polycondensation or polyaddition, not provided for in a single one of main groups B29K 259/00-B29K 285/00, as reinforcement**

AL M **295/00 Use of bituminous materials as reinforcement**

AL M **296/00 Use of specific macromolecular materials not provided for in a single one of main groups B29K 201/00-B29K 295/00, as reinforcement**

AL M **301/00 Use of unspecified macromolecular compounds as reinforcement** (use of unspecified rubbers **B29K 221/00**)

AL M **303/00 Use of resin-bonded materials as reinforcement**

AL M **305/00 Use of metals, their alloys or their compounds, as reinforcement**

AL M **307/00 Use of elements other than metals as reinforcement**

AL M **309/00 Use of inorganic materials not provided for in groups B29K 303/00-B29K 307/00, as reinforcement**

AL M **311/00 Use of natural products or their composites, not provided for in groups B29K 201/00-B29K 309/00, as reinforcement**

AL M **401/00 Use of cellulose, modified cellulose or cellulose derivatives, e.g. viscose, as filler**

AL M **407/00 Use of natural rubber as filler**

AL M **409/00 Use of rubber derived from conjugated dienes, as filler**

AL M **419/00 Use of rubber not provided for in a single one of main groups B29K 407/00-B29K 409/00, as filler**

AL M **421/00 Use of unspecified rubbers as filler**

AL M **423/00 Use of polyalkenes as filler**

AL M **425/00 Use of polymers of vinyl-aromatic compounds as filler**

AL M **427/00 Use of polyvinylhalogenides as filler**

AL M **429/00 Use of polyvinylalcohols, polyvinylethers, polyvinylaldehydes, polyvinylketones or polyvinylketals as filler**

AL M **431/00 Use of polyvinylesters as filler**

AL M **433/00 Use of polymers of unsaturated acids or derivatives thereof, as filler** (**B29K 435/00** takes precedence)

AL M **435/00 Use of polymers of unsaturated polycarboxylic acids as filler**

AL M **445/00 Use of polymers of unsaturated cyclic compounds having no unsaturated aliphatic groups in a side-chain, e.g. coumarone-indene resins, as filler**

AL M **455/00 Use of specific polymers obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in a single one of main groups B29K 423/00-B29K 445/00, as filler**

AL M **459/00 Use of polyacetals as filler**

AL M **461/00 Use of condensation polymers of aldehydes or ketones, as filler**

AL M **463/00 Use of epoxy resins as filler**

AL M **467/00 Use of polyesters as filler**

AL M **469/00 Use of polycarbonates as filler**

AL M **471/00 Use of polyethers as filler**

AL M **473/00 Use of other polymers having oxygen as the only hetero atom in the main chain, as filler**

AL M **475/00 Use of polyureas or polyurethanes as filler**

AL M **477/00 Use of polyamides, e.g. polyesteramides, as filler**

AL M **479/00 Use of other polymers having nitrogen, with or without oxygen or carbon only, in the main chain, as filler**

AL M **481/00 Use of polymers having sulfur, with or without nitrogen, oxygen or carbon only, in the main chain, as filler**

AL M **483/00 Use of polymers having silicon, with or without sulfur, nitrogen, oxygen or carbon only, in the main chain, as filler**

AL M **485/00 Use of polymers having elements other than silicon, nitrogen, oxygen or carbon only, in the main chain, as filler**

AL M **486/00 Use of specific polymers obtained by polycondensation or polyaddition, not provided for in a single one of main groups B29K 459/00-B29K 485/00, as filler**

AL M **491/00 Use of waxes as filler**

AL M **495/00 Use of bituminous materials as filler**

AL M **496/00 Use of specific macromolecular materials not provided for in a single one of main groups B29K 401/00-B29K 495/00, as filler**

AL M **501/00 Use of unspecified macromolecular compounds as filler** (use of unspecified rubbers **B29K 421/00**)

AL M **503/00 Use of resin-bonded materials as filler**

AL M **505/00 Use of metals, their alloys or their compounds, as filler**

AL M **507/00 Use of elements other than metals as filler**

AL M **509/00 Use of inorganic materials not provided for in groups B29K 503/00-B29K 507/00, as filler**

AL M **511/00 Use of natural products or their composites, not provided for in groups B29K 401/00-B29K 509/00, as filler**

AL M **601/00 Use of cellulose, modified cellulose or cellulose derivatives, e.g. viscose, for preformed parts, e.g. for inserts**

AL M **607/00 Use of natural rubber for preformed parts, e.g. for inserts**

AL M **609/00 Use of rubber derived from conjugated dienes, for preformed parts, e.g. for inserts**

AL M **619/00 Use of rubber not provided for in a single one of main groups B29K 607/00-B29K 609/00, for preformed parts, e.g. for inserts**

AL M **621/00 Use of unspecified rubbers for preformed parts, e.g. for inserts**

AL M **623/00 Use of polyalkenes for preformed parts, e.g. for inserts**

AL M **625/00 Use of polymers of vinyl-aromatic compounds for preformed parts, e.g. for inserts**

AL M **627/00 Use of polyvinylhalogenides for preformed parts, e.g. for inserts**

AL M **629/00 Use of polyvinylalcohols, polyvinylethers, polyvinylaldehydes, polyvinylketones or polyvinylketals for preformed parts, e.g. for inserts**

AL M **631/00 Use of polyvinylesters for preformed parts, e.g. for inserts**

AL M **633/00 Use of polymers of unsaturated acids or derivatives thereof, for preformed parts, e.g. for inserts** (**B29K 635/00** takes precedence)

AL M **635/00 Use of polymers of unsaturated polycarboxylic acids for preformed parts, e.g. for inserts**

AL M **645/00 Use of polymers of unsaturated cyclic compounds having no unsaturated aliphatic groups in a side-chain, e.g. coumarone-indene resins, for preformed parts, e.g. for inserts**

AL M **655/00 Use of specific polymers obtained by polymerisation reactions only involving carbon-to-carbon unsaturated bonds, not provided for in a single one of main groups B29K 623/00-B29K 645/00, for preformed parts, e.g. for inserts**

AL M **659/00 Use of polyacetals for preformed parts, e.g. for inserts**

AL M **661/00 Use of condensation polymers of aldehydes or ketones, for preformed parts, e.g. for inserts**

AL M **663/00 Use of epoxy resins for preformed parts, e.g. for inserts**

AL M **667/00 Use of polyesters for preformed parts, e.g. for inserts**

AL M **669/00 Use of polycarbonates for preformed parts, e.g. for inserts**

AL M **671/00 Use of polyethers for preformed parts, e.g. for inserts**

AL M **673/00 Use of other polymers having oxygen as the only hetero atom in the main chain, for preformed parts, e.g. for inserts**

AL M **675/00 Use of polyureas or polyurethanes for preformed parts, e.g. for inserts**

AL M **677/00 Use of polyamides, e.g. polyesteramides, for preformed parts, e.g. for inserts**

AL M **679/00 Use of other polymers having nitrogen, with or without oxygen or carbon only, in the main chain, for preformed parts, e.g. for inserts**

AL M **681/00 Use of polymers having sulfur, with or without nitrogen, oxygen or carbon only, in the main chain, for preformed parts, e.g. for inserts**

AL M **683/00 Use of polymers having silicon, with or without sulfur, nitrogen, oxygen or carbon only, in the main chain, for preformed parts, e.g. for inserts**

AL M **685/00 Use of polymers having elements other than silicon, nitrogen, oxygen or carbon only, in the main chain, for preformed parts, e.g. for inserts**

AL M **686/00 Use of specific polymers obtained by polycondensation or polyaddition, not provided for in a single one of main groups B29K 659/00-B29K 685/00, for preformed parts, e.g. for inserts**

AL M **691/00 Use of waxes for preformed parts, e.g. for inserts**

AL M **695/00 Use of bituminous materials for preformed parts, e.g. for inserts**

AL M **696/00 Use of specific macromolecular materials not provided for in a single one of main groups B29K 601/00-B29K 695/00, for preformed parts, e.g. for inserts**

AL M **701/00 Use of unspecified macromolecular compounds for preformed parts, e.g. for inserts** (use of unspecified rubbers **B29K 621/00**)

AL M **703/00 Use of resin-bonded materials for preformed parts, e.g. for inserts**

AL M **705/00 Use of metals, their alloys or their compounds, for preformed parts, e.g. for inserts**

AL M **707/00 Use of elements other than metals for preformed parts, e.g. for inserts**

AL M **709/00 Use of inorganic materials not provided for in groups B29K 703/00-B29K 707/00, for preformed parts, e.g. for inserts**

AL M **711/00 Use of natural products or their composites, not provided for in groups B29K 601/00-B29K 709/00, for preformed parts, e.g. for inserts**

ANNEX 36E B31 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title MAKING PAPER ARTICLES; WORKING PAPER**

ANNEX 37E B41 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title PRINTING; LINING MACHINES; TYPEWRITERS; STAMPS**

ANNEX 38E B60L [Project-Rapporteur : M701/SE] <CE42>

AL M **Title PROPULSION OF ELECTRICALLY-PROPELLED VEHICLES** (arrangements or mounting of electrical propulsion units or of plural diverse prime-movers for mutual or common propulsion in vehicles **B60K 1/00**, **B60K 6/20**; arrangements or mounting of electrical gearing in vehicles **B60K 17/12**, **B60K 17/14**; preventing wheel slip by reducing power in rail vehicles **B61C 15/08**; dynamo-electric machines **H02K**; control or regulation of electric motors **H02P**) **; SUPPLYING ELECTRIC POWER FOR AUXILIARY EQUIPMENT OF ELECTRICALLY-PROPELLED VEHICLES** (electric coupling devices combined with mechanical couplings of vehicles **B60D 1/64**; electric heating for vehicles **B60H 1/00**) **; ELECTRODYNAMIC BRAKE SYSTEMS FOR VEHICLES IN GENERAL** (control or regulation of electric motors **H02P**) **; MAGNETIC SUSPENSION OR LEVITATION FOR VEHICLES; MONITORING OPERATING VARIABLES OF ELECTRICALLY-PROPELLED VEHICLES; ELECTRIC SAFETY DEVICES FOR ELECTRICALLY-PROPELLED VEHICLES**

CL D Note B60L < Deleted >

CL M **1/00** **Supplying electric power to auxiliary equipment of electrically-propelled vehicles** (arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general **B60Q**)

CL M **3/00** **Electric devices on electrically-propelled vehicles for safety purposes; Monitoring operating variables, e.g. speed, deceleration, power consumption**

CL M 3/04 · Cutting-off the power supply under fault conditions

CL M **5/00** **Current-collectors for power supply lines of electrically-propelled vehicles**

AL M 7/24 · with additional mechanical or electromagnetic braking

CL M **9/00** **Electric propulsion with power supply external to vehicle** (**B60L 8/00**, **B60L 13/00** take precedence)

AL M **11/00** **Electric propulsion with power supplied within the vehicle** (**B60L 8/00**, **B60L 13/00** take precedence; arrangements or mounting of prime-movers consisting of electric motors and internal combustion engines for mutual or common propulsion **B60K 6/20**)

CL M **13/00** **Electric propulsion for monorail vehicles, suspension vehicles or rack railways; Magnetic suspension or levitation for vehicles**

CL M **15/00** **Methods, circuits or devices for controlling the propulsion of electrically-propelled vehicles, e.g. their traction-motor speed, to achieve a desired performance; Adaptation of control equipment on electrically-propelled vehicles for remote actuation from a stationary place, from alternative parts of the vehicle or from alternative vehicles of the same vehicle train**

ANNEX 39E B60R [Project-Rapporteur : A017/US] <CE42>

AL N *21/201* · · · · *Packaging straps or envelopes for inflatable members*

AL N *21/206* · · · · · *in the lower part of dashboards, e.g. for protecting the knees*

AL M 21/213 · · · · in vehicle roof frames or pillars

AL N *21/214* · · · · *in roof panels*

AL N *21/2155* · · · · · *with complex motion of the cover; Retraction under the lining during opening*

AL N *21/216* · · · · · *comprising tether means for limitation of cover motion during deployment*

AL N *21/2165* · · · · · *characterised by a tear line for defining a deployment opening*

AL C *21/217* · · · · *Inflation fluid source retainers, e.g. reaction canisters; Connection of bags, covers, diffusers or inflation fluid sources therewith or together*

CL M 21/23 · · · Inflatable members (**B60R 21/18** takes precedence)

AL C *21/231* · · · · *characterised by their shape, construction or spatial configuration*

AL N *21/232* · · · · · *Curtain-type airbags deploying mainly in a vertical direction from their top edge*

AL M 21/233 · · · · · comprising a plurality of individual compartments; comprising two or more bag-like members, one within the other (**B60R 21/232** takes precedence)

AL N *21/2334* · · · · · *Expansion regulating features*

AL N *21/2338* · · · · · · *Tethers*

AL N *21/2342* · · · · · · *Tear seams*

AL N *21/2346* · · · · · · *Soft diffusers*

AL N *21/261* · · · · *with means other than bag structure to diffuse or guide inflation fluid*

AL N *21/262* · · · · · *Elongated tubular diffusers, e.g. curtain-type*

AL N *21/263* · · · · *using a variable source, e.g. plural stage or controlled output (hybrid inflator **B60R 21/272**)*

AL M 21/264 · · · · using instantaneous generation of gas, e.g. pyrotechnic (**B60R 21/268** takes precedence)

AL C *21/272* · · · · · *with means for increasing the pressure of the gas just before or during liberation, e.g. hybrid inflators*

AL N *21/274* · · · · · *characterised by means to rupture or open the fluid source*

AL N *21/36* · · *using airbags*

AL N *21/38* · · *using means for lifting bonnets*

ANNEX 40E B60T [Project-Rapporteur : M010/IB] <CE42>

CL M Subclass index		
	IMMOBILISATION	
	Portable devices	**3/00**
	BRAKING	
	Kind of braking and corresponding arrangements	**1/00**
	Vehicle modifications for cooling brakes	**5/00**
	Kinds of brake control	
	initiating means; varying braking force or its distribution according to road or load conditions	**7/00**; **8/00**
	continuous braking	**10/00**
	transmission of control between initiating means and brakes	**11/00**, **13/00**
	Parts or accessories for fluid-pressure brake control:	

valve structure, disposition, and operation	**15/00**
other parts or accessories	**17/00**

ANNEX 41E B60V [Project-Rapporteur : M036/IB] <CE42>

CL M **Title AIR-CUSHION VEHICLES**

AL M 1/22 · provided with hydrofoils

ANNEX 42E B61D [Project-Rapporteur : M010/IB] <CE42>

CL M Subclass index

KINDS OF VEHICLES	
Passenger; goods; tank; mine	**1/00**; **3/00**; **5/00**; **11/00**
Hopper; tipping	**7/00**; **9/00**
Tramway	**13/00**
Other	**15/00**
BODY DETAILS AND ACCESSORIES	
Details	
bodywork: general; doors; steps; windows; movable roofs; loading means	**17/00**; **19/00**; **23/00**; **25/00**; **39/00**; **47/00**
interior fittings: sleeping; seating; sanitation; air-conditioning; lighting; other	**31/00**; **33/00**; **35/00**; **27/00**; **29/00**; **37/00**
devices using movement of vehicle	**43/00**
other	**49/00**
Accessories	
signs, ticket-holders	**41/00**
covers; securing load	**39/00**; **45/00**
other	**49/00**

ANNEX 43E B65B [Project-Rapporteur : C443/DE] <CE42>

CL M **Title MACHINES, APPARATUS OR DEVICES FOR, OR METHODS OF, PACKAGING ARTICLES OR MATERIALS; UNPACKING** (bundling and pressing devices for cigars **A24C 1/44**; paper-bag holders as shop or office accessories **A47F 13/08**; apparatus for coating, e.g. by dipping, **B05C**; devices for tensioning and securing binders adapted to be supported by the article or articles to be bound **B25B**; nailing or stapling devices **B25C**, **B27F**; inserting documents in envelopes and closing the latter **B43M 3/00**, **B43M 5/00**; labelling **B65C**; wrappers, containers or other packaging elements, e.g. binders, closures,

protective caps, **B65D**; transport or storage devices **B65G**; devices for handling sheets or webs of interest apart from their application in packaging machines **B65H**; applying closure members to bottles, jars or similar containers **B67B**; hand- or power-operated devices not attached to, or not incorporated in, containers or container closures for opening closed containers **B67B 7/00**; packaging of matches **C06F**; wrapping sugar during manufacture **C13B 45/02**; packaging of ammunition or explosive charges **F42B 39/00**; making containers or receptacles, see the appropriate subclasses)

ANNEX 44E B67 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title** **OPENING OR CLOSING BOTTLES, JARS OR SIMILAR CONTAINERS; LIQUID HANDLING**

ANNEX 45E B82 [Project-Rapporteur : C452/US] <CE42>

CL N *Note B82* *In this class, the following terms are used with the meaning indicated:*

- *"nano-size" or "nano-scale" relate to a controlled geometrical size below 100 nanometres (nm) in one or more dimensions;* **[new.]**
- *"nano-structure" means an entity having at least one nano-sized functional component that makes physical, chemical or biological properties or effects available, which are uniquely attributable to the nano-scale.* **[new.]**

ANNEX 46E B82B [Project-Rapporteur : C452/US] <CE42>

CL M **Title** **NANO-STRUCTURES FORMED BY MANIPULATION OF INDIVIDUAL ATOMS, MOLECULES, OR LIMITED COLLECTIONS OF ATOMS OR MOLECULES AS DISCRETE UNITS; MANUFACTURE OR TREATMENT THEREOF**

CL M Note B82B

1. This subclass does not cover chemical or biological nano-structures per se, provided for elsewhere, e.g., in classes **C08** or **C12**.
2. *Attention is drawn to the Note following the title of class **B82**, which defines the meaning of the terms "nano-size", "nano-scale" and "nano-structure" in this subclass.* **[new.]**
3. *Subject matter classified in this subclass is further classified in subclass **B82Y**, in order to enable a comprehensive search of nano-structure technology using classification symbols of **B82Y** in combination with classification symbols of **B82B**.* **[new.]**
4. *Nano-structures having specialised features or functions are further classified in appropriate places in other subclasses that provide for those features or functions, e.g. in **G01Q** , **G02F 1/017**, **H01L 29/775**.* **[new.]**

CL M **1/00** **Nano-structures formed by manipulation of individual atoms or molecules, or limited collections of atoms or molecules as discrete units**

CL M **3/00 Manufacture or treatment of nano-structures by manipulation of individual atoms or molecules, or limited collections of atoms or molecules as discrete units**

ANNEX 47E B82Y [Project-Rapporteur : C452/US] <CE42>

CL N ***Title*** ***SPECIFIC USES OR APPLICATIONS OF NANO-STRUCTURES; MEASUREMENT OR ANALYSIS OF NANO-STRUCTURES; MANUFACTURE OR TREATMENT OF NANO-STRUCTURES***

CL N *Note B82Y*

1. *This subclass covers applications and aspects of nano-structures which are produced by any method, and is not restricted to those that are formed by manipulation of individual atoms or molecules.* **[new.]**
2. *Attention is drawn to the Note following the title of class* ***B82****, which defines the meaning of the terms "nano-size", "nano-scale" and "nano-structure" in this subclass.* **[new.]**
3. *This subclass is intended to enable a comprehensive search of subject matter related to nano-structures by combination of classification symbols of this subclass with classification symbols from other subclasses. Therefore this subclass covers aspects of nano-structures that might also be entirely or partially covered elsewhere in the IPC.* **[new.]**
4. *This subclass is for secondary classification, i.e. obligatory supplementary classification of subject matter already classified as such in other classification places, e.g.:* **[new.]**

B82B	*Nano-structures formed by individual manipulation of atoms, molecules, or limited collections of atoms or molecules as discrete units; manufacture or treatment thereof*
A61K 9/51	*Nano-capsules for medicinal preparations*
B05D 1/20	*Langmuir-Blodgett films*
C01B 31/02	*Carbon nano-structures, e.g. bucky-balls, nanotubes, nanocoils, nano-doughnuts or nano-onions*
G01Q	*Scanning probe techniques*
G02F 1/017	*Optical quantum wells or boxes*
H01F 10/32	*Nano-structured thin magnetic films*
H01F 41/30	*Molecular beam epitaxy [MBE]*
H01L 29/775	*Quantum wire FETs*

5. *The classification symbols of this subclass are not listed first when assigned to patent documents.* **[new.]**
6. *In this subclass, multi-aspects classification is applied, so that aspects of subject matter that are covered by more than one of its groups should be classified in each of those groups.* **[new.]**

CL N ***5/00 Nano-biotechnology or nano-medicine, e.g. protein engineering or drug delivery***

CL N ***10/00 Nano-technology for information processing, storage or transmission, e.g. quantum computing or single electron logic***

