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WIPO

IPC/CE/41/6
ORIGINAL: English
DATE: April 6, 2009

WORLD INTELLECTUAL PROPERTY ORGANIZATION
GENEVA

SPECIAL UNION FOR THE INTERNATIONAL PATENT CLASSIFICATION (IPC UNION)

COMMITTEE OF EXPERTS

Forty-First Session
Geneva, March 16 to 18, 2009

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-first session in Geneva from March 16 to 18, 2009. The following members of the Committee were represented at the session: Australia, Austria, Brazil, Bulgaria, Canada, China, Czech Republic, Egypt, Estonia, Finland, France, Germany, Ireland, Israel, Japan, Mexico, Netherlands, Norway, Portugal, Republic of Korea, Romania, Russian Federation, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Turkey, United Kingdom, United States of America (29). Ukraine was represented as an observer. 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. Francis Gurry, Director General, WIPO, who welcomed the participants. Mr. Gurry highlighted the importance of this session where major decisions were expected with regard to simplified structure and revision procedures of the IPC. These changes would pave the way for greater efficiency toward a common international classification system in the next decade.

OFFICERS

3. The Committee unanimously elected Mr. H. Wongel (EPO) as Chair and Mr. S. Iwasaki (Japan) and Ms. A. Ezcurra Martínez (Spain) as Vice-Chairs.

4. Mr. A. 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.

AMENDMENTS TO THE IPC

7. Discussions were based on Annexes 1 and 2 to project file CE 412 containing amendments to the IPC approved by the IPC Revision Working Group (hereinafter referred to as “the Working Group”) and additional proposals prepared by the International Bureau and distributed during the session containing amendments resulting from cross-reference checking.

8. 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 both the core and the advanced levels of the IPC which would enter into force on January 1, 2010.

9. The Committee agreed with a proposal by the IPC Advanced Level Subcommittee (hereinafter referred to as “the ALS”) that amendments of advanced level revision projects A 007 (G01N), A 008 (H01M), A 009 (G01S), A 011 (B62M) and A 015 (F16H) would be introduced into the next version of the IPC before completion of their respective reclassifications. Meanwhile, IPC users would be notified that reclassification in these areas was not complete and also be informed of those patent collections which were not completely reclassified and of the scheme which should be used for searching these collections.

IMPLEMENTATION OF THE RESULTS OF THE REFORM IN THE IPC AND STATUS OF THE IPC DEVELOPMENT PROGRAM

10. Discussions were based on document IPC/CE/41/2 which contains a status report on several tasks in the program of the Working Group with respect to the implementation of the results of the reform in the IPC. The Committee took note of the contents of this document and, in particular, of the decisions taken by the Working Group with respect to the task "Removal of Non-Limiting References from the Scheme", and expressed its satisfaction with the work carried out.

11. Concerning the task "Removal of Non-Limiting References from the Scheme", the Committee also noted that the Working Group had completed the removal of non-limiting references in a further 29 subclasses. Thus, the non-limiting references have been removed in a total of 51 subclasses. Annex 8 to project file WG 191 contains a table summarizing the status of this task for each subclass.

12. The Committee noted that the Working Group had completed the task of renumbering pre-reform residual main groups. All decisions taken in the course of this task are summarized in Annex 63 to project file WG 111. In 45 subclasses, pre-reform residual main groups have been deleted, 11 of them had subgroups which were also deleted. The deleted groups were transferred to 43 new standardized residual main groups and 16 new main groups with specific titles, some of them with subgroups.

13. With respect to the task "Introduction of Residual Main Groups in IPC Subclasses", the Committee noted that the Working Group had continued consideration of the remaining subclasses without residual main groups in the framework of definition projects (five subclasses). The current status of this task with respect to each subclass is summarized in Annex 63 to project file WG 111. For 39 subclasses, a decision regarding the introduction of a residual main group is still pending.

14. With respect to the continuing task "Elaboration of Classification Definitions", the Committee noted that, in total, 113 definition projects had been completed so far, and the target of a total of 100 subclass definitions by end of 2008, as set forth in Task 1(b) of the IPC Development Program 2006 to 2008 (see Annex III to document IPC/CE/37/9), had been exceeded. Annex IV to the report of the twentieth session of the Working Group (see document IPC/WG/20/2) contains a table summarizing the status of each definition project on the program. Following a request by Spain, the Committee requested the International Bureau to investigate whether compilations of amendments to already published definitions could be made available in order to facilitate the maintenance of the national translations of definitions.

PUBLICATION OF IPC VERSIONS 2008.04 AND 2009.01 AND RELATED RECLASSIFICATION OF PATENT FILES

15. Discussions were based on document IPC/CE/41/3 and on a document submitted by the European Patent Office (hereinafter referred to as "EPO") entitled "MCD Revision Statistics".