CL N ***15/00 Nano-technology for interacting, sensing or actuating, e.g. quantum dots as markers in protein assays or molecular motors***

CL N ***20/00 Nano-optics, e.g. quantum optics or photonic crystals***

CL N ***25/00 Nano-magnetism, e.g. magnetoimpedance, anisotropic magnetoresistance, giant magnetoresistance or tunneling magnetoresistance***

CL N ***30/00 Nano-technology for materials or surface science, e.g. nano-composites***

CL N ***35/00 Methods or apparatus for measurement or analysis of nano-structures***

CL N ***40/00 Manufacture or treatment of nano-structures***

CL N ***99/00 Subject matter not provided for in other groups of this subclass***

ANNEX 48E C01 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title INORGANIC CHEMISTRY**

ANNEX 49E C01B [Project-Rapporteur : M035/IB] <CE42>

CL M **Title NON-METALLIC ELEMENTS; COMPOUNDS THEREOF** (fermentation or enzyme-using processes for the preparation of elements or inorganic compounds except carbon dioxide **C12P 3/00**; production of non-metallic elements or inorganic compounds by electrolysis or electrophoresis **C25B**)

ANNEX 50E C01B [Project-Rapporteur : M038/IB] <CE42>

AL M **3/00 Hydrogen; Gaseous mixtures containing hydrogen; Separation of hydrogen from mixtures containing it; Purification of hydrogen** (production of water-gas or synthesis gas from solid carbonaceous material **C10J**)

AL M 3/22 ・・ by decomposition of gaseous or liquid organic compounds

CL M **4/00 Hydrogen isotopes; Inorganic compounds thereof prepared by isotope exchange, e.g. $NH_3 + D_2$ $NH_2D + HD$**

CL M **6/00 Hydrides of metals; Monoborane or diborane; Addition complexes thereof**

CL M **7/00 Halogens; Halogen acids**

CL M **19/00 Selenium; Tellurium; Compounds thereof**

AL M 21/06 · Binary compounds of nitrogen with metals, with silicon, or with boron

AL M 25/234 · · · Purification; Stabilisation; Concentration (purification concomitant with preparation **C01B 25/22**)

AL M 25/46 · · Preparation involving solvent-solvent extraction

AL M **31/00 Carbon; Compounds thereof** (**C01B 21/00**, **C01B 23/00** take precedence; percarbonates **C01B 15/10**; carbon black **C09C 1/48**)

AL M 31/14 · · Granulation

AL M 31/18 · Carbon monoxide

AL M 31/30 · Carbides

AL M 33/06 · Metal silicides

AL M 33/18 · · · Preparation of finely divided silica neither in sol nor in gel form; After-treatment thereof (treatment to enhance the pigmenting or filling properties **C09C**)

AL M 33/36 · · having base-exchange properties but not having molecular sieve properties

AL M 33/46 · · · Amorphous silicates, e.g. so-called "amorphous zeolites"

CL M **35/00 Boron; Compounds thereof** (monoborane, diborane, metal borohydrides or addition complexes thereof **C01B 6/00**; perborates **C01B 15/12**; binary compounds with nitrogen **C01B 21/06**; phosphides **C01B 25/08**; carbides **C01B 31/36**)

CL M **39/00 Compounds having molecular sieve and base-exchange properties, e.g. crystalline zeolites; Their preparation; After-treatment, e.g. ion-exchange or dealumination** (treatment to modify the sorption properties, e.g. shaping using a binder, **B01J 20/10**; treatment to modify the catalytic properties, e.g. combination of treatments to make the zeolites appropriate to their use as a catalyst, **B01J 29/04**; treatment to improve the ion-exchange properties **B01J 39/14**)

ANNEX 51E C01C [Project-Rapporteur : M035/IB] <CE42>

CL M **Title AMMONIA; CYANOGEN; COMPOUNDS THEREOF** (salts of oxyacids of halogens **C01B 11/00**; peroxides, salts of peroxyacids **C01B 15/00**; thiosulfates, dithionites, polythionates **C01B 17/64**; compounds containing selenium or tellurium **C01B 19/00**; azides **C01B 21/08**; metal amides **C01B 21/092**; nitrites **C01B 21/50**; phosphides **C01B 25/08**; salts of oxyacids of phosphorus **C01B 25/16**; compounds containing silicon **C01B 33/00**; compounds containing boron **C01B 35/00**; fermentation or enzyme-using processes for the preparation of elements or inorganic compounds except carbon dioxide **C12P 3/00**; production of non-metallic elements or inorganic compounds by electrolysis or electrophoresis **C25B**)

ANNEX 52E C01C [Project-Rapporteur : M038/IB] <CE42>

AL M 3/16 · Cyanamide; Salts thereof

ANNEX 53E C01D [Project-Rapporteur : M035/IB] <CE42>

CL M **Title COMPOUNDS OF ALKALI METALS, i.e. LITHIUM, SODIUM, POTASSIUM, RUBIDIUM, CAESIUM, OR FRANCIUM** (metal hydrides **C01B 6/00**; salts of oxyacids of halogens **C01B 11/00**; peroxides, salts of peroxyacids **C01B 15/00**; sulfides or polysulfides **C01B 17/22**; thiosulfates, dithionites, polythionates **C01B 17/64**; compounds containing selenium or tellurium **C01B 19/00**; binary compounds of nitrogen with metals **C01B 21/06**; azides **C01B 21/08**; metal amides **C01B 21/092**; nitrites **C01B 21/50**; phosphides **C01B 25/08**; salts of oxyacids of phosphorus **C01B 25/16**; carbides **C01B 31/30**; compounds containing silicon **C01B 33/00**; compounds containing boron **C01B 35/00**; cyanides **C01C 3/08**; salts of cyanic acid **C01C 3/14**; salts of cyanamide **C01C 3/16**; thiocyanates **C01C 3/20**; fermentation or enzyme-using processes for the preparation of elements or inorganic compounds except carbon dioxide **C12P 3/00**; obtaining metal compounds from mixtures, e.g. ores, which are intermediate compounds in a metallurgical process for obtaining a free metal **C22B**; production of non-metallic elements or inorganic compounds by electrolysis or electrophoresis **C25B**)

ANNEX 54E C01F [Project-Rapporteur : M035/IB] <CE42>

CL M **Title COMPOUNDS OF THE METALS BERYLLIUM, MAGNESIUM, ALUMINIUM, CALCIUM, STRONTIUM, BARIUM, RADIUM, THORIUM, OR OF THE RARE-EARTH METALS** (metal hydrides **C01B 6/00**; salts of oxyacids of halogens **C01B 11/00**; peroxides, salts of peroxyacids **C01B 15/00**; sulfides or polysulfides of magnesium, calcium, strontium, or barium **C01B 17/42**; thiosulfates, dithionites, polythionates **C01B 17/64**; compounds containing selenium or tellurium **C01B 19/00**; binary compounds of nitrogen with metals **C01B 21/06**; azides **C01B 21/08**; metal amides **C01B 21/092**; nitrites **C01B 21/50**; phosphides **C01B 25/08**; salts of oxyacids of phosphorus **C01B 25/16**; carbides **C01B 31/30**; compounds containing silicon **C01B 33/00**; compounds containing boron **C01B 35/00**; compounds having molecular sieve properties but not having base-exchange properties **C01B 37/00**; compounds having molecular sieve and base-exchange properties, e.g. crystalline zeolites, **C01B 39/00**; cyanides **C01C 3/08**; salts of cyanic acid **C01C 3/14**; salts of cyanamide **C01C 3/16**; thiocyanates **C01C 3/20**; fermentation or enzyme-using processes for the preparation of elements or inorganic compounds except carbon dioxide **C12P 3/00**; obtaining metal compounds from mixtures, e.g. ores, which are intermediate compounds in a metallurgical process for obtaining a free metal **C22B**; production of non-metallic elements or inorganic compounds by electrolysis or electrophoresis **C25B**)

ANNEX 55E C01G [Project-Rapporteur : M035/IB] <CE42>

CL M **Title COMPOUNDS CONTAINING METALS NOT COVERED BY SUBCLASSES C01D OR C01F** (metal hydrides **C01B 6/00**; salts of oxyacids of halogens **C01B 11/00**; peroxides, salts of peroxyacids **C01B 15/00**; thiosulfates, dithionites, polythionates **C01B 17/64**; compounds containing selenium or tellurium **C01B 19/00**; binary compounds of nitrogen with metals **C01B 21/06**; azides **C01B 21/08**; metal amides **C01B 21/092**; nitrites **C01B 21/50**; phosphides **C01B 25/08**; salts of oxyacids of phosphorus **C01B 25/16**; carbides **C01B 31/30**; compounds containing silicon **C01B 33/00**; compounds containing boron **C01B 35/00**; compounds having molecular sieve properties but not having base-exchange properties **C01B 37/00**; compounds having molecular sieve and base-exchange properties, e.g. crystalline zeolites, **C01B 39/00**; cyanides **C01C 3/08**; salts of cyanic acid **C01C 3/14**; salts of cyanamide **C01C 3/16**; thiocyanates **C01C 3/20**; fermentation or enzyme-using processes for the preparation of elements or inorganic compounds except carbon dioxide **C12P 3/00**; obtaining metal compounds from mixtures, e.g. ores, which are intermediate compounds in a metallurgical process for obtaining a free metal **C21B**, **C22B**; production of non-metallic elements or inorganic compounds by electrolysis or electrophoresis **C25B**)

ANNEX 56E C02 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title TREATMENT OF WATER, WASTE WATER, SEWAGE, OR SLUDGE**

ANNEX 57E C02F [Project-Rapporteur : M035/IB] <CE42>

CL M **Title TREATMENT OF WATER, WASTE WATER, SEWAGE, OR SLUDGE** (processes for making harmful chemical substances harmless, or less harmful, by effecting a chemical change in the substances **A62D 3/00**; separation, settling tanks or filter devices **B01D**; special arrangements on waterborne vessels of installations for treating water, waste water or sewage, e.g. for producing fresh water, **B63J**; adding materials to water to prevent corrosion **C23F**; treating radioactively-contaminated liquids **G21F 9/04**)

ANNEX 58E C02F [Project-Rapporteur : M038/IB] <CE42>

CL M 1/02 · by heating

CL M 1/20 · by degassing, i.e. liberation of dissolved gases

CL M 1/40 · Devices for separating or removing fatty or oily substances or similar floating material (cleaning or keeping clear the surface of open water from oil or like materials **E02B 15/04**; devices in sewers for separating liquid or solid substances from sewage **E03F 5/14**)

CL M 1/42 · by ion-exchange

CL M 1/68 · by addition of specified substances, e.g. trace elements, for ameliorating potable water

CL M 3/10 · · Packings; Fillings; Grids

CL M 11/06 · by oxidation

ANNEX 59E C04 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title CEMENTS; CONCRETE; ARTIFICIAL STONE; CERAMICS; REFRACTORIES**

ANNEX 60E C04B [Project-Rapporteur : M035/IB] <CE42>

CL M **Title LIME; MAGNESIA; SLAG; CEMENTS; COMPOSITIONS THEREOF, e.g. MORTARS, CONCRETE OR LIKE BUILDING MATERIALS; ARTIFICIAL STONE; CERAMICS** (devitrified glass-ceramics **C03C 10/00**) **; REFRACTORIES** (alloys based on refractory metals **C22C**) **; TREATMENT OF NATURAL STONE**

ANNEX 61E C05 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title FERTILISERS; MANUFACTURE THEREOF**

ANNEX 62E C06B [Project-Rapporteur : M038/IB] <CE42>

CL M **Title EXPLOSIVE OR THERMIC COMPOSITIONS** (blasting **F42D**) **; MANUFACTURE THEREOF; USE OF SINGLE SUBSTANCES AS EXPLOSIVES**

ANNEX 63E C06C [Project-Rapporteur : D201/EP] <CE42>

CL M **Title DETONATING OR PRIMING DEVICES; FUSES; CHEMICAL LIGHTERS; PYROPHORIC COMPOSITIONS**

CL M **15/00 Pyrophoric compositions; Flints** (chemical lighters **C06C 9/00**)

ANNEX 64E C06D [Project-Rapporteur : D202/EP] <CE42>

CL M **Title MEANS FOR GENERATING SMOKE OR MIST; GAS-ATTACK COMPOSITIONS; GENERATION OF GAS FOR BLASTING OR PROPULSION (CHEMICAL PART)**

CL M **3/00 Generation of smoke or mist (chemical part)** (compositions used as biocides, pest repellants or attractants, or plant growth regulators **A01N 25/18**)

ANNEX 65E C06F [Project-Rapporteur : D203/EP] <CE42>

AL M 1/02 · Cutting match splints

AL M 1/06 · Dipping, coating, impregnating, or drying of matches

AL M 1/12 · Filling matches into boxes

CL M **3/00 Chemical features in the manufacture of matches**

ANNEX 66E C07 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title ORGANIC CHEMISTRY**

ANNEX 67E C07B [Project-Rapporteur : M101/SE] <CE42>

CL M **Title GENERAL METHODS OF ORGANIC CHEMISTRY; APPARATUS THEREFOR** (preparation of carboxylic acid esters by telomerisation **C07C 67/47**; processes for preparing macromolecular compounds, e.g. telomerisation **C08F**, **C08G**)

CL M Note C07B

1. In this subclass, a functional group which is already present in some residue being introduced and is not substantially involved in a chemical reaction, is not considered as the functional group which is formed or introduced as a result of the chemical reaction. **[4]**
2. In this subclass, the following term is used with the meaning indicated:
   - "separation" means separation only for the purposes of recovering organic compounds. **[4]**
3. When classifying in this subclass, classification is also made in group **B01D 15/08**insofar as subject matter of general interest relating to chromatography is concerned. **[8]**
4. In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place according to the type of reaction employed, noting the bond or the functional group which is formed or introduced as a result of

the chemical reaction. **[4]**

CL M Subclass index

REDUCTION IN GENERAL	**31/00**
OXIDATION IN GENERAL	**33/00**
REACTIONS WITHOUT FORMATION OR INTRODUCTION OF FUNCTIONAL GROUPS CONTAINING HETERO ATOMS	
Change of bond type between carbon atoms already directly linked	**35/00**
Formation of new or disconnection of existing carbon-to-carbon bonds	**37/00**
REACTIONS WITH FORMATION OR INTRODUCTION OF FUNCTIONAL GROUPS CONTAINING HETERO ATOMS	
Halogenation	**39/00**
Oxygen-containing groups	**41/00**
Nitrogen-containing groups	**43/00**
Sulfur-containing groups	**45/00**
Other groups	**47/00**
GRIGNARD REACTIONS	**49/00**
INTRODUCTION OF PROTECTING OR ACTIVATING GROUPS NOT COVERED BY THE PRECEDING GROUPS	**51/00**
ASYMMETRIC SYNTHESES	**53/00**
RACEMISATION, INVERSION	**55/00**
SEPARATION, PURIFICATION, STABILISATION, USE OF ADDITIVES	**57/00**, **63/00**
INTRODUCTION OF ISOTOPES	**59/00**
GENERATION OF ORGANIC FREE RADICALS	**60/00**
OTHER GENERAL METHODS	**61/00**

CL M **57/00 Separation of optically-active organic compounds**

CL N ***60/00 Generation of organic free radicals***

AL D 61/02 (transferred to **C07B 60/00**)

CL M **63/00 Purification; Separation specially adapted for the purpose of recovering organic compounds** (separation of optically-active organic compounds **C07B 57/00**) **; Stabilisation; Use of additives**

ANNEX 68E C07G [Project-Rapporteur : C455/EP] <CE42>

CL C ***1/00*** ***Low-molecular-weight derivatives of lignin*** *(high-molecular-weight derivatives of lignin* ***C08H 7/00****)*

ANNEX 69E C07H [Project-Rapporteur : M038/IB] <CE42>

CL M **11/00 Compounds containing saccharide radicals esterified by inorganic acids; Metal salts thereof** (halo-sugars **C07H 5/02**; thio-, seleno-, or telluro-sugars **C07H 5/08**)

AL M 11/04 · Phosphates; Phosphites; Polyphosphates

AL M 15/08 · · · Polyoxyalkylene derivatives

AL M 15/24 · · Condensed ring systems having three or more rings

AL M 19/207 · · · · · the phosphoric or polyphosphoric acids being esterified by a further hydroxylic compound, e.g. flavine-adenine dinucleotide or nicotinamide-adenine dinucleotide

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ANNEX 70E C07J [Project-Rapporteur : M038/IB] <CE42>

CL M **17/00 Normal steroids containing carbon, hydrogen, halogen, or oxygen, having an oxygen-containing hetero ring not condensed with the cyclopenta[a]hydrophenanthrene skeleton**

ANNEX 71E C08 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title ORGANIC MACROMOLECULAR COMPOUNDS; THEIR PREPARATION OR CHEMICAL WORKING-UP; COMPOSITIONS BASED THEREON**

ANNEX 72E C08H [Project-Rapporteur : C455/EP] <CE42>

CL N ***7/00*** ***Lignin; Modified lignin; High-molecular-weight products derived therefrom*** *(low-molecular-weight derivatives of lignin* ***C07G 1/00****)*

ANNEX 73E C08K [Project-Rapporteur : D100/DE] <CE42>

CL M **Title USE OF INORGANIC OR NON-MACROMOLECULAR ORGANIC SUBSTANCES AS COMPOUNDING INGREDIENTS** (paints, inks, varnishes, dyes, polishes, adhesives **C09**)

ANNEX 74E C09F [Project-Rapporteur : D200/EP] <CE42>

AL M 1/04 · Chemical modification, e.g. esterification

CL M **5/00 Obtaining drying-oils**

CL M **7/00 Chemical modification of drying-oils** (factice **C08H**)

ANNEX 75E C09J [Project-Rapporteur : D095/GB] <CE42>

CL M **Title ADHESIVES; NON-MECHANICAL ASPECTS OF ADHESIVE PROCESSES IN GENERAL; ADHESIVE PROCESSES NOT PROVIDED FOR ELSEWHERE; USE OF MATERIALS AS ADHESIVES** (surgical adhesives **A61L 24/00**; adhesives on the basis of non specified organic macromolecular compounds used as bonding agents in layered products **B32B**; labelling fabrics or comparable materials or articles with deformable surface using adhesives and thermo-activatable adhesives respectively **B65C 5/02**, **B65C 5/04**; preparation of glue or gelatine **C09H**; adhesive labels, tag tickets or similar identification of indication means **G09F 3/10**)

CL M **5/00 Adhesive processes in general; Adhesive processes not provided for elsewhere, e.g. relating to primers**

CL M **189/00 Adhesives based on proteins; Adhesives based on derivatives thereof**

CL M **191/00 Adhesives based on oils, fats or waxes; Adhesives based on derivatives thereof**

CL M **193/00 Adhesives based on natural resins; Adhesives based on derivatives thereof** (based on polysaccharides **C09J 101/00-C09J 105/00**; based on natural rubber **C09J 107/00**)

ANNEX 76E C10B [Project-Rapporteur : D204/GB] <CE42>

AL M 45/02 · Devices for producing compact unified coal charges outside the oven

AL M 57/08 · Non-mechanical pretreatment of the charge

AL M 57/18 · Modifying the properties of the distillation gases in the oven

ANNEX 77E C10C [Project-Rapporteur : D205/GB] <CE42>

CL M **Title WORKING-UP TAR, PITCH, ASPHALT, BITUMEN; PYROLIGNEOUS ACID**

CL M **1/00 Working-up tar** (obtaining hydrocarbon oils **C10G**)

ANNEX 78E C10F [Project-Rapporteur : D206/GB] <CE42>

CL M **5/00 Drying or de-watering peat**

ANNEX 79E C10G [Project-Rapporteur : D207/GB] <CE42>

CL M **Title CRACKING HYDROCARBON OILS; PRODUCTION OF LIQUID HYDROCARBON MIXTURES, e.g. BY DESTRUCTIVE HYDROGENATION, OLIGOMERISATION, POLYMERISATION** (cracking to hydrogen or synthesis gas **C01B**; cracking or pyrolysis of hydrocarbon gases to individual hydrocarbons or mixtures thereof of definite or specified constitution **C07C**; cracking to cokes **C10B**) **; RECOVERY OF HYDROCARBON OILS FROM OIL-SHALE, OIL-SAND, OR GASES; REFINING MIXTURES MAINLY CONSISTING OF HYDROCARBONS; REFORMING OF NAPHTHA; MINERAL WAXES**

AL M 1/02 · by distillation

CL M **3/00 Production of liquid hydrocarbon mixtures from oxygen-containing organic materials, e.g. fatty oils, fatty acids** (production from non-melting solid oxygen-containing carbonaceous materials **C10G 1/00**)

CL M **7/00 Distillation of hydrocarbon oils**

AL M 7/12 · Controlling or regulating

CL M **21/00 Refining of hydrocarbon oils, in the absence of hydrogen, by extraction with selective solvents** (**C10G 17/00**, **C10G 19/00** take precedence)