16. Two new versions of the IPC advanced level (versions 2008.04 and 2009.01) entered into force on April 1, 2008, and on January 1, 2009, respectively. On January 1, 2009, a new version of the core level entered into force as well. The publication of January 1, 2009, also included several new definitions in the electronic layer of the IPC. These new versions, in particular the associated master files, were officially published on the WIPO IPC website in the two authentic languages, English and French, in due time, before their entering into force.

17. For the systematic reclassification of patent files according to the latest version of the IPC, working lists of documents were prepared by the EPO for all industrial property offices that could potentially take part in the reclassification, and were made available for downloading on the dedicated WIPO IPC website.

18. The Committee noted that the EPO had prepared, for each new revision of the advanced level and several months after the entry into force of each revision, "residual working lists" in addition to the first set of working lists that had been prepared before each respective entry into force. These residual working lists captured all remaining documents that had not yet been reclassified at the time of their establishment. The Committee noted that for all revisions a considerable number of documents have not yet been reclassified and that for none of the revisions since the entry into force of the reformed IPC in 2006, could reclassification be considered as completed. The Committee therefore invited all participating offices to do their best to complete reclassification as early as possible using the residual working lists. The Secretariat informed that these residual working lists would be retrievable from the WIPO IPC reclassification website.

19. The Delegation of the EPO indicated that a new set of residual working lists would be made available soon. The Delegation of Brazil informed the Committee that the reclassification tool that had been provided for small- and medium-sized patent offices would soon be adapted in order to accommodate also the residual working lists. The Committee took the opportunity to express its gratitude to the Delegation of Brazil for having developed and maintained this tool on their own initiative to the benefit of many offices that use it.

20. The Committee also shortly addressed the appearance of industrial designs in some of the working lists prepared by the EPO, and invited the Quality Control Task Force (QCTF) to consider whether such documents should appear in the working lists in the future.

MASTER CLASSIFICATION DATABASE STATUS REPORT

21. Discussions were based on document IPC/CE/41/4, containing a tabular status report on the Master Classification Database (MCD) prepared by the EPO.

22. The Committee noted that 92% of the patent documents in the MCD, published before 2006, have received valid advanced level symbols, and that this percentage has not changed since the report given at its last session. Furthermore, 97% of the patent documents in the MCD published after January 1, 2006, have received valid advanced level symbols; this percentage has also remained unchanged. The EPO was asked to prepare separate statistics regarding the reclassification status of patent documents belonging to the PCT minimum documentation for the next session of the Committee.

23. The Committee renewed its invitation to the QCTF to investigate the reasons for the incomplete reclassification of the documents published before 2006, and means for improving the status of reclassification. Following a request from Brazil, the EPO was requested also to prepare working lists for the reclassification of national documents published before 2006.

IPC AND TECHNOLOGY CONCORDANCE TABLE

24. Discussions were based on document IPC/CE/41/5. The Committee noted an oral presentation by the Secretariat regarding the IPC Technology Concordance Table. In particular, it was noted that this table of concordances between 35 fields of technology and the IPC was a recent update of a similar table used in the past. The concordance table is intended to facilitate the collection of statistical data regarding technological trends and development activities. It was emphasized that the concordances were not intended to be fully comprehensive, i.e., the use of the respective IPC symbols for searching patent collections would not allow retrieval of all patent documents pertaining to the respective technological field. It should be noted that it is a concordance table between the IPC and technological fields and not a concordance table between the IPC and industrial classification. The concordance table is also available on the WIPO website (*http://www.wipo.int/ipstats/en/statistics/patents*) under the subsection Methodological Information. Offices were invited to submit enquiries or comments to *ipstats@wipo.int*.

PROCEDURES OF REVISION AND PUBLICATION OF THE IPC

25. Two presentations were given before the main discussion on this item, one by the EPO on the “IP5 (European Patent Office, Japan Patent Office, Korean Intellectual Property Office, State Intellectual Property Office of the People’s Republic of China, United States Patent and Trademark Office) View on the Future of Classification” and one by Japan on “IP5 Hybrid Classification Project through Mapping Tool”.

26. The EPO presented the goals of the Common Hybrid Classification project, in particular to:

- eliminate unnecessary duplication of work;
- improve international searching efficiency;
- utilize the strengths of existing internal classification systems; and
- enhance patent examination efficiency and quality.

In this respect, the following common approach would be followed to:

– develop the IPC to the necessary depth;

– start pilot projects to evaluate cost and benefits;

– use mapping tools between existing internal schemes in order to identify areas where schemes are very similar and to assist in searching using internal schemes; and

– cooperate closely with WIPO and the IPC community.

27. The Mapping Tool, as proposed by the JPO, would be a transitional tool which would enable identification of the most suitable internal scheme to serve as a basis of the IPC revision in each technical area by analyzing the internal classification information given to the family members in order to minimize the resulting classification work.

28. Discussions were based on project file CE 404 and, in particular, on Annex 21 to the project file containing the proposal that had been adopted by the Task Force in September 2008. This proposal was adopted, with several amendments, and appears as Annex III to this document. Paragraphs 29 to 40 below outline the most important decisions.

29. Only one text of the Classification will be maintained and published, corresponding to the current advanced level. The terms “core level” and “advanced level” will be discontinued. Small offices with limited resources or expertise for classification may classify their documents either at subclass level or using the main groups of the IPC. Common rules for classification will apply to all users of the IPC.

30. The IPC will be published once a year, in electronic form only, and enter into force on January 1. The Committee will review, at its next sessions, whether the number of publications should be increased to twice yearly. The master files and the early Internet publication will be published six months before entry into force.

31. The Committee recognizes that the IP5 Offices, in the framework of the hybrid classification foundation project, will be the driving force behind the IPC revision in the years to come. In that respect any project forwarded from this process (including Trilateral Harmony projects) will automatically be included in the IPC revision program and treated with priority. Other revision requests will be submitted to the Committee and accepted if there is commitment for the reclassification of the PCT minimum documentation.

32. The Committee realizes the need for an efficient revision process. Discussions on the IPC e-forum will be enhanced. Revision projects will be considered by the Working Group and after completion they will be forwarded to the Committee for final adoption. The Working Group should take measures to increase its efficiency. The Committee will evaluate at its next sessions whether the Working Group accomplishes its tasks in an efficient way and, if not, whether there will be a need for a review.

33. 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 Committee 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.

34. A centralized system will be created at WIPO in order to organize, facilitate and monitor reclassification.

35. All projects completed and adopted by the Committee at its 41st session and by the ALS at its sixth and seventh session will enter into force on January 1, 2010, in both the core and advanced levels. The Working Group, at its next session, will include all pending A and C projects in its agenda.

36. The QCTF and the International Bureau were requested to review all Standards, master files and basic IPC documents and to propose the necessary amendments to be adopted at the next session of the Committee.

37. The International Bureau was invited to take action for the promotion of the new simplified structure and procedure to IPC users, and to bring the matter to the attention of the IPC Union Assembly as well. Following the second workshop with IPC users, to be scheduled for February 2010, the Committee will finally adopt the new structure of the IPC at its next session; the new structure will enter into force with the relevant publication of the IPC in 2011.

IPC REVISION POLICY AND CONSISTENCY OF APPLICATION

38. Discussions were based on Annexes 13 and 14 to project file CE 405.

39. With respect to the item “IPC Revision Policy”, it was agreed that the same selection criteria should apply to all revision requests. It was noted that the growth rate of applications should also be taken into account in addition to the criteria listed in the proposal of said Annex 13, and that the criteria “gain in efficiency” and “technical merit” should be explained, e.g., by preparing sample revision requests. The EPO was invited to revise the current template for revision requests and to submit it to the e-forum for discussion. A consolidated proposal was requested for consideration at the next session of the Committee.

40. With respect to the item “Consistency of Application of the IPC”, it was agreed that examples of problematic classifications given to documents or to different members of a family of patent documents should be collected on the IPC e-forum. The International Bureau was requested to prepare a template for submission of such samples and to create a corresponding project on the IPC e-forum. Once a sufficient number of samples is collected, the Committee would decide on the continuation of consideration of this item.

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

41. Discussions were based on Annex 1 to project CE 413, containing a proposal prepared by the International Bureau on the introduction of a new type of universal indexing/tagging scheme in the IPC.

42. It was recalled that the Working Group, at its twentieth session held in November 2008, had concluded that the new scheme proposed in the framework of project C 452 (nano-technology) should be:

– universal;

– secondary;

– obligatorily applied;

– allow the development of related subdivisions in ordinary classification places;

– "temporary"; and

– readily visible to all users.

43. Since paragraph 107 of the *Guide to the IPC* (hereinafter referred to as the *Guide*), does not cover all the above features, the Working Group had requested the Committee to create a new type of scheme with the above features, or to broaden the scope of paragraph 107.

44. It was noted that the *Guide* had several provisions for multiple classification, such as multi-aspect obligatory or non-obligatory classification, indexing, secondary obligatory, and although finally, the practical result is almost always the same, nonetheless some contradictions and confusions arise. Furthermore, introduction of a new section in the IPC should not be adopted in an expeditious manner since this could require major changes in many of the associated IT systems.