AL M 21/30 · Controlling or regulating

AL M 33/08 · Controlling or regulating

AL M 35/24 · Controlling or regulating of reforming operations

AL M 45/68 · · Aromatisation of hydrocarbon oil fractions

AL M 45/72 · Controlling or regulating

AL M 47/36 · Controlling or regulating

AL M 49/26 · Controlling or regulating

CL M **50/00 Production of liquid hydrocarbon mixtures from lower carbon number hydrocarbons, e.g. by oligomerisation**

AL M 53/06 · · · including only extraction steps, e.g. deasphalting by solvent treatment followed by extraction of aromatics

AL M **71/00 Treatment by methods not otherwise provided for of hydrocarbon oils or fatty oils for lubricating purposes**

AL M 73/34 ・・ Controlling or regulating

CL M **75/00 Inhibiting corrosion or fouling in apparatus for treatment or conversion of hydrocarbon oils, in general** (**C10G 7/10**, **C10G 9/16** take precedence)

ANNEX 80E C10H [Project-Rapporteur : D208/GB] <CE42>

CL M **Title PRODUCTION OF ACETYLENE BY WET METHODS**

CL M **1/00 Acetylene gas generators with dropwise, gravity, non-automatic water feed**

ANNEX 81E C10K [Project-Rapporteur : D209/GB] <CE42>

AL M 1/08 ・ by washing with liquids; Reviving the used wash liquors

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ANNEX 82E C11 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title ANIMAL OR VEGETABLE OILS, FATS, FATTY SUBSTANCES OR WAXES; FATTY ACIDS THEREFROM; DETERGENTS; CANDLES**

ANNEX 83E C12H [Project-Rapporteur : D199/EP] <CE42>

CL M **3/00 Removal of alcohol from alcoholic beverages to obtain alcohol-free or low-alcohol beverages** (recovery of by-products of wine or beer other than low-alcohol beverages **C12F 3/06**; preparation of alcoholic beverages other than wine or beer by varying the composition of fermented solutions **C12G 3/08**)

ANNEX 84E C12N [Project-Rapporteur : D039/EP] <CE42>

CL M **Title MICRO-ORGANISMS OR ENZYMES; COMPOSITIONS THEREOF** (biocides, pest repellants or attractants, or plant growth regulators containing micro-organisms, viruses, microbial fungi, enzymes, fermentates, or substances produced by, or extracted from, micro-organisms or animal material **A01N 63/00**; medicinal preparations **A61K**; fertilisers **C05F**) **; PROPAGATING, PRESERVING, OR MAINTAINING MICRO-ORGANISMS; MUTATION OR GENETIC ENGINEERING; CULTURE MEDIA** (microbiological testing media **C12Q 1/00**)

CL M 1/12 · Unicellular algae; Culture media therefor (as new plants **A01H 13/00**)

CL M **9/00** **Enzymes, e.g. ligases (6.); Proenzymes; Compositions thereof** (preparations containing enzymes for cleaning teeth **A61K 8/66**, **A61Q 11/00**; medicinal preparations containing enzymes or proenzymes **A61K 38/43**; enzyme containing detergent compositions **C11D**) **; Processes for preparing, activating, inhibiting, separating, or purifying enzymes**

ANNEX 85E C13 [Project-Rapporteur : C443/DE] <CE42>

CL M **Title SUGAR INDUSTRY**

CL M Note C13

1. In class **C13**, the following terms or expressions are used with the meanings indicated:
   - *"sugars" are a class of edible, water-soluble crystalline carbohydrates, having a characteristic sweet taste, including mono-, di- and oligosaccharides, e.g. sucrose, lactose and fructose. A more specific meaning of the term "sugar" is defined in the note of subclass **C13B**.* **[new.]**
2. Processes using enzymes or micro-organisms in order:
   i. to liberate, separate or purify a pre-existing compound or composition, or
   ii. to treat textiles or clean solid surfaces of materials

   are further classified in subclass **C12S**. **[5]**

ANNEX 86E C13B [Project-Rapporteur : C443/DE] <CE42>

CL N ***Title*** ***PRODUCTION OF SUCROSE; APPARATUS SPECIALLY ADAPTED THEREFOR*** *(chemically synthesised sugars or sugar derivatives **C07H**; fermentation or enzyme-using processes for preparing compounds containing saccharide radicals **C12P 19/00**)*

CL N *Note C13B* *In subclass **C13B**, the following terms or expressions are used with the meanings indicated:*
- *"sugar" is used in its non-scientific meaning and refers to sucrose, also called "table sugar" or "saccharose", a white crystalline disaccharide;* ***[new.]***
- *"sugar juices" are solutions of sugar, essentially comprising sucrose, which are derived from different plants, e.g. beet, cane or maple;* ***[new.]***
- *"syrups" are highly concentrated sugar juices.* ***[new.]***

CL N ***5/00*** ***Reducing the size of material from which sugar is to be extracted*** *(for extraction of starch **C08B 30/02**)*

AL N *5/02* · *Cutting sugar cane*

AL N *5/04* · · *Shredding sugar cane*

AL N *5/06* · *Slicing sugar beet*

AL N *5/08 · Knives; Adjustment or maintenance thereof*

CL N ***10/00 Production of sugar juices*** *(tapping of tree-juices **A01G 23/10**; tapping-spouts, receptacles for juices **A01G 23/14**)*

AL N *10/02 · Expressing juice from sugar cane or similar material, e.g. sorghum saccharatum*

AL N *10/04 · · combined with imbibition*

AL N *10/06 · · Sugar-cane crushers*

AL N *10/08 · Extraction of sugar from sugar beet with water*

AL N *10/10 · · Continuous processes*

AL N *10/12 · · Details of extraction apparatus, e.g. arrangements of pipes or valves*

AL N *10/14 · using extracting agents other than water, e.g. alcohol or salt solutions*

CL N ***15/00 Expressing water from material from which sugar has been extracted*** *(from starch-extracted material **C08B 30/10**)*

AL N *15/02 · between perforated moving belts*

CL N ***20/00 Purification of sugar juices***

CL N *Note 20/00* *When classifying in this group, classification is also made in group **B01D 15/08** insofar as subject matter of general interest relating to chromatography is concerned.* ***[new.]***

AL N *20/02 · using alkaline earth metal compounds*

AL N *20/04 · · followed by saturation*

AL N *20/06 · · · with carbon dioxide or sulfur dioxide*

AL N *20/08 · by oxidation or reduction*

AL N *20/10 · · using sulfur dioxide or sulfites*

AL N *20/12 · using adsorption agents, e.g. active carbon*

AL N *20/14 · using ion-exchange materials*

AL N *20/16 · by physical means, e.g. osmosis or filtration*

AL N *20/18 · by electrical means*

CL N ***25/00 Evaporators or boiling pans specially adapted for sugar juices; Evaporating or boiling sugar juices***

AL N *25/02 · Details, e.g. for preventing foaming or for catching juice*

AL N *25/04 · · Heating equipment*

AL N *25/06 · combined with measuring instruments for effecting control of the process*

CL N ***30/00 Crystallisation; Crystallising apparatus; Separating crystals from mother liquors***

AL N *30/02 · Crystallisation; Crystallising apparatus*

AL N *30/04 · Separating crystals from mother liquor*

AL N *30/06 · · by centrifugal force*

AL N *30/08 · · Washing residual mother liquor from crystals*

AL N *30/10 · · · in centrifuges*

AL N *30/12 · · Recycling mother liquor or wash liquors*

AL N *30/14 · · Dissolving or refining raw sugar*

CL N ***35/00 Extraction of sucrose from molasses***

AL N *35/02 · by chemical means*

AL N *35/04 · · by precipitation as alkaline earth metal saccharates*

AL N *35/06 · · using ion exchange*

AL N *35/08 · by physical means, e.g. osmosis*

CL N ***40/00 Drying sugar***

CL N ***45/00 Cutting machines specially adapted for sugar***

CL N *45/02 · in combination with sorting and packing machines*

CL N ***50/00 Sugar products, e.g. powdered, lump or liquid sugar; Working-up of sugar*** *(**C13B 40/00**, **C13B 45/00** take precedence; confectionery **A23G 3/00**)*

AL N *50/02 · formed by moulding sugar*

CL N ***99/00 Subject matter not provided for in other groups of this subclass***

ANNEX 87E C13C [Project-Rapporteur : C443/DE] <CE42>

CL D Title (transferred to **C13B**)

CL D 1/00 (transferred to **C13B 5/00**)

AL D 1/02 (transferred to **C13B 5/02**)

AL D 1/04 (transferred to **C13B 5/04**)

AL D 1/06 (transferred to **C13B 5/06**)

AL D 1/08 (transferred to **C13B 5/08**)

CL D 3/00 (transferred to **C13B 15/00**)

AL D 3/02 (transferred to **C13B 15/02**)

ANNEX 88E C13D [Project-Rapporteur : C443/DE] <CE42>

CL D Title (transferred to **C13B**)

CL D 1/00 (transferred to **C13B 10/00**)

AL D 1/02 (transferred to **C13B 10/02**)

AL D 1/04 (transferred to **C13B 10/04**)

AL D 1/06 (transferred to **C13B 10/06**)

AL D 1/08 (transferred to **C13B 10/08**)

AL D 1/10 (transferred to **C13B 10/10**)

AL D 1/12 (transferred to **C13B 10/12**)

AL D 1/14 (transferred to **C13B 10/14**)

CL D 3/00 (transferred to **C13B 20/00**)

CL D Note < Deleted >
3/00

AL D 3/02 (transferred to **C13B 20/02**)

AL D 3/04 (transferred to **C13B 20/04**)

AL D 3/06 (transferred to **C13B 20/06**)

AL D 3/08 (transferred to **C13B 20/08**)

AL D 3/10 (transferred to **C13B 20/10**)

AL D 3/12 (transferred to **C13B 20/12**)

AL D 3/14 (transferred to **C13B 20/14**)

AL D 3/16 (transferred to **C13B 20/16**)

AL D 3/18 (transferred to **C13B 20/18**)

ANNEX 89E C13F [Project-Rapporteur : C443/DE] <CE42>

CL D Title (transferred to **C13B**)

CL D 1/00 (transferred to **C13B 25/00**)

AL D 1/02 (transferred to **C13B 30/02**)

AL D 1/04 (transferred to **C13B 30/04**)

AL D 1/06 (transferred to **C13B 30/06**)

AL D 1/08 (transferred to **C13B 30/08**)

AL D 1/10 (transferred to **C13B 30/10**)

AL D 1/12 (transferred to **C13B 30/12**)

AL D 1/14 (transferred to **C13B 30/14**)

CL D 3/00 (transferred to **C13B 50/00**)

AL D 3/02 (transferred to **C13B 50/02**)

CL D 5/00 (transferred to **C13B 40/00**)

CL D 99/00 (transferred to **C13B 99/00**)

ANNEX 90E C13G [Project-Rapporteur : C443/DE] <CE42>

CL D Title (transferred to **C13B**)

CL D 1/00 (transferred to **C13B 25/00**)

AL D 1/02 (transferred to **C13B 25/04**)

AL D 1/04 (transferred to **C13B 25/02**)

AL D 1/06 (transferred to **C13B 25/06**)

ANNEX 91E C13H [Project-Rapporteur : C443/DE] <CE42>

CL D Title (transferred to **C13B**)

CL D 1/00 (transferred to **C13B 45/02**)

CL D 3/00 (transferred to **C13B 45/00**)

ANNEX 92E C13J [Project-Rapporteur : C443/DE] <CE42>

CL D Title (transferred to **C13B**)

CL D 1/00 (transferred to **C13B 35/00**)

AL D 1/02 (transferred to **C13B 35/02**)

AL D 1/04 (transferred to **C13B 35/04**)

AL D 1/06 (transferred to **C13B 35/06**)

AL D 1/08 (transferred to **C13B 35/08**)

ANNEX 93E C13K [Project-Rapporteur : C443/DE] <CE42>

CL M **Title SACCHARIDES, OTHER THAN SUCROSE, OBTAINED FROM NATURAL SOURCES OR BY HYDROLYSIS OF NATURALLY OCCURRING DI-, OLIGO- OR POLYSACCHARIDES** (chemically synthesised sugars or sugar derivatives **C07H**; polysaccharides, e.g. starch, derivatives thereof **C08B**; malt **C12C**; fermentation or enzyme-using processes for preparing compounds containing saccharide radicals **C12P 19/00**)

AL M 1/02 · obtained by saccharification of cellulosic materials (manufacture of fodder **A23K 1/12**)

AL M 1/06 · obtained by saccharification of starch or raw materials containing starch

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ANNEX 94E C14B [Project-Rapporteur : D197/DE] <CE42>

CL M **Title MECHANICAL TREATMENT OR PROCESSING OF SKINS, HIDES, OR LEATHER IN GENERAL; PELT-SHEARING MACHINES; INTESTINE-SPLITTING MACHINES** (mechanical cleaning of hides or the like **D06G**)

AL M 1/26 · Leather tensioning or stretching frames; Stretching-machines; Setting-out boards; Pasting boards (fastening devices **C14B 17/08**)

AL M 1/56 · · Ornamenting, producing designs, embossing

AL M 1/60 · · Pasting processes (chemical aspects **C14C 7/00**)

CL M **5/00 Clicking, perforating, or cutting leather** (for shoe parts, e.g. soles, **A43D**)

CL M **11/00 Finishing the edges of leather pieces, e.g. by folding, by burning**

CL M **13/00 Shredding hides or leather**

ANNEX 95E C14C [Project-Rapporteur : D198/DE] <CE42>

CL M **Title CHEMICAL TREATMENT OF SKINS, HIDES OR LEATHER, e.g. TANNING, IMPREGNATING, FINISHING; APPARATUS THEREFOR; COMPOSITIONS FOR TANNING** (bleaching of leather or furs **D06L**; dyeing of leather or furs **D06P**)

CL M **13/00 Manufacture of special kinds of leather, e.g. vellum**

ANNEX 96E C22 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title METALLURGY; FERROUS OR NON-FERROUS ALLOYS; TREATMENT OF ALLOYS OR NON-FERROUS METALS**

ANNEX 97E C22B [Project-Rapporteur : M035/IB] <CE42>

CL M **Title PRODUCTION OR REFINING OF METALS** (making metallic powder or suspensions thereof **B22F 9/00**; production of metals by electrolysis or electrophoresis **C25**) **; PRETREATMENT OF RAW MATERIALS**

ANNEX 98E C22F [Project-Rapporteur : M035/IB] <CE42>

CL M **Title CHANGING THE PHYSICAL STRUCTURE OF NON-FERROUS METALS OR NON-FERROUS ALLOYS** (general methods or devices for heat treatment of ferrous or non-ferrous metals or alloys **C21D**; surface treatment of metallic material involving at least one process provided for in class **C23** and at least one process covered by this subclass **C23F 17/00**)

ANNEX 99E C23 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title COATING METALLIC MATERIAL; COATING MATERIAL WITH METALLIC MATERIAL; CHEMICAL SURFACE TREATMENT; DIFFUSION TREATMENT OF METALLIC MATERIAL; COATING BY VACUUM EVAPORATION, BY SPUTTERING, BY ION IMPLANTATION OR BY CHEMICAL VAPOUR DEPOSITION, IN GENERAL; INHIBITING CORROSION OF METALLIC MATERIAL OR INCRUSTATION IN GENERAL**

ANNEX 100E C23C [Project-Rapporteur : M035/IB] <CE42>

CL M **Title COATING METALLIC MATERIAL; COATING MATERIAL WITH METALLIC MATERIAL; SURFACE TREATMENT OF METALLIC MATERIAL BY DIFFUSION INTO THE SURFACE, BY CHEMICAL CONVERSION OR SUBSTITUTION; COATING BY VACUUM EVAPORATION, BY SPUTTERING, BY ION IMPLANTATION OR BY CHEMICAL VAPOUR DEPOSITION, IN GENERAL** (applying liquids or other fluent materials to surfaces in general **B05**; making metal-coated products by extrusion **B21C 23/22**; covering with metal by connecting pre-existing layers to articles, see the relevant places, e.g. **B21D 39/00**, **B23K**; working of metal by the action of a high concentration of electric current on a workpiece using an electrode **B23H**; metallising of glass **C03C**; metallising mortars, concrete, artificial stone, ceramics or natural stone **C04B 41/00**; paints, varnishes, lacquers **C09D**; enamelling of, or applying a vitreous layer to, metals **C23D**; inhibiting corrosion of metallic material or incrustation in general **C23F**; treating metal surfaces or coating of metals by electrolysis or electrophoresis **C25D**, **C25F**; single-crystal film growth **C30B**; by metallising textiles **D06M 11/83**; decorating textiles by locally metallising **D06Q 1/04**; details of scanning-probe apparatus, in general **G01Q**; manufacture of semiconductor devices **H01L**; manufacture of printed circuits **H05K**)

ANNEX 101E C23F [Project-Rapporteur : M035/IB] <CE42>

CL M **Title NON-MECHANICAL REMOVAL OF METALLIC MATERIAL FROM SURFACES** (working of metal by electro-erosion **B23H**; desurfacing by applying flames **B23K 7/00**; working metal by laser beam **B23K 26/00**; producing decorative effects by removing surface-material, e.g. by engraving, by etching, **B44C 1/22**) **; INHIBITING CORROSION OF METALLIC MATERIAL; INHIBITING INCRUSTATION IN GENERAL** (treating metal surfaces or coating of metals by electrolysis or electrophoresis **C25D**, **C25F**) **; MULTI-STEP PROCESSES FOR SURFACE TREATMENT OF METALLIC MATERIAL INVOLVING AT LEAST ONE PROCESS PROVIDED FOR IN CLASS C23 AND AT LEAST ONE PROCESS COVERED BY SUBCLASS C21D OR C22F OR CLASS C25** (inhibition or prevention of corrosion or incrustation during processing of hydrocarbons **C10G 7/10**, **C10G 9/16**, **C10G 75/00**)

ANNEX 102E C25 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title ELECTROLYTIC OR ELECTROPHORETIC PROCESSES; APPARATUS THEREFOR**

ANNEX 103E C25B [Project-Rapporteur : M035/IB] <CE42>

CL M **Title ELECTROLYTIC OR ELECTROPHORETIC PROCESSES FOR THE PRODUCTION OF COMPOUNDS OR NON- METALS; APPARATUS THEREFOR** (anodic or cathodic protection **C23F**; single-crystal growth **C30B**)

ANNEX 104E C25C [Project-Rapporteur : M035/IB] <CE42>

CL M **Title PROCESSES FOR THE ELECTROLYTIC PRODUCTION, RECOVERY OR REFINING OF METALS; APPARATUS THEREFOR** (anodic or cathodic protection **C23F**; single-crystal growth **C30B**)

ANNEX 105E C25D [Project-Rapporteur : M035/IB] <CE42>

CL M **Title PROCESSES FOR THE ELECTROLYTIC OR ELECTROPHORETIC PRODUCTION OF COATINGS; ELECTROFORMING** (manufacturing printed circuits by metal deposition **H05K 3/18**) **; JOINING WORKPIECES BY ELECTROLYSIS; APPARATUS THEREFOR** (anodic or cathodic protection **C23F**; single-crystal growth **C30B**)

ANNEX 106E C25F [Project-Rapporteur : M035/IB] <CE42>

CL M **Title PROCESSES FOR THE ELECTROLYTIC REMOVAL OF MATERIALS FROM OBJECTS; APPARATUS THEREFOR** (treatment of water, waste water or sewage by electrochemical methods **C02F 1/46**; anodic or cathodic protection **C23F**)

ANNEX 107E C30 [Project-Rapporteur : M035/IB] <CE42>

CL M **Title CRYSTAL GROWTH**

ANNEX 108E D01 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title NATURAL OR ARTIFICIAL THREADS OR FIBRES; SPINNING**

ANNEX 109E D01D [Project-Rapporteur : M033/IB] <CE42>

CL M **Title MECHANICAL METHODS OR APPARATUS IN THE MANUFACTURE OF ARTIFICIAL FILAMENTS, THREADS, FIBRES, BRISTLES, OR RIBBONS** (metal threads **B21**; fibres or filaments of softened glass, minerals or slag **C03B 37/00**)

ANNEX 110E E01 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title CONSTRUCTION OF ROADS, RAILWAYS, OR BRIDGES**

ANNEX 111E E04 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title BUILDING**

ANNEX 112E F01 [Project-Rapporteur : M107/US] <CE42>

CL M Note F01-F04 /

Guide to the use of this subsection (classes **F01-F04**)

The following notes are meant to assist in the use of this part of the classification scheme.