45. It was therefore decided, instead of introducing another type of scheme, to review and amend all paragraphs of the *Guide* relative to multiple classification and indexing, aiming at simplification. The International Bureau was requested to prepare and post a comprehensive proposal to project CE 413 and subsequently discussion could take place in the framework of that project.

46. The Working Group was invited to continue the revision work on project C 452, taking into account the following remarks:

– all nano-technology related art should be collected in one place, namely class B82 in order to assure better visibility;

– a new subclass should be created to provide a basis for a complete search to be made with respect to nano-technology applications, as defined in the subclass title, notes and definitions. It should be used, in combination with other classification symbols which cover relevant aspects of the subject matter, to obligatorily classify either invention or additional

information. It should be used in order to easily collect statistics to identify trends in nano-technology applications and to identify places elsewhere in the IPC where nano-technology applications develop;

– this new subclass should be created at the end of class B82, e.g., as B82Y, so as to clearly distinguish it from the other "ordinary" subclass for nano-technology. It should be broadly subdivided into main groups which should not be further subdivided according to technical features; and

– the scope of existing subclass B82B should be broadened in order to cover technical features that fall under the new definition of "nano-structure", as proposed in the new Note under the title of class B82 (see Annex 6 to project file C 452).

47. The Committee also discussed a proposal recently submitted by the United Kingdom for the creation of an indexing scheme for Environmentally Sound Technologies (EST) (see Annex 19 to project file WG 020).

48. It was noted that agreeing on a definition of EST would be demanding and, in view of the recent submission of the proposal, a technical answer from the Classification point of view could not be given by the Committee at present. Furthermore, it was not clear whether a concordance between EST and the IPC or the creation of a new indexing scheme was the appropriate solution. It was therefore decided to initiate a new revision project with the United Kingdom as Rapporteur (project C 456). The Working Group was invited to discuss the project, without making any scheme approval, and to report its conclusions to the Committee.

IPC INTERNET PUBLICATION REDESIGN

49. As a follow-up to the presentation provided during the twentieth session of the Working Group, the International Bureau provided a progress report presentation on the IPC Internet publication redesign initiated in the Summer of 2008.

50. The International Bureau introduced specifications, staging and planning documents and provided a test URL where implementation progress is now visible to the IPC community. A live demonstration of the first implementation stage was also provided.

51. It was emphasized that the complete reworking of this application could allow for implementation of new search facilities, for IT automation of the IPC internet publication and would facilitate implementation of future adaptations (e.g., those possibly required by the new revised IPC revision procedure).

52. The Committee was also informed about the impact on other IPC tools and that a replacement of the current IPCPUBPREP software package, allowing offices to produce their own IPC internet publication in national languages, would also be made available for download on the WIPO website.

NEXT SESSION OF THE COMMITTEE

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

Geneva, February 8 to 12, 2010.

54. This report was unanimously adopted by the Committee by electronic means on April 6, 2009.

[Annexes follow]

ANNEXE I/ANNEX I

LISTE DES PARTICIPANTS/ LIST OF PARTICIPANTS

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IV. BUREAU/OFFICERS

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Vice-présidents/Vice-Chairs:	Amaya EZCURRA MARTÍNEZ (Sra.) (Espagne/Spain) Susumu IWASAKI (Japon/Japan)
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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Yo TAKAGI, directeur exécutif du Département de l'infrastructure mondiale en matière de propriété intellectuelle/Executive Director, Global IP Infrastructure Department

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ANNEX II

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ANNEX III

PROCEDURES OF REVISION AND PUBLICATION OF THE IPC

PROPOSAL

Principles

1. After a transitional period, as described below, the maintenance of two separate and autonomous levels of the IPC, i.e. of the core and of the advanced levels, will be discontinued. Only one text of the Classification will be maintained and published, corresponding to the current advanced level. The terms “core level” and “advanced level” will be discontinued, since they have led to confusion. Titles, references, notes, definitions and version indicators of the current core level groups will be the same whether the full text of the Classification is displayed or a part of it (e.g. main groups only). Common rules for classification apply to all users of the IPC.

2. Small Offices with limited resources or expertise for classification may classify their documents either at subclass level (as foreseen in Article 4(4) of the Strasbourg Agreement) or using the main groups of the IPC. Offices using only main groups fulfill their obligations as foreseen in Article 4(3) of the Strasbourg Agreement. On the other hand, those Offices whose patent collections belong to the PCT minimum documentation are held to use the complete Classification (i.e., the current advanced level). Offices should notify the International Bureau (IB) whether they classify using subclass, main groups only or the complete Classification. The IB will publish a list, regularly updated, indicating the above use.

Publication

3. The IPC will be published once a year in electronic form only. The Committee will review, at its forty-second Session, whether the number of publications should be increased to twice yearly. The IB will in the meantime review the IT tools available to offices for the translation and preparation of national versions of the IPC, including definitions, so as to increase their effectiveness and robustness. There will no longer be a paper publication. The “PDF” version will become available, at the latest, on the day of entry in force. Only one version of the master and “PDF” files will be published corresponding to the complete IPC. A view of the main groups alone will be available, as an alternative to the full text or the hierarchical view of the Classification. However, the IB will assist Offices with limited Internet resources to provide, on demand, a version that is convenient for their environment.

4. For yearly publication the date of entry in force will be January 1. The master files (i.e., scheme, RCL, compilation and validity files) and the early Internet publication will be published in both official languages six months before entry in force in order to allow the timely preparation of national versions of the Classification, of the Working Lists and the subsequent reclassification.

Revision Requests/Revision Projects

5. In view of the importance of the harmonization process of the internal classification systems of the IP5 Offices for the development of the IPC, any project forwarded from this process (including Trilateral Harmony projects) will automatically be included in the IPC revision program and 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.

6. Other revision requests may be submitted by any member or observer of the IPC Union. For those requests, the new revision policy and criteria for acceptance will apply (see Project CE 405). They should be submitted to the IPC e-forum at least three months before consideration for inclusion in the revision program by the IPC/CE. It should be noted that any new proposed scheme should take into account the local classification systems, in particular those of the Trilateral Offices, in order to minimize the resources required for reclassification. The IB, in cooperation with the EPO, will establish for each request a table with an estimated distribution of families to be reclassified by each Office. This table will be submitted to the e-forum at least two months before the consideration of the request. 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 Committee of Experts meeting.

7. 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.

8. A single revision project will be created per revision request. Exceptionally, more than one revision project might be created if different areas of the Classification are concerned and if there is no overlap in the documentation to be reclassified. A request should not be divided into different projects according to the hierarchical level of the proposed groups. However, once the main structure of a project has been approved, the discussion of a part of a project might be forwarded to a subsidiary body or subgroup (see below revision procedure).

Revision Procedure/Preparation of the French version

9. The Committee recognizes that the IP5 offices, in the framework of the hybrid classification foundation project, will be the driving force behind the IPC revision in the years to come. In that respect the IP5 offices will make IPC revision proposals based on their internal schemes. Concerning existing harmony projects, the trilateral offices will decide at which stage a project will enter its IPC phase.

10. The Committee realizes the need of an efficient revision process. A technical body is needed that will adapt the proposals by the IP5 or the trilateral offices to the IPC rules and language, as described in paragraph 5 above. A wide participation in its physical meetings will allow a better international understanding and use of the new schemes to be adopted, and is expected to contribute to a broader participation in the reclassification work.

11. In view of the limited number of revision projects during the next two years, it is proposed that this technical body will be the IPC/WG in its current composition. The Committee will evaluate at its next sessions whether the IPC/WG accomplishes these tasks in an efficient way and, if not, whether there will be a need for a review, e.g. of its composition or its working methods.

12. All revision projects will be considered by the IPC/WG and after completion they will be forwarded to the Committee for final adoption. In order to achieve efficient consideration of the revision projects, the work of the IPC/WG will be limited to the consideration of revision, definition and maintenance projects, priority being given to revision projects and to the corresponding definition projects. Other tasks that were considered during the last years by the IPC/WG, e.g. coordination of the reclassification work or monitoring of the use of residual groups, will be considered by the Committee, which might create *ad hoc* or permanent task forces to deal with such matters, e.g., the QCTF.

13. Discussions on the IPC e-forum should be enhanced. These discussions should try to settle most of the substantive and technical issues prior to subsequent physical meeting of the IPC/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. The IPC/WG should be further encouraged to take measures that would increase its efficiency.

14. The IB will in principle 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% of the proposal is approved, early enough after the session of the IPC/WG in order to allow time for commenting by French-speaking Offices. The IPC/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. Otherwise, if the English version is already completed, the French version might be adopted directly by the Committee. In case of short and relatively simple projects, the French version might be prepared by a volunteering Office eventually during a session of the IPC/WG.

15. Once consideration of a project is completed by the IPC/WG, it is forwarded to the Committee for final adoption. This adoption may take place either electronically or either during an ordinary session of the Committee, depending on the date of publication. If needed, the RCL will also be adopted and the cross references checked. This adoption will also be the last opportunity for checking the new scheme before publication.