1. In this subsection, subclasses or groups designating "engines" or "pumps" cover methods of operating the same, unless otherwise specifically provided for.
2. In this subsection, the following terms or expressions are used with the meanings indicated:
   - "engine" means a device for continuously converting fluid energy into mechanical power. Thus, this term includes, for example, steam piston engines or steam turbines, per se , or internal-combustion piston engines, but it excludes single-stroke devices. "Engine" also includes the fluid-motive portion of a meter unless such portion is particularly adapted for use in a meter;
   - "pump" means a device for continuously raising, forcing, compressing, or exhausting fluid by mechanical or other means. Thus, this term includes fans or blowers;
   - "machine" means a device which could equally be an engine and a pump, and not a device which is restricted to an engine or one which is restricted to a pump;
   - "positive displacement" means the way the energy of a working fluid is transformed into mechanical energy, in which variations of volume created

by the working fluid in a working chamber produce equivalent displacements of the mechanical member transmitting the energy, the dynamic effect of the fluid being of minor importance, and vice versa ;

- "non-positive displacement" means the way the energy of a working fluid is transformed into mechanical energy, by transformation of the energy of the working fluid into kinetic energy, and vice versa ;
- "oscillating-piston machine" means a positive-displacement machine in which a fluid-engaging work-transmitting member oscillates. This definition applies also to engines and pumps;
- "rotary-piston machine" means a positive-displacement machine in which a fluid-engaging work-transmitting member rotates about a fixed axis or about an axis moving along a circular or similar orbit. This definition applies also to engines and pumps;
- "rotary piston" means the work-transmitting member of a rotary-piston machine and may be of any suitable form, e.g., like a toothed gear;
- "cooperating members" means the "oscillating piston" or "rotary piston" and another member, e.g., the working-chamber wall, which assists in the driving or pumping action;
- "movement of the co-operating members" is to be interpreted as relative, so that one of the "co-operating members" may be stationary, even though reference may be made to its rotational axis, or both may move;
- "teeth or tooth equivalents" include lobes, projections or abutments;
- "internal-axis type" means that the rotational axes of the inner and outer co-operating members remain at all times within the outer member, e.g., in a similar manner to that of a pinion meshing with the internal teeth of a ring gear;
- "free piston" means a piston of which the length of stroke is not defined by any member driven thereby;
- "cylinders" means positive-displacement working chambers in general. Thus, this term is not restricted to cylinders of circular cross-section;
- "main shaft" means the shaft which converts reciprocating piston motion into rotary motion or vice versa ;
- "plant" means an engine together with such additional apparatus as is necessary to run the engine. For example, a steam engine plant includes a steam engine and means for generating the steam;
- "working fluid" means the driven fluid in a pump or the driving fluid in an engine. The working fluid can be in a compressible, gaseous state, called elastic fluid, e.g. steam; in a liquid state; or in a state where there is coexistence of an elastic fluid and liquid phase.
- "steam" includes condensable vapours in general, and "special vapour" is used when steam is excluded;
- "reaction type" as applied to non-positive-displacement machines or engines means machines or engines in which pressure/velocity transformation takes place wholly or partly in the rotor. Machines or engines with no, or only slight, pressure/velocity transformation in the rotor are called "impulse type".

3. In this subsection:
   - cyclically operating valves, lubricating, gas-flow silencers or exhaust apparatus, or cooling are classified in subclasses **F01L**, **F01M**, **F01N**, **F01P**irrespective of their stated application, unless their classifying features

are peculiar to their application, in which case they are classified only in the relevant subclass of classes **F01**-**F04**;

- lubricating, gas-flow silencers or exhaust apparatus, or cooling of machines or engines are classified in subclasses **F01M**, **F01N**, **F01P** except for those peculiar to steam engines which are classified in subclass **F01B**.

4. For use of this subsection with a good understanding, it is essential to remember, so far as subclasses **F01B**, **F01C**, **F01D**, **F03B**, and **F04B**, **F04C**, **F04D**, which form its skeleton, are concerned:
   - the principle which resides in their elaboration,
   - the classifying characteristics which they call for, and
   - their complementarity.

   i. Principle

   This concerns essentially the subclasses listed above. Other subclasses, notably those of class **F02**, which cover better-defined matter, are not considered here.

   Each subclass covers fundamentally a genus of apparatus (engine or pump) and by extension covers equally "machines" of the same kind. Two different subjects, one having a more general character than the other, are thus covered by the same subclass.

   Subclasses **F01B**, **F03B**, **F04B**, beyond the two subjects which they cover, have further a character of generality in relation to other subclasses concerning the different species of apparatus in the genus concerned.

   This generality applies as well for the two subjects dealt with, without these always being in relation to the same subclasses.

   Thus, subclass **F03B**, in its part dealing with "machines", should be considered as being the general class relating to subclasses **F04B**, **F04C**, and in its part dealing with "engines" as being general in relation to subclass **F03C**.

   ii. Characteristics

   a. The principal classifying characteristic of the subclass is that of genera of apparatus, of which there are three possible:

      Machines; engines; pumps.

   b. As stated above, "machines" are always associated with one of the other two genera. These main genera are subdivided according to the general principles of operation of the apparatus:

      Positive displacement; non-positive displacement.

   c. The positive displacement apparatus are further subdivided according to the ways of putting into effect the principle of operation, that is, to the kind of apparatus:

      Simple reciprocating piston; rotary or oscillating piston; other kind.

   d. Another classifying characteristic is that of the working

fluid, in respect of which three kinds of apparatus are possible, namely:

Liquid and elastic fluid; elastic fluid; liquid.

iii. Complementarity

This resides in association of pairs of the subclasses listed above, according to the characteristics under consideration in respect of kind of apparatus or working fluid.

The subclasses concerned with the various principles, characteristics and complementarity are shown in the subsection index below.

It is seen from this index that:

- For the same kind of apparatus in a given genus, the characteristics of "working fluid" associates:

  F01B and **F04B** to Machines
  F01C and **F04C** to Machines
  F01D and **F03B** to Machines
  F01B and **F03C** to Engines
  F01C and **F03C** to Engines
  F01D and **F03B** to Engines
- For the same kind of working fluid, the "apparatus" characteristic relates subclasses in the same way as considerations of relative generality.

ANNEX 113E F01 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title MACHINES OR ENGINES IN GENERAL; ENGINE PLANTS IN GENERAL; STEAM ENGINES**

ANNEX 114E F01B [Project-Rapporteur : M033/IB] <CE42>

CL M **Title MACHINES OR ENGINES, IN GENERAL OR OF POSITIVE-DISPLACEMENT TYPE, e.g. STEAM ENGINES** (of rotary-piston or oscillating-piston type **F01C**; of non-positive-displacement type **F01D**; combustion engines **F02**; internal-combustion aspects of reciprocating-piston engines **F02B 57/00**, **F02B 59/00**; machines for liquids **F03**, **F04**; crankshafts, crossheads, connecting-rods **F16C**; flywheels **F16F**; gearings for interconverting rotary motion and reciprocating motion in general **F16H**; pistons, piston-rods, cylinders, for engines in general **F16J**)

ANNEX 115E F01C [Project-Rapporteur : M033/IB] <CE42>

CL M **Title ROTARY-PISTON OR OSCILLATING-PISTON MACHINES OR ENGINES** (combustion engines **F02**; internal-combustion aspects **F02B 53/00**, **F02B 55/00**; machines for liquids **F03**, **F04**)

ANNEX 116E F01D [Project-Rapporteur : M033/IB] <CE42>

CL M **Title NON-POSITIVE-DISPLACEMENT MACHINES OR ENGINES, e.g. STEAM TURBINES** (combustion engines **F02**; machines or engines for liquids **F03**, **F04**; non-positive-displacement pumps **F04D**)

ANNEX 117E F02 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title COMBUSTION ENGINES; HOT-GAS OR COMBUSTION-PRODUCT ENGINE PLANTS**

ANNEX 118E F02B [Project-Rapporteur : M033/IB] <CE42>

CL M **Title INTERNAL-COMBUSTION PISTON ENGINES; COMBUSTION ENGINES IN GENERAL** (cyclically operating valves therefor **F01L**; lubricating internal-combustion engines **F01M**; gas-flow silencers or exhaust apparatus therefor **F01N**; cooling of internal-combustion engines **F01P**; internal-combustion turbines **F02C**; plants in which engines use combustion products **F02C**, **F02G**)

ANNEX 119E F02P [Project-Rapporteur : C453/EP] <CE42>

CL M 17/12 · Testing characteristics of the spark, ignition voltage or current

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ANNEX 120E F03 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title MACHINES OR ENGINES FOR LIQUIDS; WIND, SPRING, OR WEIGHT MOTORS; PRODUCING MECHANICAL POWER OR A REACTIVE PROPULSIVE THRUST, NOT OTHERWISE PROVIDED FOR**

ANNEX 121E F04 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title POSITIVE-DISPLACEMENT MACHINES FOR LIQUIDS; PUMPS FOR LIQUIDS OR ELASTIC FLUIDS**

ANNEX 122E F04B [Project-Rapporteur : M033/IB] <CE42>

CL M **Title POSITIVE-DISPLACEMENT MACHINES FOR LIQUIDS; PUMPS** (engine fuel-injection pumps **F02M**; machines for liquids, or pumps, of rotary-piston or oscillating-piston type **F04C**; non-positive-displacement pumps **F04D**; pumping of fluid by direct contact of another fluid or by using inertia of fluid to be pumped **F04F**; crankshafts, crossheads, connecting-rods **F16C**; flywheels **F16F**; gearings for interconverting rotary motion and reciprocating motion in general **F16H**; pistons, piston-rods, cylinders, in general **F16J**)

ANNEX 123E F04C [Project-Rapporteur : M033/IB] <CE42>

CL M **Title ROTARY-PISTON, OR OSCILLATING-PISTON, POSITIVE-DISPLACEMENT MACHINES FOR LIQUIDS** (engines driven by liquids **F03C**) **; ROTARY-PISTON, OR OSCILLATING-PISTON, POSITIVE-DISPLACEMENT PUMPS** (engine fuel-injection pumps **F02M**)

ANNEX 124E F04C [Project-Rapporteur : M107/US] <CE42>

CL M Subclass index

MACHINES FOR LIQUIDS; PUMPS FOR LIQUIDS OR FOR LIQUIDS AND ELASTIC FLUIDS	
Rotary-piston	
general characteristics; non-parallel axes of movement of co-operating members	**2/00**; **3/00**
resiliently-deformable chamber walls; fluid ring	**5/00**; **7/00**
Oscillating-piston	**9/00**
Combinations or adaptations	**11/00**, **13/00**
Pump installations	**11/00**
Control; monitoring; safety arrangements	**14/00**
Other details or accessories	**15/00**
PUMPS SPECIALLY ADAPTED FOR ELASTIC FLUIDS	
Rotary-piston pumps	**18/00**
Rotary-piston pumps with fluid ring or the like	**19/00**

Oscillating-piston pumps	**21/00**
Combinations of two or more pumps, each being of rotary-piston or oscillating-piston type; Pumping installations; Multi-stage pumps	**23/00**
Adaptations of pumps for special use	**25/00**
Sealing arrangements in rotary-piston pumps	**27/00**
Control; monitoring; safety arrangements	**28/00**
Other components parts, details or accessories	**29/00**

CL N *Guidance heading 2/00-15/00* **Machines for liquids**; **Pumps for liquids or for liquids and elastic fluids**

ANNEX 125E F04C [Project-Rapporteur : D018/EP] <CE42>

CL M **11/00 Combinations of two or more machines or pumps, each being of rotary-piston or oscillating-piston type** (combinations of such pumps specially adapted for elastic fluids **F04C 23/00**) **; Pumping installations** (**F04C 13/00** takes precedence; specially adapted for elastic fluids **F04C 23/00**; fluid gearing **F16H 39/00**-**F16H 47/00**)

CL M 29/02 · Lubrication; Lubricant separation

CL M 29/04 · Heating; Cooling; Heat insulation

CL M 29/06 · Silencing

ANNEX 126E F04D [Project-Rapporteur : M033/IB] <CE42>

CL M **Title NON-POSITIVE-DISPLACEMENT PUMPS** (engine fuel-injection pumps **F02M**)

ANNEX 127E F16C [Project-Rapporteur : D101/DE] <CE42>

CL M **Title SHAFTS; FLEXIBLE SHAFTS; MECHANICAL MEANS FOR TRANSMITTING MOVEMENT IN A FLEXIBLE SHEATHING; ELEMENTS OF CRANKSHAFT MECHANISMS; PIVOTS; PIVOTAL CONNECTIONS; ROTARY ENGINEERING ELEMENTS OTHER THAN GEARING, COUPLING, CLUTCH OR BRAKE ELEMENTS; BEARINGS**

CL M Note F16C In this subclass, the following expression is used with the meaning indicated:
- "rotary engineering elements other than gearing, coupling, clutch or brake elements" covers any engineering element other than gearing, coupling, clutch or brake elements which rotates in so far as its features are affected only by the fact that it rotates.

CL M 3/03 ・・ telescopic

CL M 3/28 ・・・ Adjustable cranks or eccentrics

CL M **7/00** **Connecting-rods or like links pivoted at both ends** (coupling-rods for locomotive driving-wheels **B61C**) **; Construction of connecting-rod heads** (heads rigid with crossheads **F16C 5/00**)

CL M 9/06 ・・ Arrangements for adjusting play in bearings, operating either automatically or not

CL M 11/04 ・ Pivotal connections (hinges for doors, windows or wings **E05D**)

CL M 11/06 ・・ Ball-joints; Other joints having more than one degree of angular freedom, i.e. universal joints (universal joints in which flexibility is produced by means of pivots or sliding or rolling connecting parts **F16D 3/16**)

CL M **13/00** **Rolls, drums, discs, or the like** (guide rollers in feeding webs **B65H 27/00**; calender rolls, bearings therefor **D21G 1/02**; rotary drums or rollers for heat-exchange or heat-transfer apparatus **F28F 5/02**; special adaptations, see the relevant classes) **; Bearings or mountings therefor**

AL M 27/06 ・ by means of parts of rubber or like materials (**F16C 27/08** takes precedence; with sliding surfaces of rubber or synthetic rubber **F16C 33/22**)

AL M 29/10 ・ Arrangements for locking the bearings

AL M 33/12 ・・・・ Structural composition; Use of special materials or surface treatments, e.g. for rust-proofing

CL M 33/22 ・・・ Sliding surface consisting mainly of rubber or synthetic rubber (**F16C 33/24-F16C 33/28** take precedence)

CL M 33/72 ・ Sealings

CL M **35/00** **Rigid support of bearing units; Housings, e.g. caps, covers** (**F16C 23/00** takes precedence)

AL M 35/06 ・・ Mounting of ball or roller bearings; Fixing them onto shaft or in housing

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ANNEX 128E F16D [Project-Rapporteur : D102/DE] <CE42>

AL D Note F16D < Deleted >

CL M **1/00 Couplings for rigidly connecting two coaxial shafts or other movable machine elements**
(for attachment of cranks to their shafts **F16C 3/10**)

ANNEX 129E F16D [Project-Rapporteur : A028/EP] <CE42>

AL C *3/223* · · · · *the rolling members being guided in grooves in both coupling parts*

AL N *3/2233* · · · · · *where the track is made up of two curves with a point of inflexion in between, i.e. S-track joints*

AL N *3/2237* · · · · · *where the grooves are composed of radii and adjoining straight lines, i.e. undercut free [UF] type joints*

AL C *3/224* · · · · · *the groove centre-lines of each coupling part lying on a sphere*

AL N *3/2245* · · · · · · *where the groove centres are offset from the joint centre*

AL M *3/226* · · · · · *the groove centre-lines of each coupling part lying on a cylinder co-axial with the respective coupling part*

ANNEX 130E F16D [Project-Rapporteur : D102/DE] <CE42>

CL M 3/82 · · with a coupling element in the form of a pneumatic tube

AL M 7/04 · of the ratchet type

AL M 13/08 · with a helical band or equivalent member, which may be built-up from linked parts, with more than one turn embracing a drum or the like, with or without an additional clutch actuating the end of the band (**F16D 13/02** takes precedence)

AL M 13/10 · with clutching members co-operating with the periphery of a drum, a wheel-rim, or the like (**F16D 13/02**-**F16D 13/08** take precedence)

AL M 13/12 · with an expansible band or coil co-operating with the inner surface of a drum or the like (**F16D 13/02** takes precedence)

AL M 13/14 · with outwardly-movable clutching members co-operating with the inner surface of a drum or the like (**F16D 13/02**, **F16D 13/06**, **F16D 13/12** take precedence)

AL M 13/20 · with clutching members co-operating with both the periphery and the inner surface of a drum or wheel-rim

AL M 13/22 · with axially-movable clutching members

AL M 21/02 · for interconnecting three or more shafts or other transmission members in different ways

AL M 25/10 · Clutch systems with a plurality of fluid-actuated clutches

AL M 33/16 · · by means arranged externally of the coupling or clutch

AL M 33/18 · Details

AL M **43/00 Internally controlled automatic clutches** (freewheels, freewheel clutches **F16D 41/00**; external control of clutches **F16D 48/00**)

AL M 43/26 · · acting at definite angular position or disengaging after a definite number of rotations (actuating by means of stationary abutment **F16D 11/02**, **F16D 13/02**, **F16D 15/00**)

CL M **49/00 Brakes with a braking member co-operating with the periphery of a drum, wheel-rim, or the like**

AL M 49/02 · shaped as a helical band or coil with more than one turn, with or without intensification of the braking force by the tension of the band or contracting member

CL M **51/00 Brakes with outwardly-movable braking members co-operating with the inner surface of a drum or the like**

CL M 51/02 · shaped as one or more circumferential bands

CL M **53/00 Brakes with braking members co-operating with both the periphery and the inner surface of a drum, wheel-rim, or the like**

CL M **55/00 Brakes with substantially-radial braking surfaces pressed together in axial direction, e.g. disc brakes**

CL M **65/00 Parts or details of brakes**

CL M **67/00 Combinations of couplings and brakes; Combinations of clutches and brakes** (**F16D 71/00** takes precedence; conjoint control of brake systems and driveline clutches in vehicles **B60W 10/02**, **B60W 10/18**)

CL M **69/00 Friction linings; Attachment thereof; Selection of coacting friction substances or surfaces** (braking members **F16D 65/02**)

CL M **71/00 Mechanisms for bringing members to rest in a predetermined position** (combined with, or controlling, clutches **F16D 43/26**; means for initiating operation of brakes at a predetermined position **F16D 65/14**)

ANNEX 131E F16G [Project-Rapporteur : D103/DE] <CE42>

CL D Note < Deleted >
F16G

ANNEX 132E F17 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title STORING OR DISTRIBUTING GASES OR LIQUIDS**

ANNEX 133E F17D [Project-Rapporteur : M033/IB] <CE42>

CL M **Title PIPE-LINE SYSTEMS; PIPE-LINES** (distributing water **E03B**; pumps or compressors **F04**; fluid dynamics **F15D**; valves or the like **F16K**; pipes, laying pipes, supports, joints, branches, repairing, work on the entire line, accessories **F16L**; steam traps or the like **F16T**; fluid-pressure electric cables **H01B 9/06**)

ANNEX 134E F21 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title LIGHTING**

ANNEX 135E F21L [Project-Rapporteur : M033/IB] <CE42>

CL M **Title LIGHTING DEVICES OR SYSTEMS THEREOF, BEING PORTABLE OR SPECIALLY ADAPTED FOR TRANSPORTATION** (burners **F23D**; electric aspects or elements, see section H, e.g. electric light sources **H01J**, **H01K**, **H05B**)

ANNEX 136E F21S [Project-Rapporteur : M033/IB] <CE42>

CL M **Title NON-PORTABLE LIGHTING DEVICES OR SYSTEMS THEREOF** (burners **F23D**; electric aspects or elements, see section H, e.g. electric light sources **H01J**, **H01K**, **H05B**)

ANNEX 137E F22 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title STEAM GENERATION**

ANNEX 138E F22B [Project-Rapporteur : M033/IB] <CE42>

CL M **Title METHODS OF STEAM GENERATION; STEAM BOILERS** (steam engine plants where engine aspects predominate **F01K**; chemical generation of gas, e.g. under pressure, Section C; removal of combustion products or residues, e.g. cleaning of the combustion contaminated surfaces of tubes of boilers, **F23J 3/00**; domestic central-heating systems using steam **F24D**; heat exchange or heat transfer in general **F28**; generation of vapour in the cores of nuclear reactors **G21**)

ANNEX 139E F22G [Project-Rapporteur : M033/IB] <CE42>

CL M **Title SUPERHEATING OF STEAM** (steam-separating arrangements in boilers **F22B 37/26**; chemical generation of gas, e.g. under pressure, Section C; removal of combustion products or residues, e.g. cleaning of the combustion contaminated surfaces of tubes of boilers, **F23J 3/00**)

ANNEX 140E F23B [Project-Rapporteur : A026/JP] <CE42>

CL C ***10/00 Combustion apparatus characterised by the combination of two or more combustion chambers***

AL N *10/02 · including separate secondary combustion chambers*

CL C ***90/00 Combustion methods not related to a particular type of apparatus***

AL N *90/02 · Start-up techniques*

AL N *90/04 · including secondary combustion (in separate combustion chambers **F23B 10/02**)*

AL N *90/06 · · the primary combustion being a gasification or pyrolysis in a reductive atmosphere*

AL N *90/08 · · in the presence of catalytic material*

ANNEX 141E F23Q [Project-Rapporteur : D139/SE] <CE42>

CL M **Title IGNITION** (devices for igniting matches **A24F**; chemical igniters **C06C 9/00**) **; EXTINGUISHING DEVICES**

ANNEX 142E F23Q [Project-Rapporteur : M715/SE] <CE42>

CL M **1/00 Mechanical ignition** (lighters containing fuel **F23Q 2/00**; matches **C06F**)

ANNEX 143E F23Q [Project-Rapporteur : D139/SE] <CE42>

AL M 2/173 · · · Valves therefor

AL M 2/28 · Lighters characterised by electrical ignition of the fuel

AL M 2/30 · Lighters characterised by catalytic ignition of fuel

AL M 2/52 ・・ Filling devices

ANNEX 144E F23Q [Project-Rapporteur : M715/SE] <CE42>

CL M **3/00 Ignition using electrically-produced sparks** (lighters containing fuel **F23Q 2/28**; sparking-plugs **H01T 13/00**)

ANNEX 145E F23Q [Project-Rapporteur : D139/SE] <CE42>

CL M **5/00 Make-and-break ignition, i.e. with spark generated between electrodes by breaking contact therebetween**

ANNEX 146E F23Q [Project-Rapporteur : M715/SE] <CE42>

CL M **7/00 Incandescent ignition; Ignition using electrically-produced heat, e.g. lighters for cigarettes; Electrically-heated glowing plugs**

AL M 7/06 ・ Igniters structurally associated with fluid-fuel burners (lighters containing fuel **F23Q 2/00**)

CL M **9/00 Ignition by a pilot flame**

ANNEX 147E F23Q [Project-Rapporteur : D139/SE] <CE42>

CL M **11/00 Arrangement of catalytic igniters**

ANNEX 148E F23Q [Project-Rapporteur : M715/SE] <CE42>

CL M **13/00 Ignition not otherwise provided for**

ANNEX 149E F23Q [Project-Rapporteur : C453/EP] <CE42>

CL M **23/00 Testing of ignition installations** (peculiar to internal-combustion engines **F02P 17/00**; testing of sparking plugs **H01T 13/58**)

ANNEX 150E F23Q [Project-Rapporteur : D139/SE] <CE42>

CL M **25/00 Extinguishing devices, e.g. for blowing-out or snuffing candle flames**

ANNEX 151E F23R [Project-Rapporteur : D140/SE] <CE42>

CL M **Title GENERATING COMBUSTION PRODUCTS OF HIGH PRESSURE OR HIGH VELOCITY, e.g. GAS-TURBINE COMBUSTION CHAMBERS** (using such products for specific purposes, see the relevant classes for the purposes; fluidised bed combustion apparatus specially adapted for operation at superatmospheric pressures **F23C 10/16**)

CL M 3/28 · characterised by the fuel supply

CL M **5/00 Continuous combustion chambers using solid or pulverulent fuel**

ANNEX 152E F24 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title HEATING; RANGES; VENTILATING**

ANNEX 153E F24C [Project-Rapporteur : M033/IB] <CE42>

CL M **15/00 Details** (electric heating elements or arrangements **H05B**)

ANNEX 154E F24D [Project-Rapporteur : M033/IB] <CE42>

CL M **Title DOMESTIC- OR SPACE-HEATING SYSTEMS, e.g. CENTRAL HEATING SYSTEMS; DOMESTIC HOT-WATER SUPPLY SYSTEMS; ELEMENTS OR COMPONENTS THEREFOR** (preventing corrosion **C23F**; water supply in general **E03**; using steam or condensate extracted or exhausted from steam engine plants for heating purposes **F01K 17/02**; steam traps **F16T**; domestic stoves or ranges **F24B**, **F24C**; water or air heaters having heat generating means **F24H**; combined heating and refrigeration systems **F25B**; heat exchange apparatus or elements **F28**; removing furring **F28G**; electric heating elements or arrangements **H05B**)

ANNEX 155E F24F [Project-Rapporteur : A013/JP] <CE42>

CL C ***1/00 Room units, e.g. separate or self-contained units or units receiving primary air from a central station***

CL C *1/01* · *in which secondary air is induced by injector action of the primary air (**F24F 1/02** takes precedence)*

CL C *1/02* · *self-contained, i.e. with all apparatus for treatment installed in a common casing*

CL C *1/04* · · *Arrangements for portability*

AL N *1/06* · *Separate outdoor units, e.g. outdoor unit to be linked to a separate room unit comprising a compressor and a heat exchanger*

AL N *Note 1/06* *In this group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.* ***[new.]***

AL N *1/08* · · *Compressors specially adapted for separate outdoor units*

AL N *1/10* · · · *Arrangement or mounting thereof*

AL N *1/12* · · · *Vibration or noise prevention therefor*

AL N *1/14* · · *Heat exchangers specially adapted for separate outdoor units*

AL N *1/16* · · · *Arrangement or mounting thereof*

AL N *1/18* · · · *characterised by their shape*

AL N *1/20* · · *Electric components for separate outdoor units*

AL N *1/22* · · · *Arrangement or mounting thereof*

AL N *1/24* · · · *Cooling of electric components*

AL N *1/26* · · *Refrigerant piping*

AL N *1/28* · · · *for connecting several separate outdoor units*

AL N *1/30* · · · *for use inside the separate outdoor units*

AL N *1/32* · · · *for connecting the separate outdoor unit to indoor units*

AL N *1/34* · · · *Protection means therefor, e.g. covers for refrigerant pipes*

AL N *1/36* · · *Drip trays for outdoor units*

AL N *1/38* · · *Fan details of outdoor units, e.g. bell-mouth shaped inlets or fan mountings*

AL N *1/40* · · *Vibration or noise prevention at outdoor units (for outdoor unit compressors **F24F 1/12**)*

AL N *1/42* · · *characterised by the use of the condensate, e.g. for enhanced cooling*

AL N *1/44* · · *characterised by the use of internal combustion engines*

AL N *1/46 · · Component arrangements in separate outdoor units*

AL N *1/48 · · · characterised by airflow, e.g. inlet or outlet airflow*

AL N *1/50 · · · · with outlet air in upward direction*

AL N *1/52 · · · · Inlet and outlet arranged on the same side, e.g. for mounting in a wall opening*

AL N *1/54 · · · · Inlet and outlet arranged on opposite sides*

AL N *1/56 · · Casing or covers of separate outdoor units, e.g. fan guards*

AL N *1/58 · · · Separate protective covers for outdoor units, e.g. solar guards, snow shields or camouflage*

AL N *1/60 · · Arrangement or mounting of the outdoor unit*

AL N *1/62 · · · Wall-mounted*

AL N *1/64 · · · Ceiling-mounted, e.g. below a balcony*

AL N *1/66 · · · under the floor level*

AL N *1/68 · · · Arrangement of multiple separate outdoor units*

ANNEX 156E F27 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title FURNACES; KILNS; OVENS; RETORTS**

ANNEX 157E F27B [Project-Rapporteur : M033/IB] <CE42>

CL M **Title FURNACES, KILNS, OVENS, OR RETORTS IN GENERAL; OPEN SINTERING OR LIKE APPARATUS** (combustion apparatus **F23**; electric heating **H05B**)

ANNEX 158E F27D [Project-Rapporteur : M033/IB] <CE42>

CL M **Title DETAILS OR ACCESSORIES OF FURNACES, KILNS, OVENS, OR RETORTS, IN SO FAR AS THEY ARE OF KINDS OCCURRING IN MORE THAN ONE KIND OF FURNACE** (combustion apparatus **F23**; electric heating **H05B**)

ANNEX 159E F28 [Project-Rapporteur : M033/IB] <CE42>

CL M **Title HEAT EXCHANGE IN GENERAL**

ANNEX 160E F28C [Project-Rapporteur : M033/IB] <CE42>

CL M **Title HEAT-EXCHANGE APPARATUS, NOT PROVIDED FOR IN ANOTHER SUBCLASS, IN WHICH THE HEAT-EXCHANGE MEDIA COME INTO DIRECT CONTACT WITHOUT CHEMICAL INTERACTION** (heat-transfer, heat-exchange or heat-storage materials **C09K 5/00**; fluid heaters having heat generating means **F24H**; with an intermediate heat-transfer medium coming into direct contact with heat-exchange media **F28D 15/00-F28D 19/00**; details of heat-exchange apparatus of general application **F28F**)

ANNEX 161E F28D [Project-Rapporteur : M033/IB] <CE42>

CL M **Title HEAT-EXCHANGE APPARATUS, NOT PROVIDED FOR IN ANOTHER SUBCLASS, IN WHICH THE HEAT-EXCHANGE MEDIA DO NOT COME INTO DIRECT CONTACT** (heat-transfer, heat-exchange or heat-storage materials **C09K 5/00**; fluid heaters having heat generating means and heat transferring means **F24H**; furnaces **F27**; details of heat-exchange apparatus of general application **F28F**) **; HEAT STORAGE PLANTS OR APPARATUS IN GENERAL**

ANNEX 162E F28F [Project-Rapporteur : M033/IB] <CE42>

CL M **Title DETAILS OF HEAT-EXCHANGE OR HEAT-TRANSFER APPARATUS, OF GENERAL APPLICATION** (heat-transfer, heat-exchange or heat-storage materials **C09K 5/00**; water or air traps, air venting **F16**)

CL M **23/00 Features relating to the use of intermediate heat-exchange materials, e.g. selection of compositions**

ANNEX 163E F41H [Project-Rapporteur : A025/EP] <CE42>

AL C ***11/00 Defence installations; Defence devices*** *(constructional aspects, see section E, e.g.* ***E04H 9/04****)* ***; Means for clearing or detecting landmines***

AL C *11/12 · Means for clearing land minefields; Systems specially adapted for detection of landmines*

AL N *11/13 · · Systems specially adapted for detection of landmines*

AL N *11/132 · · · Biological systems, e.g. with detection by animals or plants*

AL N *11/134* · · · *Chemical systems, e.g. with detection by vapour analysis*

AL N *11/136* · · · *Magnetic, electromagnetic, acoustic or radiation systems, e.g. ground penetrating radars or metal-detectors*

AL N *11/138* · · · *Mechanical systems, e.g. prodding sticks for manual detection*

AL C *11/14* · · *Explosive line charges, e.g. snakes*

AL C *11/16* · · *Self-propelled mine-clearing vehicles; Mine-clearing devices attachable to vehicles*

AL N *11/18* · · · *with ground-impacting means for activating mines by the use of mechanical impulses, e.g. flails or stamping elements*

AL N *11/20* · · · *with ground-penetrating elements, e.g. with means for removing buried landmines from the soil (**F41H 11/18** takes precedence)*

AL N *11/22* · · · · *the elements being excavation buckets*

AL N *11/24* · · · · *the elements being ploughs*

AL N *11/26* · · · · *the elements being rotary ground-penetrating elements*

AL N *11/28* · · · *using brushing or sweeping means or dozers to push mines lying on a surface aside; using means for removing mines intact from a surface*

AL N *11/30* · · · *with rollers creating a surface load on the ground, e.g. steadily increasing surface load, for triggering purposes*

AL N *11/32* · · · *Decoy or sacrificial vehicles; Decoy or sacrificial devices attachable to vehicles*

ANNEX 164E G01D [Project-Rapporteur : D172/EP] <CE42>

CL M **Title MEASURING NOT SPECIALLY ADAPTED FOR A SPECIFIC VARIABLE; ARRANGEMENTS FOR MEASURING TWO OR MORE VARIABLES NOT COVERED BY A SINGLE OTHER SUBCLASS; TARIFF METERING APPARATUS; MEASURING OR TESTING NOT OTHERWISE PROVIDED FOR**

CL M **1/00 Measuring arrangements giving results other than momentary value of variable, of general application** (**G01D 3/00** takes precedence; in tariff metering apparatus **G01D 4/00**; transducers not specially adapted for a specific variable **G01D 5/00**)

AL M 1/18 · with arrangements for signalling that a predetermined value of an unspecified parameter has been exceeded (**G01D 1/14** takes precedence)

CL M **4/00 Tariff metering apparatus** (in taximeters **G07B 13/00**; apparatus actuated by coins, cards or the like with meter-controlled dispensing of liquid, gas, or electricity **G07F 15/00**)

AL M 4/04 · · Resetting-mechanisms, e.g. for indicating members

AL M 4/08 · · Transfer of indication from a counter into a summing counter

CL M **5/00 Mechanical means for transferring the output of a sensing member; Means for converting the output of a sensing member to another variable where the form or nature of the sensing member does not constrain the means for converting; Transducers not specially adapted for a specific variable** (**G01D 3/00** takes precedence; specially adapted for apparatus giving results other than momentary value of variable **G01D 1/00**)

AL M 5/04 ・・ using levers; using cams; using gearing

AL M 5/06 ・・ acting through a wall or enclosure, e.g. by bellows, by magnetic coupling

AL M 11/02 ・ Bearings or suspensions for moving parts

AL M 11/30 ・ Supports specially adapted for an instrument; Supports specially adapted for a set of instruments

CL M 15/16 ・ Recording elements transferring recording material, e.g. ink, to the recording surface (printing recording elements **G01D 15/20**)

AL M 15/26 ・・ operating by clockwork

ANNEX 165E G01G [Project-Rapporteur : D174/EP] <CE42>

CL M **Title WEIGHING**

AL M 5/04 ・ with means for measuring the pressure imposed by the load on a liquid

AL M 11/08 ・ having means for controlling the rate of feed or discharge

AL M 11/14 ・ using totalising or integrating devices

CL M **15/00 Arrangements for check-weighing of materials dispensed into removable containers**

CL M 19/08 ・ for incorporation in vehicles

AL M 19/14 ・ for weighing suspended loads (**G01G 3/00** takes precedence)

AL M 19/22 ・ for apportioning materials by weighing prior to mixing them

CL M 19/40 ・ with provisions for indicating, recording, or computing price or other quantities dependent on the weight (indicating means for weighing apparatus **G01G 23/18**; recording means for weighing apparatus **G01G 23/18**)

AL M 21/02 ・ Arrangements of bearings

AL M 21/10 ・・ Floating suspensions; Arrangements of shock-absorbers

AL M 23/38 ・・ Recording or coding devices specially adapted for weighing apparatus

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ANNEX 166E G01H [Project-Rapporteur : D175/EP] <CE42>

CL M **Title MEASUREMENT OF MECHANICAL VIBRATIONS OR ULTRASONIC, SONIC OR INFRASONIC WAVES**

CL M **7/00 Measuring reverberation time**

ANNEX 167E G01J [Project-Rapporteur : D176/EP] <CE42>

CL M **Title MEASUREMENT OF INTENSITY, VELOCITY, SPECTRAL CONTENT, POLARISATION, PHASE OR PULSE CHARACTERISTICS OF INFRA-RED, VISIBLE OR ULTRA-VIOLET LIGHT; COLORIMETRY; RADIATION PYROMETRY**

AL M 1/26 · · · · · adapted for automatic variation of the measured or reference value

AL M 1/32 · · · · · adapted for automatic variation of the measured or reference value

AL M 3/18 · · using diffraction elements, e.g. grating

CL M **4/00 Measuring polarisation of light**

CL M **5/00 Radiation pyrometry**

CL M 5/12 · · using thermoelectric elements, e.g. thermocouples

AL M 5/18 · · · · Special adaptation for indicating or recording

CL M **9/00 Measuring optical phase difference; Determining degree of coherence; Measuring optical wavelength** (spectrometry **G01J 3/00**)

AL M 9/02 · by interferometric methods

ANNEX 168E G01K [Project-Rapporteur : D177/EP] <CE42>

CL M **Title MEASURING TEMPERATURE; MEASURING QUANTITY OF HEAT; THERMALLY-SENSITIVE ELEMENTS NOT OTHERWISE PROVIDED FOR** (radiation pyrometry **G01J 5/00**)

CL M **3/00 Thermometers giving results other than momentary value of temperature** (**G01K 7/42** takes precedence)

CL M **5/00 Measuring temperature based on the expansion or contraction of a material** (**G01K 9/00** takes precedence; giving other than momentary value of temperature **G01K 3/00**)

AL M 5/02 · the material being a liquid (**G01K 5/32** takes precedence)

AL M 5/28 · the material being a gas (**G01K 5/32** takes precedence)

AL M 5/32 · the material being a fluid contained in a hollow body having parts which are deformable or displaceable under the pressure developed by the material (under pressure developed by evaporation **G01K 11/04**)

CL M **7/00 Measuring temperature based on the use of electric or magnetic elements directly sensitive to heat** (giving results other than momentary value of temperature **G01K 3/00**)

CL M 7/02 · using thermo-electric elements, e.g. thermo-couples

CL M 7/16 · using resistive elements

CL M 7/34 · using capacitative elements

CL M 7/36 · using magnetic elements, e.g. magnets, coils

AL M 11/12 · using change of colour or translucency (**G01K 11/32** takes precedence)

AL M 11/28 · using measurements of density

CL M **17/00 Measuring quantity of heat**

ANNEX 169E G01L [Project-Rapporteur : D178/EP] <CE42>

CL M **Title MEASURING FORCE, STRESS, TORQUE, WORK, MECHANICAL POWER, MECHANICAL EFFICIENCY, OR FLUID PRESSURE** (weighing **G01G**)

CL M **1/00 Measuring force or stress, in general** (measuring force due to impact **G01L 5/00**)

CL M 1/18 · using properties of piezo-resistive materials, i.e. materials of which the ohmic resistance varies according to changes in magnitude or direction of force applied to the material

AL M 1/22 · · using resistance strain gauges

AL M 3/24 · Devices for determining the value of power, e.g. by measuring and simultaneously multiplying the values of torque and revolutions per unit of time, by multiplying the values of tractive or propulsive force and velocity

CL M **5/00 Apparatus for, or methods of, measuring force, e.g. due to impact, work, mechanical power, or torque, adapted for special purposes**

CL M 5/20 · for measuring wheel side-thrust

CL M 5/24 · for determining value of torque or twisting moment for tightening a nut or other member which is similarly stressed

CL M **7/00 Measuring the steady or quasi-steady pressure of a fluid or a fluent solid material by mechanical or fluid pressure-sensitive elements** (transmitting or indicating the displacement of mechanical pressure-sensitive elements by electric or magnetic means **G01L 9/00**; measuring differences of two or more pressure values **G01L 13/00**; measuring two or more pressure values simultaneously **G01L 15/00**)

CL M **9/00 Measuring steady or quasi-steady pressure of a fluid or a fluent solid material by electric or magnetic pressure-sensitive elements; Transmitting or indicating the displacement of mechanical pressure-sensitive elements, used to measure the steady or quasi-steady pressure of a fluid or fluent solid material, by electric or magnetic means** (measuring differences of two or more pressure values **G01L 13/00**; measuring two or more pressure values simultaneously **G01L 15/00**)

CL M **17/00 Devices or apparatus for measuring tyre pressure or the pressure in other inflated bodies**

AL M 21/30 · by making use of ionisation effects

AL M 23/32 · · Apparatus specially adapted for recording pressure changes measured by indicators

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ANNEX 170E G01M [Project-Rapporteur : C453/EP] <CE42>

CL M **Title TESTING STATIC OR DYNAMIC BALANCE OF MACHINES OR STRUCTURES; TESTING OF STRUCTURES OR APPARATUS, NOT OTHERWISE PROVIDED FOR**

CL M Subclass index

TESTING STATIC OR DYNAMIC BALANCE OF MACHINES OR STRUCTURES	**1/00**
INVESTIGATING FLUID-TIGHTNESS; ELASTICITY	**3/00**; **5/00**
VIBRATION- OR SHOCK-TESTING	**7/00**
SPECIAL APPLICATIONS	
Aerodynamic; hydrodynamic testing	**9/00**; **10/00**
Optical testing	**11/00**
Mechanical or engine testing	**13/00**, **15/00**, **17/00**
SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS	**99/00**

CL D 19/00 (transferred to **G01M 99/00**)

CL D 19/02 (transferred to **H01T 13/58**)

CL N ***99/00 Subject matter not provided for in other groups of this subclass***

ANNEX 171E G01R [Project-Rapporteur : C453/EP] <CE42>

CL D 31/38 (transferred to **H01T 13/60**)