Reclassification.

16. It is confirmed that every effort should be made to make the reclassified search files of the PCT minimum documentation available on the date of entry into force of the corresponding revised schemes. The IP5 Offices confirm their commitment to reclassify the PCT minimum documents having a simple family member in one of their working languages for those revision projects that have originated from a Harmony project or the IP5 "Common Hybrid Classification" foundation project, following the provisions that will be described in the revised CONOPS. For other projects other distributions of reclassification work could be decided depending on the interest that some Offices might have on a particular project, e.g. China with Project C432, the principle being to reclassify one simple family member and propagate the symbol(s) to the other members as appropriate. Further details on the propagation of symbols to other family members are indicated in CONOPS. When considering a revision request each Office should indicate to what extent it will be able to participate in the reclassification. For example if a project is based on ECLA, the EPO could commit to reclassify all families already classified in ECLA.

17. All remaining families will be distributed to Offices based on an algorithm that takes into account their preferences and the priority Office. The QCTF will work out the details of the distribution algorithm.

18. Concerning the collections of Offices classifying at a subclass or main group only, their documents having a family member reclassified by a user of the complete IPC, will receive the new symbol(s) by propagation. The remaining documents will be reclassified, if needed, by the respective Offices. Assistance may be requested by these Offices in order to reclassify such remaining documents.

19. If an Office cannot achieve reclassification of the complete collection to which it was committed, before the entry into force of a new scheme, the Committee should decide whether the entry into force of this scheme should be postponed or whether it should be published with incomplete reclassification provided that there is a specific new completion date. However it should be noted that Offices which will not have the resources to accomplish reclassification before the entry into force should continue reclassification of the remaining documents. Assistance from other Offices could be requested, e.g. via family members or using automatic translation of original documents.

20. In case that complete reclassification cannot be achieved by the envisaged date of entry into force the procedure adopted at the 40th session of the Committee for subclass H04W as exceptional and experimental should be used when needed. This would, for example, allow the front file classification of active technologies. In any case a considerable amount of the backfile should be reclassified on the date of entry into force. In the new scheme, warnings should be included indicating which collections of documents are not yet reclassified, e.g., documents of country X published between date 1 and date 2. These warnings should include links to the corresponding scheme that should be used to search these collections. Furthermore, no new revision should be undertaken in that area before completion of the reclassification.

21. A centralized system will be created at WIPO in order to organize, facilitate and monitor the reclassification. The system will regularly receive Working Lists by the EPO and possibly additional national lists by other offices containing the families to be reclassified. Offices will be able either to reclassify the documents in their list one by one using this service, or they will be able to extract their working lists and then submit their result lists after reclassification. Links will be provided to the new and the old scheme, to the full text of the documents and their family members. Access to the reclassification data will be available to all. Interested Offices or the public will be able to submit proposals to the IB for reclassification of those families that remain without reclassification after a certain period. The IB will regularly monitor the situation with the remaining not yet reclassified documents and alert Offices which have not yet completed their tasks. Links will also be provided from the internet publication of the IPC to those documents that are not reclassified through the corresponding "bridge". The IB will propose in due time detailed requirement specification to be considered by the QCTF.

Standards – Databases

22. Concerning the standards ST.8 and ST.10C, in principle there is no need for major modifications. Amendments might also be needed to some master files. Concerning the master files and the Internet versions published since 2006.01, a decision should be taken as to whether core level attributes should be maintained or not. The practice of rolling up symbols and the handling of existing rolled-up symbols in the MCD, should also be reconsidered. The QCTF should investigate these issues and propose the necessary amendments to the Committee.

Timetable of Implementation

23. The IB will launch a consultation of current core level Offices and of other users, on the new simplified structure and process. Based on this consultation and following the 2nd seminar with IPC users, which will be scheduled for February 2010, the Committee will finally adopt the new structure of the IPC. The IB will prepare amendments to the Guide and to all other basic documents (e.g. Guidelines) to align them to the new structure and procedures. Concerning in particular CONOPS, discussion will continue in the framework of project SC022 and a proposal will be submitted to the Committee for adoption at its next session. The Committee will also adopt any amendments needed to Standards ST.8 and ST.10C (see paragraph 22 above) and forward these amendments to the Standards and Documentation Working Group for adoption. All the above modifications will enter into force with the relevant publication of the IPC in 2011.

24. All projects completed and adopted by the CE at its 41st session and by the ALS at its sixth and seventh session will enter into force on January 1, 2010, in both the core and advanced levels. The IPC/WG at its June session will include all pending A and C projects in its agenda.

25. The IB is requested to take action for the promotion and publicizing of the new simplified structure and procedure to the IPC users, and to bring the matter to the attention of the IPC Union Assembly as well.

[Technical Annexes follow]

TECHNICAL ANNEXES

ANNEX 1E A01B [Project-Rapporteur : D067/SE] <CE41>

AL M 45/04 · for cutting sods or turf

ANNEX 2E A01D [Project-Rapporteur : D067/SE] <CE41>

CL M **3/00 Non-abrasive sharpening devices for scythes, sickles, or the like**

CL M **5/00 Containers for whetstones for use during harvesting**

CL M **7/00 Rakes** (mowers convertible to rakes or capable of raking **A01D 42/02**; mowers combined with rakes **A01D 43/02**)

AL M 23/04 · cutting the tops after being lifted

CL M **37/00 Reaper-binders** (equipment thereon for binding harvested or mown produce, e.g. knotters, **A01D 59/00**)

CL M **41/00 Combines, i.e. harvesters or mowers combined with threshing devices**

CL M **59/00 Equipment for binding harvested or mown produce** (specially adapted for baling presses **A01F 15/14**)

AL M 59/12 · Containers for the twine

CL M **61/00 Elevators or conveyers for binders or combines**

AL M 75/08 · Sharpening apparatus fixed to the harvester or mower

AL M 75/18 · Safety devices for parts of the machines

AL M 75/20 · Devices for protecting men or animals

CL M **87/00 Loaders for hay or like field crops** (combined with mowers **A01D 43/06**)

CL M **90/00 Vehicles for carrying harvested crops with means for selfloading or unloading** (combined with mowers **A01D 43/06**)

ANNEX 3E A01F [Project-Rapporteur : M100/SE] <CE41>

CL M **Title** **THRESHING** (combines **A01D 41/00**) **; BALING OF STRAW, HAY OR THE LIKE; STATIONARY APPARATUS OR HAND TOOLS FOR FORMING OR BINDING STRAW, HAY OR THE LIKE INTO BUNDLES; CUTTING OF STRAW, HAY OR THE LIKE; STORING AGRICULTURAL OR HORTICULTURAL PRODUCE** (arrangements for making or setting stacks in connection with harvesting **A01D 85/00**)

CL M Subclass index

THRESHING	
Functional types of apparatus	**5/00**, **7/00**
Special applications	**11/00**
Details	**12/00**
BALING OF STRAW, HAY OR THE LIKE	**1/00**, **13/00**, **15/00**
ACCESSORIES FOR THRESHING MACHINES OR BALING PRESSES	**17/00**, **19/00**, **21/00**
STORING AGRICULTURAL OR HORTICULTURAL PRODUCE	**25/00**
MACHINES OR IMPLEMENTS FOR CUTTING STRAW, HAY OR THE LIKE	**3/00**, **29/00**

CL D Guidance heading / Rubrique d'orientation 1/00- 3/00 < Deleted / Supprimé >

CL M **1/00** **Stationary apparatus or hand tools for forming or binding straw, hay or the like into bundles** (baling apparatus or presses **A01F 13/00**, **A01F 15/00**; mobile binders for use in the field **A01D 37/00**, **A01D 39/00**)

AL M 1/06 ・ Ties for bundles

CL M **3/00** **Hand-operated implements for cutting-up straw, hay or the like** (mechanically-driven straw cutters **A01F 29/00**)

CL M **7/00** **Threshing apparatus**

AL M 7/02 ・ with rotating tools (threshing cylinders or concaves **A01F 12/18**)

AL M 7/04 < Add / Ajouter 1 dot(s) / point(s) >

AL M 7/06 < Add / Ajouter 1 dot(s) / point(s) >

AL N *7/70* ・ *with flails*

CL D 9/00 (transferred to **A01F 7/70**)

CL M **11/00** **Threshing apparatus specially adapted for maize; Threshing apparatus specially adapted for particular crops other than cereals**

AL U 11/02 < unchanged >

AL U 11/04 < unchanged >

AL U 11/06 < unchanged >

AL U 11/08 < unchanged >

CL M **12/00 Parts or details of threshing apparatus** (devices, other than safety devices for feeders, for protecting human beings **A01D 75/20**, **A01F 21/00**)