ANNEX 172E G01S [Project-Rapporteur : A009/EP] <CE42>

CL M Subclass index

BEACON SYSTEMS; DIRECTION-FINDERS; POSITION FIXING	**1/00**, **19/00**; **3/00**; **5/00**
RADAR OR ANALOGOUS SYSTEMS	
Details	**7/00**
Using radio waves, using other waves where the wavelength or the kind of wave is irrelevant or unspecified	**13/00**
Using acoustic waves	**15/00**
Using electromagnetic waves other than radio waves	**17/00**
SYSTEMS FOR DETERMINING DISTANCE OR VELOCITY NOT USING REFLECTION OR RERADIATION	**11/00**

ANNEX 173E G01T [Project-Rapporteur : M708/IE] <CE42>

CL M **Title MEASUREMENT OF NUCLEAR OR X-RADIATION** (radiation analysis of materials, mass spectrometry **G01N 23/00**; tubes for determining the presence, intensity, density or energy of radiation or particles **H01J 47/00**)

ANNEX 174E G01W [Project-Rapporteur : D180/EP] <CE42>

CL M **Title METEOROLOGY** (radar, sonar, lidar or analogous systems, designed for meteorological use **G01S 13/95**, **G01S 15/88**, **G01S 17/95**)

AL M 1/08 · Adaptations of balloons, missiles, or aircraft for meteorological purposes; Radiosondes

AL M 1/12 · Sunshine-duration recorders

CL M 1/14 · Rainfall or precipitation gauges

AL M 1/16 · Measuring atmospheric potential differences, e.g. due to electrical charges in clouds

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ANNEX 175E G02 [Project-Rapporteur : M034/IB] <CE42>

CL M **Title OPTICS**

ANNEX 176E G03 [Project-Rapporteur : M034/IB] <CE42>

CL M **Title PHOTOGRAPHY; CINEMATOGRAPHY; ANALOGOUS TECHNIQUES USING WAVES OTHER THAN OPTICAL WAVES; ELECTROGRAPHY; HOLOGRAPHY**

CL M Note G03

1. *This class does not cover reproduction of pictures or patterns by scanning and converting into electrical signals, which is covered by subclass **H04N**.* **[new.]**
2. In this class, the following terms are used with the meaning indicated:
   - "records" means photographs or any other kind of latent, directly-visible or permanent storage of pictorial information, which consist of an imagewise distribution of a quantity, e.g. an electric charge pattern, recorded on a carrier member;
   - "optical" applies not only to visible light but also to ultra-violet or infra-red radiations. **[4]**

ANNEX 177E G06 [Project-Rapporteur : M034/IB] <CE42>

CL M **Title COMPUTING; CALCULATING; COUNTING**

CL M Note G06

1. This class covers :
   - simulators which are concerned with the mathematics of computing the existing or anticipated conditions within the real device or system;
   - simulators which demonstrate, by means involving computing, the function of apparatus or of a system, if no provision exists elsewhere;
   - image data processing or generation.
2. This class does not cover :
   - *combinations of writing implements with computing devices, which are covered by group **B43K 29/08**;* **[new.]**
   - control functions derived from simulators, in general, which are covered by class **G05**, although such functions may be covered by the subclass of this class for the device controlled;
   - measurement or analysis of an individual variable to serve as an input to a simulator, which is covered by class **G01**;
   - simulators regarded as teaching or training devices which is the case if they give perceptible sensations having a likeness to the sensations a student would experience in reality in response to actions taken by him. Such simulators are covered by class **G09**;
   - components of simulators, if identical with real devices or machines, which

are covered by the relevant subclass for these devices or machines (and not by class **G09**).

3. In this class, the following terms or expressions are used with the meanings indicated:
   - "data" is used as the synonym of "information". Therefore, the term "information" is not used in subclasses **G06C**, **G06F**or **G06Q**;
   - "calculating or computing" includes, inter alia , operations on numerical values and on data expressed in numerical form. Of these terms "computing" is used throughout the class;
   - "computation" is derived from this interpretation of "computing". In the French language the term "calcul" will serve for either term;
   - "simulator" is a device which may use the same time scale as the real device or operate on an expanded or compressed time scale. In interpreting this term models of real devices to reduced or expanded scales are not regarded as simulators;
   - "record carrier" means a body, such as a cylinder, disc, card, tape, or wire, capable of permanently holding information, which can be read-off by a sensing element movable relative to the recorded information.
4. Attention is drawn to the Notes following the title of section G, especially as regards the definition of the term "variable".

ANNEX 178E G06F [Project-Rapporteur : A019/EP] <CE42>

CL C ***19/00 Digital computing or data processing equipment or methods, specially adapted for specific applications*** *(**G06F 17/00** takes precedence; data processing systems or methods specially adapted for administrative, commercial, financial, managerial, supervisory or forecasting purposes **G06Q**)*

AL N *19/10・ Bioinformatics, i.e. methods or systems for genetic or protein-related data processing in computational molecular biology (in silico methods of screening virtual chemical libraries **C40B 30/02**; in silico or mathematical methods of creating virtual chemical libraries **C40B 50/02**)*

AL N *Note 19/10*

1. *This group also covers bioinformatics methods or systems where digital data processing is inherent or implicit, but not explicitly mentioned.* **[new.]**
2. In this group, the following term is used with the meaning indicated:
   - *"systems" includes apparatus.* **[new.]**
3. *In this group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.* **[new.]**

AL N *19/12・・ for modelling or simulation in systems biology, e.g. probabilistic or dynamic models, gene-regulatory networks, protein interaction networks or metabolic networks*

AL N *19/14・・ for phylogeny or evolution, e.g. evolutionarily conserved regions determination or phylogenetic tree construction*

AL N *19/16 · · for molecular structure, e.g. structure alignment, structural or functional relations, protein folding, domain topologies, drug targeting using structure data, involving two-dimensional or three-dimensional structures*

AL N *19/18 · · for functional genomics or proteomics, e.g. genotype-phenotype associations, linkage disequilibrium, population genetics, binding site identification, mutagenesis, genotyping or genome annotation, protein-protein interactions or protein-nucleic acid interactions*

AL N *19/20 · · for hybridisation or gene expression, e.g. microarrays, sequencing by hybridisation, normalisation, profiling, noise correction models, expression ratio estimation, probe design or probe optimisation*

AL N *19/22 · · for sequence comparison involving nucleotides or amino acids, e.g. homology search, motif or SNP [Single-Nucleotide Polymorphism] discovery or sequence alignment*

AL N *19/24 · · for machine learning, data mining or biostatistics, e.g. pattern finding, knowledge discovery, rule extraction, correlation, clustering or classification*

AL N *19/26 · · for data visualisation, e.g. graphics generation, display of maps or networks or other visual representations*

AL N *19/28 · · for programming tools or database systems, e.g. ontologies, heterogeneous data integration, data warehousing or computing architectures*

ANNEX 179E G06M [Project-Rapporteur : M099/IB] <CE42>

CL N ***15/00 Counting of objects, not otherwise provided for***

ANNEX 180E G06T [Project-Rapporteur : A012/EP] <CE42>

CL M Subclass index

GENERAL PURPOSE IMAGE DATA PROCESSING	**1/00**
GEOMETRIC IMAGE TRANSFORMATION IN THE PLANE OF THE IMAGE	**3/00**
IMAGE ENHANCEMENT OR RESTORATION	**5/00**
IMAGE ANALYSIS	**7/00**
IMAGE CODING	**9/00**
2D [TWO DIMENSIONAL] IMAGE GENERATION	**11/00**
ANIMATION	**13/00**
3D [THREE DIMENSIONAL] IMAGE RENDERING	**15/00**
3D MODELLING FOR COMPUTER GRAPHICS	**17/00**
MANIPULATING 3D MODELS OR IMAGES FOR COMPUTER GRAPHICS	**19/00**

CL M **11/00 2D [Two Dimensional] image generation**

CL M 11/20 · Drawing from basic elements, e.g. lines or circles

CL M 11/40 · Filling a planar surface by adding surface attributes, e.g. colour or texture

CL 11/60 < Reinsert original entry 11/60>

CL 11/80 < Reinsert original entry 11/80>

CL C ***13/00 Animation***

AL N *13/20 · 3D [Three Dimensional] animation*

AL N *13/40 · · of characters, e.g. humans, animals or virtual beings*

AL N *13/60 · · of natural phenomena, e.g. rain, snow, water or plants*

AL N *13/80 · 2D animation, e.g. using sprites*

CL M **15/00 3D [Three Dimensional] image rendering**

AL N *15/02 · Non-photorealistic rendering*

AL N *15/04 · Texture mapping*

AL N *15/06 · Ray-tracing*

AL N *15/08 · Volume rendering*

CL 15/10 < Reinsert original entry 15/10>

CL M 15/50 · Lighting effects

AL N *15/55 · · Radiosity*

AL M 15/60 · · Shadow generation

CL D 15/70 (transferred to **G06T 13/00-G06T 13/60**)

AL N *15/80 · · Shading*

AL N *15/83 · · · Phong shading*

AL N *15/87 · · · Gouraud shading*

CL M **17/00 3D modelling for computer graphics**

AL N *17/05 · Geographic models*

CL M 17/10 · Volume description, e.g. cylinders, cubes or using CSG [Constructive Solid Geometry]

CL M 17/20 · Wire-frame description, e.g. polygonalisation or tessellation

CL M 17/30 · Surface description, e.g. polynomial surface description

CL D 17/40 (transferred to **G06T 19/00-G06T 19/20**)

CL D 17/50 (transferred to **G06T 17/05**)

CL N ***19/00 Manipulating 3D models or images for computer graphics***

AL N *19/20 · Editing of 3D images, e.g. changing shapes or colours, aligning objects or positioning parts*

ANNEX 181E G07B [Project-Rapporteur : C449/GB] <CE42>

CL M **Title TICKET-ISSUING APPARATUS; TAXIMETERS; ARRANGEMENTS OR APPARATUS FOR COLLECTING FARES, TOLLS OR ENTRANCE FEES AT ONE OR MORE CONTROL POINTS; FRANKING APPARATUS**

CL M Subclass index

MACHINES FOR PRINTING OR ISSUING TICKETS; DETAILS THEREOF	**1/00**, **3/00**; **5/00**
OTHER APPARATUS OR SYSTEMS CONCERNING TICKETS	
Holders; punches; validating; cancelling	**7/00**; **9/00**; **11/00**
TAXIMETERS	**13/00**
ARRANGEMENTS OR APPARATUS FOR COLLECTING FARES, TOLLS OR ENTRANCE FEES AT ONE OR MORE CONTROL POINTS	**15/00**
FRANKING APPARATUS	**17/00**

CL C ***15/00 Arrangements or apparatus for collecting fares, tolls or entrance fees at one or more control points*** *(handling coins or paper currency **G07D**; apparatus for vending or hiring articles or services activated by coins, credit cards, paper currency or the like **G07F 7/00**, **G07F 17/00**)*

CL N *Note 15/00* *Data processing aspects of payment systems or protocols relating to toll, entrance fee or fare collection, e.g. in road pricing or congestion charging, are also classified in **G06Q 20/00**. **[new.]***

CL C *15/02 · taking into account a variable factor such as distance or time, e.g. for passenger transport, parking systems or car rental systems (**G07B 15/06** takes precedence; taximeters **G07B 13/00**; parking meters per se **G07F 17/24**)*

CL N *15/06 · Arrangements for road pricing or congestion charging of vehicles or vehicle users, e.g. automatic toll systems*

CL N *Note 15/06* *This group covers the identification or tracking of vehicles or vehicle users for the purpose of road pricing or congestion charging, which means that vehicles or vehicle users are not necessarily channelled through fixed control points, e.g. toll booths or overhead gantries, but may be detected at a number of places when they travel in normal fashion in a pre-*

defined locality, e.g. a defined area in a city centre or an expressway, and where the information so generated is then used to determine a charge to be paid. ***[new.]***

ANNEX 182E G07D [Project-Rapporteur : C447/EP] <CE42>

CL M **Title HANDLING OF COINS OR OF PAPER CURRENCY OR SIMILAR VALUABLE PAPERS, e.g. TESTING, SORTING BY DENOMINATIONS, COUNTING, DISPENSING, CHANGING OR DEPOSITING**

CL M Note G07D In this subclass, the following terms or expressions are used with the meaning indicated:

- "coins" also covers tokens of similar nature;
- *"paper currency or similar valuable papers" covers banknotes, bills, cheques, vouchers, securities, bonds or the like.* **[new.]**

CL M **1/00 Coin dispensers**

CL M 1/02 · giving change

CL M **3/00 Sorting a mixed bulk of coins into denominations**

AL M 3/02 · Sorting coins by means of graded apertures

AL M 3/12 · Sorting coins by means of stepped deflectors

AL M 3/14 · Apparatus driven under control of coin-sensing elements

AL M 3/16 · in combination with coin-counting

CL M **5/00 Testing specially adapted to determine the identity or genuineness of coins, e.g. for segregating coins which are unacceptable or alien to a currency**

CL M **7/00 Testing specially adapted to determine the identity or genuineness of paper currency or similar valuable papers, e.g. for segregating those which are unacceptable or alien to a currency**

CL M **9/00 Counting coins** (in combination with coin-sorting **G07D 3/16**) **; Handling of coins not provided for in the other groups of this subclass**

CL M 9/04 · Hand- or motor-driven devices for counting coins

CL M **11/00 Devices accepting coins or paper currency, e.g. depositing machines** (apparatus freed or actuated by coins or the like **G07F**; apparatus freed or actuated by paper currency **G07F 7/04**; complete banking systems **G07F 19/00**)

CL M **13/00 Handling of coins or of paper currency or similar valuable papers, characterised by a combination of mechanisms not covered by a single one of groups G07D 1/00-G07D 11/00**

ANNEX 183E G07F [Project-Rapporteur : A014/EP] <CE42>

AL M 17/28 · for radio apparatus

ANNEX 184E G08 [Project-Rapporteur : M034/IB] <CE42>

CL M **Title SIGNALLING**

ANNEX 185E G08C [Project-Rapporteur : D181/BR] <CE42>

CL M **Title TRANSMISSION SYSTEMS FOR MEASURED VALUES, CONTROL OR SIMILAR SIGNALS** (fluid pressure transmission systems **F15B**; mechanical means for transferring the output of a sensing member into a different variable **G01D 5/00**; mechanical control systems **G05G**)

CL M **13/00 Arrangements for influencing the relationship between signals at input and output, e.g. differentiating, delaying**

CL M **15/00 Arrangements characterised by the use of multiplexing for the transmission of a plurality of signals over a common path**

CL M 19/36 · using optical means to convert the input signal

CL M 19/38 · using dynamo-electric devices (operated by pulses **G08C 19/20**)

CL M **21/00 Systems for transmitting the position of an object with respect to a predetermined reference system, e.g. tele-autographic system**

ANNEX 186E G08G [Project-Rapporteur : C449/GB] <CE42>

CL M 1/01 · Detecting movement of traffic to be counted or controlled (**G08G 1/07**-**G08G 1/14** take precedence; road pricing or congestion charging of vehicles or vehicle users **G07B 15/06**)

CL M 1/065 · by counting the vehicles in a section of the road or in a parking area, i.e. comparing incoming count with outgoing count (road pricing or congestion charging of vehicles or vehicle users **G07B 15/06**)

ANNEX 187E G21B [Project-Rapporteur : D187/GB] <CE42>

CL M **Title FUSION REACTORS** (uncontrolled fusion, applications thereof **G21J**)

ANNEX 188E G21D [Project-Rapporteur : D189/GB] <CE42>

CL M **Title NUCLEAR POWER PLANT**

AL M 1/04 · Pumping arrangements (by means within the reactor pressure vessel **G21C 15/24**)

CL M **3/00 Control of nuclear power plant** (control of nuclear reaction **G21C 7/00**)

AL M 3/06 · · responsive to faults within the plant (in the reactor **G21C 9/02**)

AL M 7/04 · using thermoelectric elements (structural combination of fuel element with thermoelectric element **G21C 3/40**)

ANNEX 189E G21F [Project-Rapporteur : D190/GB] <CE42>

CL M **Title PROTECTION AGAINST X-RADIATION, GAMMA RADIATION, CORPUSCULAR RADIATION OR PARTICLE BOMBARDMENT; TREATING RADIOACTIVELY CONTAMINATED MATERIAL; DECONTAMINATION ARRANGEMENTS THEREFOR** (radiation protection by pharmaceutical means **A61K 8/00**, **A61Q 17/00**-**A61Q 17/04**; in cosmonautic vehicles **B64G 1/54**; combined with a reactor **G21C 11/00**; combined with X-ray tubes **H01J 35/16**; combined with X-ray apparatus **H05G 1/02**)

AL M 3/02 · Clothing

CL M **7/00 Shielded cells or rooms**

AL M 7/04 · Shielded glove-boxes

AL M 7/06 · Structural combination with remotely-controlled apparatus, e.g. with manipulators

CL M 9/06 · · Processing

CL M 9/30 · · Processing

ANNEX 190E G21G [Project-Rapporteur : D143/GB] <CE42>

CL M **Title CONVERSION OF CHEMICAL ELEMENTS; RADIOACTIVE SOURCES**

CL M **1/00 Arrangements for converting chemical elements by electromagnetic radiation, corpuscular radiation, or particle bombardment, e.g. producing radioactive isotopes** (by thermonuclear reactions in nuclear reactors **G21B**; conversion of nuclear fuel in nuclear reactors **G21C**)

AL M 1/12 · · by electromagnetic irradiation, e.g. with gamma or X-rays (irradiation devices **G21K 5/00**)

CL M **4/00 Radioactive sources**

ANNEX 191E G21H [Project-Rapporteur : D191/GB] <CE42>

CL M **Title OBTAINING ENERGY FROM RADIOACTIVE SOURCES; APPLICATIONS OF RADIATION FROM RADIOACTIVE SOURCES; UTILISING COSMIC RADIATION** (fusion reactors **G21B**; nuclear reactors **G21C**)

AL M 1/04 · Cells using secondary emission induced by alpha radiation, beta radiation, or gamma radiation

AL M 1/08 · Cells in which radiation ionises a gas in the presence of a junction of two dissimilar metals, i.e. contact potential-difference cells

AL M 1/10 · Cells in which radiation heats a thermoelectric junction or a thermionic converter

CL M **3/00 Arrangements for direct conversion of radiation energy from radioactive sources into forms of energy other than electric energy, e.g. light**

AL M **5/00 Applications of radiation from radioactive sources or arrangements therefor** (producing mutation in plants **A01H 1/06**; preservation of dairy products **A23C 3/07**; preservation of foodstuffs **A23L 3/26**; for therapeutic purposes **A61N 5/10**; in chemical, physical or physicochemical processes in general **B01J 19/08**; in electrostatic separation **B03C 3/38**; for after-treatment of coatings applied as liquids or other fluent materials **B05D 3/06**; for action between electric vehicles and tracked apparatus **B61L 1/10**, **B61L 3/06**; for preparation of organic chemical compounds **C07**, **C08F 2/46**; for treating macromolecular substances or articles made therefrom **B29C 71/04**, **C08J 3/28**, **C08J 7/18**; for cracking of hydrocarbon oils **C10G 15/10**, **C10G 32/04**; for reforming naphtha **C10G 35/16**; preservation or ageing of products obtained from fermentation processes **C12H 1/06**, **C12H 1/16**; for bleaching fibres **D06L 3/04**; measuring **G01T**; irradiation devices, gamma- or X-ray microscopes **G21K**; in discharge tubes **H01J**; apparatus for generating ions to be introduced into non-enclosed gases, e.g. into the atmosphere, **H01T 23/00**; for carrying-off electrostatic charges **H05F 3/06**)

ANNEX 192E H01R [Project-Rapporteur : A020/JP] <CE42>

CL M **4/00 Electrically-conductive connections between two or more conductive members in direct contact, i.e. touching one another; Means for effecting or maintaining such contact; Electrically-conductive connections having two or more spaced connecting locations for conductors and using contact members penetrating insulation** (details of contacts of coupling devices **H01R 13/00**; coupling devices **H01R 12/70**, **H01R 24/00**-**H01R 33/00**; flexible or turnable line connectors **H01R 35/00** non-rotary current collectors **H01R 41/00**)

AL M 4/02 · Soldered or welded connections (**H01R 4/62**, **H01R 12/59**, **H01R 12/65** take precedence)

CL M **9/00 Structural associations of a plurality of mutually-insulated electrical connecting elements, e.g. terminal strips, terminal blocks; Terminals or binding posts mounted upon a base or in a case; Bases therefor** (details of direct connections or connections

using contact members penetrating insulation **H01R 4/00**; specially adapted for printed circuits, flat or ribbon cables, or like generally planar structures **H01R 12/00**; coupling devices **H01R 12/70**, **H01R 24/00**-**H01R 33/00**; flexible or turnable line connectors **H01R 35/00**)

CL M **11/00 Individual connecting elements providing two or more spaced connecting locations for conductive members which are, or may be, thereby interconnected, e.g. end pieces for wires or cables supported by the wire or cable and having means for facilitating electrical connection to some other wire, terminal, or conductive member, blocks of binding posts** (connections between members in direct contact **H01R 4/00**; structural associations of a plurality of mutually-insulated electrical connecting elements **H01R 9/00**; coupling devices **H01R 12/70**, **H01R 24/00**-**H01R 29/00**, **H01R 33/00**; flexible or turnable line connectors **H01R 35/00**)

AL D 12/02- (transferred to **H01R 12/50**-**H01R 12/91**)
12/38

AL N *12/50 · Fixed connections*

AL N *12/51 · · for rigid printed circuits or like structures*

AL N *12/52 · · · connecting to other rigid printed circuits or like structures*

AL N *12/53 · · · connecting to cables except for flat or ribbon cables*

AL N *12/55 · · · characterised by the terminals*

AL N *12/57 · · · · surface mounting terminals*

AL N *12/58 · · · · terminals for insertion into holes*

AL N *12/59 · · for flexible printed circuits, flat or ribbon cables or like structures*

AL N *12/61 · · · connecting to flexible printed circuits, flat or ribbon cables or like structures*

AL N *12/62 · · · connecting to rigid printed circuits or like structures*

AL N *12/63 · · · connecting to another shape cable*

AL N *12/65 · · · characterised by the terminal*

AL N *12/67 · · · · insulation penetrating terminals*

AL N *12/68 · · · · · comprising deformable portions*

AL N *12/69 · · · · deformable terminals e.g. crimping terminals*

AL N *12/70 · Coupling devices*

AL N *12/71 · · for rigid printing circuits or like structures*

AL N *12/72 · · · coupling with the edge of the rigid printed circuits or like structures*

AL N *12/73 · · · · connecting to other rigid printed circuits or like structures*

AL N *12/75 · · · connecting to cables except for flat or ribbon cables*

AL N *12/77 · · for flexible printed circuits, flat or ribbon cables or like structures*

AL N *12/78 · · · connecting to other flexible printed circuits, flat or ribbon cables or like structures*

AL N *12/79 · · · connecting to rigid printed circuits or like structures*

AL N *12/81 · · · connecting to another cable except for flat or ribbon cable*

AL N *12/82 · · connected with low or zero insertion force*

AL N *12/83 · · · connected with pivoting of printed circuits or like after insertion*

AL N *12/85 · · · contact pressure producing means, contacts activated after insertion of printed circuits or like structures*

AL N *12/87 · · · · acting automatically by insertion of rigid printed or like structures*

AL N *12/88 · · · · acting manually by rotating or pivoting connector housing parts*

AL N *12/89 · · · · acting manually by moving connector housing parts linearly e.g. slider*

AL N *12/91 · · allowing relative movement between coupling parts e.g. floating or self aligning*

CL M **13/00 Details of coupling devices of the kinds covered by groups H01R 12/70 or H01R 24/00-H01R 33/00**

ANNEX 193E H01R [Project-Rapporteur : A021/US] <CE42>

AL C *13/646 · specially adapted for high-frequency, e.g. structures providing an impedance match or phase match (non-coaxed protective earth or shield arrangements **H01R 13/648-H01R 13/6599**; coaxed connectors specifically adapted for high frequency **H01R 24/40-H01R 24/56**)*

AL N *13/6461 · · Means for preventing cross-talk*

AL N *13/6463 · · · using twisted pairs of wires*

AL N *13/6464 · · · by adding capacitive elements*

AL N *13/6466 · · · · on substrates, e.g. PCBs [Printed Circuit Boards]*

AL N *13/6467 · · · by cross-over of signal conductors*

AL N *13/6469 · · · · on substrates*

AL N *13/6471* · · · *by special arrangement of ground and signal conductors, e.g. GSGS [Ground-Signal-Ground-Signal]*

AL N *13/6473* · · *Impedance matching*

AL N *13/6474* · · · *by variation of conductive properties, e.g. by variation of dimensions*

AL N *13/6476* · · · · *by making an aperture, e.g. a hole*

AL N *13/6477* · · · *by variation of dielectric properties*

AL D 13/6479 < Delete new entry >

AL C *13/648* · *Protective earth or shield arrangements on coupling devices (coaxially arranged shields **H01R 24/38**)*

CL C *13/658* · · *High frequency shielding arrangements, e.g. against EMI [Electro-Magnetic Interference] or EMP [Electro-Magnetic Pulse]*

AL N *13/6581* · · · *Shield structure*

AL N *13/6582* · · · · *with resilient means for engaging mating connector*

AL N *13/6583* · · · · · *with separate conductive resilient members between mating shield members*

AL N *13/6584* · · · · · · *formed by conductive elastomeric members, e.g. flat gaskets or O-rings*

AL N *13/6585* · · · · *Shielding material individually surrounding or interposed between mutually spaced contacts*

AL N *13/6586* · · · · · *for separating multiple connector modules*

AL N *13/6587* · · · · · · *for mounting on PCBs*

AL N *13/6588* · · · · · *with through openings for individual contacts*

AL N *13/6589* · · · · · *with wires separated by conductive housing parts*

AL N *13/659* · · · · *with plural ports for distinct connectors*

AL N *13/6591* · · · *Specific features or arrangements of connection of shield to conductive members*

AL N *13/6592* · · · · *the conductive member being a shielded cable*

AL N *13/6593* · · · · · *the shield being composed of different pieces*

AL N *13/6594* · · · · *the shield being mounted on a PCB and connected to conductive members*

AL N *13/6595* · · · · · *with separate members fixing the shield to the PCB*

AL N *13/6596* · · · · *the conductive member being a metal grounding panel*

AL N *13/6597* · · · · *the conductive member being a contact of the connector*

AL N *13/6598* · · · *Shield material*

AL N *13/6599* · · · · *Dielectric material made conductive, e.g. plastic material coated with metal*

CL C *13/66* · *Structural association with built-in electrical component (coupling devices having concentrically or coaxially-arranged contacts **H01R 24/38**-**H01R 24/56**)*

CL C *13/68* · · *with built-in fuse*

AL N *13/684* · · · *the fuse being removable*

AL N *13/688* · · · · *with housing part adapted for accessing the fuse*

AL N *13/692* · · · · · *Turnable housing part*

AL N *13/696* · · · *the fuse being integral with the terminal, e.g. pin or socket*

AL M 13/717 · · with built-in light source

CL C *13/719* · · *specially adapted for high frequency, e.g. with filters*

AL N *13/7193* · · · *with ferrite filters*

AL N *13/7195* · · · *with planar filters with openings for contacts*

AL N *13/7197* · · · *with filters integral with or fitted onto contacts, e.g. tubular filters*

ANNEX 194E H01R [Project-Rapporteur : A022/EP] <CE42>

CL C ***24/00 Two-part coupling devices, or either of their cooperating parts, characterised by their overall structure*** *(specially adapted for printed circuits, flat or ribbon cables, or like structures **H01R 12/00**; specially adapted for supporting apparatus **H01R 33/00**)*

AL D 24/02 (transferred to **H01R 24/38**)

AL D 24/04 (transferred to **H01R 24/58**)

AL D 24/06 (transferred to **H01R 24/28**,**H01R 24/66**)

AL D 24/08 (transferred to **H01R 24/30**,**H01R 24/70**)

AL D 24/10 (transferred to **H01R 24/20**,**H01R 24/76**)

AL D 24/12 (transferred to **H01R 24/22**,**H01R 24/78**)

AL D 24/14 (transferred to **H01R 24/66**)

AL D 24/16 (transferred to **H01R 24/76**)

AL D 24/18 (transferred to **H01R 24/84**)

AL N *24/20 · Coupling parts carrying sockets, clips or analogous contacts and secured only to wire or cable*

AL N *24/22 · · with additional earth or shield contacts*

AL N *24/28 · Coupling parts carrying pins, blades or analogous contacts and secured only to wire or cable*

AL N *24/30 · · with additional earth or shield contacts*

AL N *24/38 · having concentrically or coaxially arranged contacts*

AL N *24/40 · · specially adapted for high frequency*

AL N *24/42 · · · comprising impedance matching means or electrical components, e.g. filters or switches*

AL N *24/44 · · · · comprising impedance matching means*

AL N *24/46 · · · · comprising switches*

AL N *24/48 · · · · comprising protection devices, e.g. overvoltage protection*

AL N *24/50 · · · mounted on a PCB [Printed Circuit Board]*

AL N *24/52 · · · mounted in or to a panel or structure*

AL N *24/54 · · · Intermediate parts, e.g. adapters, splitters or elbows*

AL N *24/56 · · · specially adapted for specific shapes of cables, e.g. corrugated cables, twisted pair cables, cables with two screens or hollow cables*

AL N *24/58 · Contacts spaced along longitudinal axis of engagement*

AL N *24/60 · Contacts spaced along planar side wall transverse to longitudinal axis of engagement*

AL N *24/62 · · Sliding engagements with one side only, e.g. modular jack coupling devices*

AL N *24/64 · · · for high frequency, e.g. RJ 45*

AL N *24/66 · with pins, blades or analogous contacts and secured to apparatus or structure, e.g. to a wall*

AL N *24/68 · · mounted on directly pluggable apparatus*

AL N *24/70 · · with additional earth or shield contacts*

AL N *24/76 · with sockets, clips or analogous contacts and secured to apparatus or structure, e.g. to a wall*

AL N *24/78 · · with additional earth or shield contacts*

AL N *24/84* · *Hermaphroditic coupling devices*

AL N *24/86* · *Parallel contacts arranged about a common axis*

ANNEX 195E H01T [Project-Rapporteur : C453/EP] <CE42>

AL M 4/10 · having a single gap or a plurality of gaps in parallel (sparking plugs **H01T 13/00**)

AL C ***13/00 Sparking plugs***

AL N *13/58* · *Testing (testing characteristics of the spark in internal-combustion engine ignition **F02P 17/12**)*

AL N *13/60* · · *of electrical properties*

AL M 21/04 · · Cleaning (means for self-cleaning **H01T 13/14**; abrasive blasting devices for cleaning sparking plugs **B24C 3/34**)

AL M 21/06 · Adjustment of spark gaps (sparking plugs having movable electrodes for adjusting the gap **H01T 13/26**)

ANNEX 196E H03K [Project-Rapporteur : M010/IB] <CE42>

CL M Note H03K

1. This subclass covers :
   - methods, circuits, devices, or apparatus using active elements operating in a discontinuous or switching manner for generating, counting, amplifying, shaping, modulating, demodulating, or otherwise manipulating signals;
   - electronic switching not involving contact-making and breaking;
   - logic circuits handling electric pulses.
2. In this subclass, the following expression is used with the meaning indicated:
   - "active element" exercises control over the conversion of input energy into an oscillation or a discontinuous flow of energy.
3. In this subclass, where the claims of a patent document are not limited to a specific circuit element, the document is classified at least according to the elements used in the described embodiment. **[6]**

ANNEX 197E H04B [Project-Rapporteur : A027/EP] <CE42>

CL C *1/69* · *Spread spectrum techniques*

CL N *Note 1/69* *When classifying in this group, any aspect of code division multiplexing, which is considered to represent information of interest for search, may also be classified in group **H04J 13/00**. **[new.]***

CL N *1/692 · · Hybrid techniques using combinations of two or more spread spectrum techniques*

CL C *1/707 · · using direct sequence modulation*

AL N *1/7073 · · · Synchronisation aspects*

AL N *1/7075 · · · · with code phase acquisition*

AL N *1/7077 · · · · · Multi-step acquisition, e.g. multi-dwell, coarse-fine or validation*

AL N *1/708 · · · · · Parallel implementation*

AL N *1/7083 · · · · Cell search, e.g. using a three-step approach*

AL N *1/7085 · · · · using a code tracking loop, e.g. a delay-locked loop*

AL N *1/7087 · · · · Carrier synchronisation aspects*

AL N *1/709 · · · Correlator structure*

AL N *1/7093 · · · · Matched filter type*

AL N *1/7095 · · · · Sliding correlator type*

AL N *1/7097 · · · Interference-related aspects*

AL N *1/710 · · · · the interference being narrowband interference*

AL N *1/7103 · · · · the interference being multiple access interference*

AL N *1/7105 · · · · · Joint detection techniques, e.g. linear detectors*

AL N *1/7107 · · · · · Subtractive interference cancellation*

AL N *1/711 · · · · the interference being multi-path interference*

AL N *1/7113 · · · · · Determination of path profile*

AL N *1/7115 · · · · · Constructive combining of multi-path signals, i.e. RAKE receivers*

AL N *1/7117 · · · · · · Selection, re-selection, allocation or re-allocation of paths to fingers, e.g. timing offset control of allocated fingers*

AL N *1/712 · · · · · · Weighting of fingers for combining, e.g. amplitude control or phase rotation using an inner loop*

AL C *1/713 · · using frequency hopping*

AL N *1/7136 · · · Arrangements for generation of hop frequencies, e.g. using a bank of frequency sources, using continuous tuning or using a transform*

AL N *1/7143 · · · Arrangements for generation of hop patterns*

AL N *1/715 · · · Interference-related aspects*

AL N *1/7156 · · · Arrangements for sequence synchronisation*

AL N *1/7163 · · using impulse radio*

AL N *1/717 · · · Pulse-related aspects*

AL N *1/7176 · · · Data mapping, e.g. modulation*

AL N *1/7183 · · · Synchronisation*

AL N *1/719 · · · Interference-related aspects*

ANNEX 198E H04J [Project-Rapporteur : D193/NO] <CE42>

CL M **Title MULTIPLEX COMMUNICATION** (peculiar to transmission of digital information **H04L 5/00**; systems for the simultaneous or sequential transmission of more than one television signal **H04N 7/08**; in exchanges **H04Q 11/00**)

CL M **1/00 Frequency-division multiplex systems** (**H04J 14/02** takes precedence)

CL M **3/00 Time-division multiplex systems** (**H04J 14/08** takes precedence)

CL M 3/02 · Details

CL M 3/24 · in which the allocation is indicated by an address (**H04J 3/17** takes precedence)

ANNEX 199E H04J [Project-Rapporteur : A027/EP] <CE42>

CL C ***13/00 Code division multiplex systems*** *(for frequency hopping **H04B 1/713**)*

CL N *Note 13/00* *When classifying in this group, any aspect of spread spectrum techniques not specific to frequency hopping, and which is considered to represent information of interest for search, may also be classified in group **H04B 1/69**.* ***[new.]***

CL D 13/02 (transferred to **H04J 13/00-H04J 13/22**)

AL D 13/04 (transferred to **H04J 13/00-H04J 13/22**)

AL D 13/06 (transferred to **H04J 13/00-H04J 13/22**)

CL N *13/10 · Code generation*

AL N *13/12 · · Generation of orthogonal codes*

AL N *13/14 · · Generation of codes with a zero correlation zone*

CL N *13/16* · *Code allocation*

AL N *13/18* · · *Allocation of orthogonal codes*

AL N *13/20* · · · *having an orthogonal variable spreading factor [OVSF]*

AL N *13/22* · · *Allocation of codes with a zero correlation zone*

ANNEX 200E H04J [Project-Rapporteur : D193/NO] <CE42>

CL M **14/00 Optical multiplex systems**

ANNEX 201E H04K [Project-Rapporteur : A027/EP] <CE42>

CL M **1/00 Secret communication** (ciphering or deciphering apparatus per se **G09C**; systems with reduced bandwidth or suppressed carrier **H04B 1/66**; spread spectrum techniques **H04B 1/69**; by using a sub-carrier **H04B 14/08**; by multiplexing **H04J**; transmission systems for secret digital information **H04L 9/00**; secret or subscription television systems **H04N 7/16**, **H04N 21/00**)

ANNEX 202E H04L [Project-Rapporteur : A027/EP] <CE42>

CL M **9/00 Arrangements for secret or secure communication** (spread spectrum techniques **H04B 1/69**)

ANNEX 203E H04M [Project-Rapporteur : A022/EP] <CE42>

AL M 5/02 · Constructional details (jacks, jack-plugs **H01R 24/58**)

ANNEX 204E H04N [Project-Rapporteur : A014/EP] <CE42>

CL M **Title PICTORIAL COMMUNICATION, e.g. TELEVISION**

CL M 1/032 · · for picture-information reproduction

CL M 1/21 · Intermediate information storage (**H04N 1/387**, **H04N 1/41** take precedence)

CL M 1/387 · Composing, repositioning or otherwise modifying originals

CL M 1/403 · · Discrimination between the two tones in the picture signal of a two-tone original

CL M 3/02 · by optical-mechanical means only (**H04N 3/36** takes precedence)

ANNEX 205E H04N [Project-Rapporteur : A029/EP] <CE42>

CL C *3/14* · · *by means of electrically scanned solid-state devices (for picture generation **H04N 5/335**)*

CL D 3/15 (transferred to **H04N 5/335**)

ANNEX 206E H04N [Project-Rapporteur : A014/EP] <CE42>

CL M 3/16 · · by deflecting electron beam in cathode-ray tube

AL M 3/185 · · · · Maintaining dc voltage constant

CL M 3/26 · · · Modifications of scanning arrangements to improve focusing

CL M 3/27 · · · Circuits special to multi-standard receivers

CL C ***5/00*** ***Details of television systems*** *(scanning details or combination thereof with generation of supply voltages **H04N 3/00**; specially adapted for colour television **H04N 9/00**; servers specially adapted for the distribution of content **H04N 21/20**; client devices specially adapted for the reception of or interaction with content **H04N 21/40**)*

CL M 5/04 · Synchronising (for television systems using pulse code modulation **H04N 7/24**)

ANNEX 207E H04N [Project-Rapporteur : A029/EP] <CE42>

CL C *5/217* · · · *in picture signal generation (noise reduction or noise suppression involving solid-state image sensors **H04N 5/357**)*

ANNEX 208E H04N [Project-Rapporteur : A014/EP] <CE42>

CL M 5/232 · · · Devices for controlling television cameras, e.g. remote control (**H04N 5/235** takes precedence)

CL M 5/30 · Transforming light or analogous information into electric information (**H04N 5/222** takes precedence; scanning details **H04N 3/00**)

ANNEX 209E H04N [Project-Rapporteur : A029/EP] <CE42>

CL C *5/335 · · using solid-state image sensors [SSIS] (**H04N 5/32**, **H04N 5/33** take precedence)*

CL N *Note 5/335 In this group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.* ***[new.]***

AL N *5/341 · · · Extracting pixel data from an image sensor by controlling scanning circuits, e.g. by modifying the number of pixels having been sampled or to be sampled*

AL N *5/343 · · · · by switching between different modes of operation using different resolutions or aspect ratios, e.g. between still and video mode or between interlaced and non-interlaced mode*

AL N *5/345 · · · · by partially reading an SSIS array*

AL N *5/347 · · · · by combining or binning pixels in SSIS*

AL N *5/349 · · · · for increasing resolution by shifting the sensor relative to the scene*

AL N *5/351 · · · Control of the SSIS depending on the scene, e.g. brightness or motion in the scene*

AL N *5/353 · · · · Control of the integration time*

AL N *5/355 · · · · Control of the dynamic range*

AL N *5/357 · · · Noise processing, e.g. detecting, correcting, reducing or removing noise*

AL N *5/359 · · · · applied to excess charges produced by the exposure, e.g. smear, blooming, ghost image, crosstalk or leakage between pixels*

AL N *5/361 · · · · applied to dark current*

AL N *5/363 · · · · applied to reset noise, e.g. KTC noise*

AL N *5/365 · · · · applied to fixed-pattern noise, e.g. non-uniformity of response*

AL N *5/367 · · · · · applied to defects, e.g. non-responsive pixels*

AL N *5/369 · · · SSIS architecture; Circuitry associated therewith*

AL N *5/372 · · · · Charge-coupled device [CCD] sensors; Time delay and integration [TDI] registers or shift registers specially adapted for SSIS*

AL N *5/3722 · · · · · using frame interline transfer [FIT]*

AL N *5/3725 · · · · · using frame transfer [FT]*

AL N *5/3728 · · · · · using interline transfer [IT]*

AL N *5/374 · · · · Addressed sensors, e.g. MOS or CMOS sensors*

AL N *5/3745* · · · · · *having additional components embedded within a pixel or connected to a group of pixels within a sensor matrix, e.g. memories, A/D converters, pixel amplifiers, shared circuits or shared components*

AL N *5/376* · · · · *Addressing circuits*

AL N *5/378* · · · · *Readout circuits, e.g. correlated double sampling [CDS] circuits, output amplifiers or A/D converters*

ANNEX 210E H04N [Project-Rapporteur : A014/EP] <CE42>

CL M 5/455 · · Demodulation-circuits

CL M 5/50 · · Tuning indicators; Automatic tuning control

CL M 5/63 · Generation or supply of power specially adapted for television receivers (generation of supply voltages in combination with electron beam deflecting **H04N 3/18**)

CL M 5/72 · Modifying the appearance of television pictures by optical filters or diffusing screens

CL M 5/74 · Projection arrangements for image reproduction, e.g. using eidophor

CL M 5/76 · Television signal recording

AL M 5/87 · · · Producing a motion picture film from a television signal

CL M 5/913 · · · for scrambling

CL M 5/917 · · · for bandwidth reduction (using pulse code modulation **H04N 7/24**)

AL M 5/945 · · · · · for signals recorded by pulse code modulation

CL C ***7/00*** ***Television systems*** *(details **H04N 3/00**, **H04N 5/00**, specially adapted for colour television **H04N 11/00**; stereoscopic television systems **H04N 13/00**; selective content distribution **H04N 21/00**)*

CL C *7/16* · *Analogue secrecy systems; Analogue subscription systems*

CL C *7/24* · *Systems for the transmission of television signals using pulse code modulation (**H04N 21/00** takes precedence)*

CL M 7/38 · · · · involving delta modulation

CL M 7/42 · · · · involving differential modulation

CL C *7/52* · · *Systems for transmission of a pulse code modulated with one or more other pulse code modulated signals, e.g. an audio signal or a synchronizing signal (assembling of a multiplex stream by combining a video stream with other content or additional data, remultiplexing of multiplex streams, insertion of stuffing bits into the multiplex stream, assembling of a packetised elementary stream at server side **H04N 21/236**; disassembling of a multiplex stream, remultiplexing of multiplex streams, extraction or*

*processing of Service Information, disassembling of packetised elementary stream at client side **H04N 21/434**)*

AL D 7/58 (transferred to **H04N 21/2365**,**H04N 21/434**)

AL D 7/60 (transferred to **H04N 21/236**,**H04N 21/434**)

AL D 7/62 (transferred to **H04N 21/242**,**H04N 21/431**,**H04N 21/434**,**H04N 21/8547**)

AL M 9/097 · · · Optical arrangements associated therewith, e.g. for beam-splitting, for colour correction

CL M 9/10 · · using optical-mechanical scanning means only (**H04N 9/11** takes precedence)

CL M 9/12 · Picture reproducers (**H04N 9/11** takes precedence)

AL M 9/14 · · using optical-mechanical scanning means only

CL M 9/16 · · using cathode ray tubes (**H04N 9/11** takes precedence)

CL M 9/285 · · · · using quadrupole lenses

AL M 9/888 · · · · for signals recorded by pulse code modulation

CL N ***21/00 Selective content distribution, e.g. interactive television, VOD [Video On Demand]***
*(broadcast communication **H04H**; arrangements, apparatus, circuits or systems for communication control or processing being characterised by a protocol **H04L 29/06**; real-time bi-directional transmission of motion video data **H04N 7/14**)*

CL N *Note 21/00*

1. *This group covers :*
   - *interactive video distribution processes, systems, or elements thereof, which are characterised by point-to-multipoint system configurations, and which are mainly used for motion video data unidirectional distribution or delivery resulting from interactions between systems operators, e.g. access or service providers, or users e.g. subscribers, and system elements.* **[new.]**
   - *such systems include dedicated communication systems, such as television distribution systems, which primarily distribute or deliver motion video data in the manner indicated, which may, in addition, provide a framework for further, diverse data communications or services in either unidirectional or bi-directional form. However, video will occupy most of the downlink bandwidth in the distribution process.* **[new.]**
   - *typically, system operators interface with transmitter-side elements or users' interface with receiver-side elements in order to facilitate, through interaction with such elements, the dynamic control of data processing or data flow at various points in the system. This interaction is typically occasional or intermittent in nature.* **[new.]**
   - *processes, systems or elements thereof specially adapted to the generation, distribution and processing of data, which is either associated with video content, e.g. metadata, ratings, or related to the user or his environment and which has been actively or passively gathered. This data is either used to facilitate interaction or to alter or target the content.* **[new.]**

2. *2. In this main group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.* **[new.]**

AL N *21/20 · Servers specifically adapted for the distribution of content, e.g. VOD servers; Operations thereof*

AL N *21/21 · · Server components or server architectures*

AL N *21/214 · · · Specialised server platform, e.g. server located in an airplane, hotel or hospital*

AL N *21/218 · · · Source of audio or video content, e.g. local disk arrays*

AL N *21/2183 · · · · Cache memory*

AL N *21/2187 · · · · Live feed*

AL N *21/222 · · · Secondary servers, e.g. proxy server or cable television Head-end*

AL N *21/2225 · · · · Local VOD servers*

AL N *21/226 · · · Internal components of the server*

AL N *21/23 · · Processing of content or additional data; Elementary server operations; Server middleware*

AL N *21/231 · · · Content storage operation, e.g. caching movies for short term storage, replicating data over plural servers or prioritizing data for deletion*

AL N *21/2312 · · · · Data placement on disk arrays*

AL N *21/2315 · · · · · using interleaving*

AL N *21/2318 · · · · · using striping*

AL N *21/232 · · · Content retrieval operation within server, e.g. reading video streams from disk arrays*

AL N *21/233 · · · Processing of audio elementary streams*

AL N *21/234 · · · Processing of video elementary streams, e.g. splicing of video streams or manipulating MPEG-4 scene graphs (video encoding or transcoding processes per se **H04N 7/26**)*

AL N *21/2343 · · · · involving reformatting operations of video signals for distribution or compliance with end-user requests or end-user device requirements*

AL N *21/2347 · · · · involving video stream encryption (arrangements for secret or secure communication **H04L 9/00**; analogue secrecy systems **H04N 7/16**)*

AL N *21/235 · · · Processing of additional data, e.g. scrambling of additional data or processing content descriptors*

AL N *21/236 · · · Assembling of a multiplex stream, e.g. transport stream, by combining a video stream with other content or additional data, e.g. inserting a URL [Uniform Resource Locator] into a video stream, multiplexing software data into a video stream; Remultiplexing of multiplex streams; Insertion of stuffing bits into the multiplex stream, e.g. to obtain a constant bit-rate; Assembling of a packetised elementary stream*

AL N *21/2362 · · · · Generation or processing of SI [Service Information]*

AL N *21/2365 · · · · Multiplexing of several video streams*

AL N *21/2368 · · · · Multiplexing of audio and video streams*

AL N *21/237 · · · Communication with additional data server*

AL N *21/238 · · · Interfacing the downstream path of the transmission network, e.g. adapting the transmission rate of a video stream to network bandwidth; Processing of multiplex streams*

AL N *21/2381 · · · · Adapting the multiplex stream to a specific network, e.g. an IP [Internet Protocol] network*

AL N *21/2383 · · · · Channel coding of digital bit-stream, e.g. modulation*

AL N *21/2385 · · · · Channel allocation (**H04N 21/266** takes precedence) ; Bandwidth allocation (**H04N 21/24** takes precedence)*

AL N *21/2387 · · · · Stream processing in response to a playback request from an end-user, e.g. for trick-play*

AL N *21/2389 · · · · Multiplex stream processing, e.g. multiplex stream encrypting*

AL N *21/239 · · · Interfacing the upstream path of the transmission network, e.g. prioritizing client requests*

AL N *21/24 · · · Monitoring of processes or resources, e.g. monitoring of server load, available bandwidth or upstream requests*

AL N *21/241 · · · OS [Operating System] processes, e.g. server setup (arrangements for programme control **G06F 9/00**)*

AL N *21/242 · · · Synchronization processes, e.g. processing of PCR [Program Clock References]*

AL N *21/25 · · Management operations performed by the server for facilitating the content distribution or administrating data related to end-users or client devices, e.g. end-user or client device authentication or learning user preferences for recommending movies*

AL N *21/254 · · · Management at additional data server, e.g. shopping server or rights management server*

AL N *21/2543 · · · · Billing*

AL N *21/2547 · · · · · Third party billing, e.g. billing of advertiser*

AL N *21/258* · · · *Client or end-user data management, e.g. managing client capabilities, user preferences or demographics or processing of multiple end-users preferences to derive collaborative data*

AL N *21/262* · · · *Content or additional data distribution scheduling, e.g. sending additional data at off-peak times, updating software modules, calculating the carousel transmission frequency, delaying a video stream transmission or generating play-lists*

AL N *21/266* · · · *Channel or content management, e.g. generation and management of keys and entitlement messages in a conditional access system or merging a VOD unicast channel into a multicast channel*

AL N *21/2662* · · · · *Controlling the complexity of the video stream, e.g. by scaling the resolution or bitrate of the video stream based on the client capabilities*

AL N *21/2665* · · · · *Gathering content from different sources, e.g. Internet and satellite*

AL N *21/2668* · · · · *Creating a channel for a dedicated end-user group, e.g. by inserting targeted commercials into a video stream based on end-user profiles*

AL N *21/27* · · *Server based end-user applications*

AL N *21/274* · · · *Storing end-user specific content or additional data in response to end-user request*

AL N *21/2743* · · · · *Video hosting of uploaded data from client*

AL N *21/2747* · · · · *Remote storage of video programs received via the downstream path, e.g. from the server*

AL N *21/278* · · · *Content descriptor database or directory service for end-user access*

AL N *21/40* · *Client devices specifically adapted for the reception of, or interaction with, content, e.g. STB [set-top-box]; Operations thereof*

AL N *21/41* · · *Structure of client; Structure of client peripherals*

AL N *21/414* · · · *Specialised client platforms, e.g. receiver in car or embedded in a mobile appliance*

AL N *21/4143* · · · · *PC [Personal Computer]*

AL N *21/4147* · · · · *PVR [Personal Video Recorder] (**H04N 5/76** takes precedence)*

AL N *21/418* · · · *External card to be used in combination with the client device, e.g. for conditional access*

AL N *21/4185* · · · · *for payment*

AL N *21/422* · · · *Input-only peripherals, e.g. GPS [Global Positioning System] (input arrangements or combined input and output arrangements for interaction between user and computer **G06F 3/01**)*

AL N *21/4223* · · · · *Cameras (**H04N 5/225** takes precedence)*

AL N *21/4227* · · · · *Remote input by a user located remotely from the client device, e.g. at work*

AL N *21/426 · · · Internal components of the client (**H04N 5/44** takes precedence)*

AL N *21/43 · · Processing of content or additional data, e.g. demultiplexing additional data from a digital video stream; Elementary client operations, e.g. monitoring of home network or synchronizing decoder's clock; Client middleware*

AL N *21/431 · · · Generation of visual interfaces; Content or additional data rendering (receiver circuitry for displaying additional information **H04N 5/445**)*

AL N *21/432 · · · Content retrieval operation from a local storage medium, e.g. hard-disk*

AL N *21/433 · · · Content storage operation, e.g. storage operation in response to a pause request or caching operations*

AL N *21/4335 · · · · Housekeeping operations, e.g. prioritizing content for deletion because of storage space restrictions*

AL N *21/434 · · · Disassembling of a multiplex stream, e.g. demultiplexing audio and video streams or extraction of additional data from a video stream; Remultiplexing of multiplex streams; Extraction or processing of SI; Disassembling of packetised elementary stream*

AL N *21/435 · · · Processing of additional data, e.g. decrypting of additional data or reconstructing software from modules extracted from the transport stream*

AL N *21/436 · · · Interfacing a local distribution network, e.g. communicating with another STB or inside the home*

AL N *21/4363 · · · · Adapting the video stream to a specific local network, e.g. a IEEE 1394 or Bluetooth network*

AL N *21/4367 · · · · Establishing a secure communication between the client and a peripheral device or smart card (arrangements for secret or secure communication **H04L 9/00**; security arrangements for protecting computers or computer systems against unauthorised activity **G06F 21/00**)*

AL N *21/437 · · · Interfacing the upstream path of the transmission network, e.g. for transmitting client requests to a VOD server*

AL N *21/438 · · · Interfacing the downstream path of the transmission network originating from a server, e.g. retrieving MPEG packets from an IP network*

AL N *21/4385 · · · · Multiplex stream processing, e.g. multiplex stream decrypting*

AL N *21/439 · · · Processing of audio elementary streams*

AL N *21/44 · · · Processing of video elementary streams, e.g. splicing a video clip retrieved from local storage with an incoming video stream or rendering scenes according to MPEG-4 scene graphs*

AL N *21/4402 · · · · involving reformatting operations of video signals for household redistribution, storage or real-time display*

AL N *21/4405 · · · · involving video stream decryption (arrangements for secret or secure communication **H04L 9/00**)*

AL N *21/4408 · · · · involving video stream encryption, e.g. re-encrypting a decrypted video stream for redistribution in a home network (arrangements for secret or secure communication **H04L 9/00**)*

AL N *21/441 · · · Acquiring end-user identification*

AL N *21/4415 · · · · using biometric characteristics of the user, e.g. by voice recognition or fingerprint scanning*

AL N *21/442 · · · Monitoring of processes or resources, e.g. detecting the failure of a recording device, monitoring the downstream bandwidth, the number of times a movie has been viewed or the storage space available from the internal hard disk*

AL N *21/4425 · · · · Monitoring of client processing errors or hardware failure (monitoring in electrical digital data processing **G06F 11/00**)*

AL N *21/443 · · · OS processes, e.g. booting a STB, implementing a Java virtual machine in a STB or power management in a STB (arrangements for program loading or initiating **G06F 9/445**)*

AL N *21/45 · · Management operations performed by the client for facilitating the reception of or the interaction with the content or administrating data related to the end-user or to the client device itself, e.g. learning user preferences for recommending movies or resolving scheduling conflicts*

AL N *21/454 · · · Content filtering, e.g. blocking advertisements*

AL N *21/4545 · · · · Input to filtering algorithms, e.g. filtering a region of the image*

AL N *21/458 · · · Scheduling content for creating a personalised stream, e.g. by combining a locally stored advertisement with an incoming stream; Updating operations, e.g. for OS modules*

AL N *21/462 · · · Content or additional data management e.g. creating a master electronic program guide from data received from the Internet and a Head-end or controlling the complexity of a video stream by scaling the resolution or bit-rate based on the client capabilities*

AL N *21/4623 · · · · Processing of entitlement messages, e.g. ECM [Entitlement Control Message] or EMM [Entitlement Management Message]*

AL N *21/4627 · · · · Rights management*

AL N *21/466 · · · Learning process for intelligent management, e.g. learning user preferences for recommending movies*

AL N *21/47 · · End-user applications (interaction techniques for graphical user interfaces **G06F 3/048**; receiver circuitry for displaying additional information **H04N 5/445**)*

AL N *21/472 · · · End-user interface for requesting content, additional data or services; End-user interface for interacting with content, e.g. for content reservation or setting reminders, for requesting event notification or for manipulating displayed content*

AL N *21/4722 · · · · for requesting additional data associated with the content*

AL N *21/4725 · · · · · using interactive regions of the image, e.g. hot spots*

AL N *21/4728 · · · · for selecting a ROI [Region Of Interest], e.g. for requesting a higher resolution version of a selected region*

AL N *21/475 · · · End-user interface for inputting end-user data, e.g. PIN [Personal Identification Number] or preference data*

AL N *21/478 · · · Supplemental services, e.g. displaying phone caller identification or shopping application*

AL N *21/4782 · · · · Web browsing*

AL N *21/4784 · · · · receiving rewards*

AL N *21/4786 · · · · e-mailing*

AL N *21/4788 · · · · communicating with other users, e.g. chatting*

AL N *21/482 · · · End-user interface for program selection*

AL N *21/485 · · · End-user interface for client configuration*

AL N *21/488 · · · Data services, e.g. news ticker*

AL N *21/60 · Network structure or processes for video distribution between server and client or between remote clients (data switching networks **H04L 12/00**; wireless communication networks **H04W**) ; Control signaling between clients, server and network components; Transmission of management data between server and client; Communication details between server and client*

AL N *21/61 · · Network physical structure; Signal processing (**H04B** takes precedence)*

AL N *21/63 · · Control signaling between client, server and network components; Network processes for video distribution between server and clients, e.g. transmitting basic layer and enhancement layers over different transmission paths, setting up a peer-to-peer communication via Internet between remote STB's; Communication protocols; Addressing*

AL N *21/633 · · · Control signals issued by server directed to the network components or client*

AL N *21/6332 · · · · directed to client*

AL N *21/6334 · · · · · for authorization, e.g. by transmitting a key (arrangements for secret or secure communication **H04L 9/00**)*

AL N *21/6336 · · · · · directed to decoder*

AL N *21/6338 · · · · directed to network*

AL N *21/637 · · · Control signals issued by the client directed to the server or network components*

AL N *21/6371 · · · · directed to network*

AL N *21/6373* · · · · *for rate control*

AL N *21/6375* · · · · *for requesting retransmission*

AL N *21/6377* · · · · *directed to server*

AL N *21/6379* · · · · · *directed to encoder*

AL N *21/64* · · · *Addressing*

AL N *21/6402* · · · · *Address allocation for clients*

AL N *21/6405* · · · · *Multicasting*

AL N *21/6408* · · · · *Unicasting*

AL N *21/643* · · · *Communication protocols*

AL N *21/6433* · · · · *DSM-CC [Digital Storage Media - Command and Control Protocol]*

AL N *21/6437* · · · · *RTP [Real-time Transport Protocol]*

AL N *21/647* · · · *Control signaling between network components and server or clients; Network processes for video distribution between server and clients, e.g. controlling the quality of the video stream, by dropping packets, protecting content from unauthorised alteration within the network, monitoring of network load or bridging between two different networks, e.g. between IP and wireless*

AL N *21/65* · · *Transmission of management data between client and server*

AL N *21/654* · · · *Transmission by server directed to the client*

AL N *21/6543* · · · · *for forcing some client operations, e.g. recording*

AL N *21/6547* · · · · *comprising parameters, e.g. for client setup*

AL N *21/658* · · · *Transmission by the client directed to the server*

AL N *21/6583* · · · · *Acknowledgement*

AL N *21/6587* · · · · *Control parameters, e.g. trick play commands or viewpoint selection*

AL N *21/80* · *Generation or processing of content or additional data by content creator independently of the distribution process; Content <u>per se</u>*

AL N *21/81* · · *Monomedia components thereof*

AL N *21/83* · · *Generation or processing of protective or descriptive data associated with content; Content structuring*

AL N *21/835* · · · *Generation of protective data, e.g. certificates*

AL N *21/8352* · · · · *involving content or source identification data, e.g. UMID [Unique Material Identifier]*

AL N *21/8355* · · · · *involving usage data, e.g. number of copies or viewings allowed*

AL N *21/8358* · · · · *involving watermark*

AL N *21/84* · · · *Generation or processing of descriptive data, e.g. content descriptors*

AL N *21/8405* · · · · *represented by keywords*

AL N *21/845* · · · *Structuring of content, e.g. decomposing content into time segments*

AL N *21/85* · · *Assembly of content; Generation of multimedia applications*

AL N *21/854* · · · *Content authoring*

AL N *21/8541* · · · · *involving branching, e.g. to different story endings*

AL N *21/8543* · · · · *using a description language, e.g. MHEG [Multimedia and Hypermedia information coding Expert Group] or XML [eXtensible Markup Language]*

AL N *21/8545* · · · · *for generating interactive applications*

AL N *21/8547* · · · · *involving timestamps for synchronizing content*

AL N *21/8549* · · · · *Creating video summaries, e.g. movie trailer*

AL N *21/858* · · · *Linking data to content, e.g. by linking an URL to a video object or by creating a hotspot*

ANNEX 211E H04Q [Project-Rapporteur : M037/IB] <CE42>

CL M **1/00 Details of selecting apparatus or arrangements**

CL M 1/06 · · Cable ducts or mountings specially adapted for exchange installations

CL M 1/30 · · Signalling arrangements; Manipulation of signalling currents (multiplex systems providing for calling or supervisory signals **H04J 1/14**, **H04J 3/12**)

ANNEX 212E H05C [Project-Rapporteur : M037/IB] <CE42>

CL M **Title ELECTRIC CIRCUITS OR APPARATUS SPECIALLY DESIGNED FOR USE IN EQUIPMENT FOR KILLING, STUNNING, ENCLOSING OR GUIDING LIVING BEINGS** (stationary means for catching or killing insects by electric means **A01M 1/22**; apparatus for the destruction of noxious animals, other than insects, by electricity **A01M 19/00**; electric traps for animals **A01M 23/38**; slaughtering or stunning by electric current **A22B 3/06**)

CL M 1/04 ・ providing pulse voltages

ANNEX 213E H05F [Project-Rapporteur : M037/IB] <CE42>

CL M **Title STATIC ELECTRICITY; NATURALLY-OCCURRING ELECTRICITY**

[End of Technical Annexes and of document]