AL U 12/34 < unchanged >

AL M 12/36 ・・・ Sieve elements specially adapted for handling short straw

CL M 12/40 ・ Arrangements of straw crushers or cutters

AL M 12/42 ・ Apparatus for removing awns from the grain

CL M 12/44 ・ Grain cleaners; Grain separators

CL M 12/46 ・ Mechanical grain conveyers

CL M 12/48 ・ Air conduits or blowers for grain

AL M 12/50 ・ Sack-filling devices; Counting or weighing devices

AL M 12/54 ・ Arrangements for collecting or removing dust

AL M 12/58 ・ Control devices; Brakes; Bearings

CL M **15/00 Baling presses for straw, hay or the like**

AL M 15/08 ・ Details

AL M 15/14 ・・ Tying devices specially adapted for baling presses

CL M **17/00 Straw conveyers for threshing machines or baling presses**

CL M **21/00 Devices for protecting human beings for threshing machines or baling presses** (in combines **A01D 75/20**; for feeders for threshing apparatus **A01F 12/16**)

CL M **25/00 Storing agricultural or horticultural produce; Hanging-up harvested fruit** (maturing fruit **A23N 15/06**; arrangements in barns for preparatory treatment of tobacco **A24B 1/02**; packing or storing hops **C12C 3/04**)

CL M 25/13 ・ Coverings (**A01F 25/14** takes precedence)

CL M 25/14 ・ Containers specially adapted for storing

CL M 25/16 ・ Arrangements in forage silos

AL U 25/18 < unchanged >

AL U 25/20 < unchanged >

AL U 25/22 < unchanged >

CL M **29/00 Cutting apparatus specially adapted for cutting hay, straw or the like** (mowers combined with means for cutting up the mown crop **A01D 43/08**)

AL M 29/01 · specially adapted for being mounted on or drawn by a tractor, e.g. field choppers

AL N *29/09 · Details*

AL M 29/10 < Add / Ajouter 1 dot(s) / point(s) >

AL M 29/12 · · Discharge means (loaders for hay or like field crop having blowers **A01D 87/10**)

AL M 29/14 < Add / Ajouter 1 dot(s) / point(s) >

AL M 29/16 < Add 1 dot(s) >

AL M 29/18 < Add / Ajouter 1 dot(s) / point(s) >

AL D 29/20 (transferred to **A01F 29/09**)

AL M 29/22 · · Arrangement of knife sharpening devices

ANNEX 4E A01N [Project-Rapporteur : C450/EP] <CE41>

CL M **63/00 Biocides, pest repellants or attractants, or plant growth regulators containing micro-organisms, viruses, microbial fungi, animals, e.g. nematodes, or substances produced by, or obtained from micro-organisms, viruses, microbial fungi or animals, e.g. enzymes or fermentates** (containing compounds of determined constitution **A01N 27/00**-**A01N 59/00**)

CL M 63/02 · Substances produced by, or obtained from, micro-organisms or animals

CL M 63/04 · Microbial fungi; Substances produced thereby or obtained therefrom

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ANNEX 5E A23K [Project-Rapporteur : D069/SE] <CE41>

CL M **1/00 Animal feeding-stuffs**

AL M 1/04 · from blood

CL M 1/14 · from vegetable materials, e.g. potatoes or roots without ensilaging

CL M 1/18 · specially adapted for particular animals

AL M 3/02 · of green fodder (processing and storing **A01F 25/00**)

ANNEX 6E A43C [Project-Rapporteur : D079/GB] <CE41>

AL M 15/06 · Ice-gripping devices or attachments, e.g. ice-spurs, ice-cleats, ice-creepers, crampons; Climbing devices or attachments (**A43C 15/09** takes precedence; ice-spurs for horseshoes **A01L 7/08**)

ANNEX 7E A44B [Project-Rapporteur : M099/IB] <CE41>

CL M	Subclass index		
		BUTTONS; CARDS THEREFOR	**1/00-5/00**; **7/00**
		SLIDE FASTENERS	**19/00**
		OTHER CLAMPING OR HOLDING DEVICES	**6/00-18/00**, **99/00**

ANNEX 8E A44B [Project-Rapporteur : D012/US] <CE41>

CL M **1/00 Buttons**

AL M 1/06 · Assembling of buttons

CL M **9/00 Hat, scarf, or safety pins or the like** (decorative or ornamental aspect **A44C**; hair pins **A45D 8/02**)

AL M 9/06 · · Hat-pins

CL M **18/00 Fasteners of the touch-and-close type; Making such fasteners**

AL M 19/48 · · · · Arranging interlocking members before securing

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ANNEX 9E A44B [Project-Rapporteur : M099/IB] <CE41>

CL D 21/00 (transferred to **A44B 99/00**)

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

ANNEX 10E A61C [Project-Rapporteur : D104/US] <CE41>

AL M 1/18 ・・ Flexible shafts; Clutches or the like

CL M 13/08 ・ Artificial teeth; Making same

CL M 13/225 ・ Fastening prostheses in the mouth (securing tooth crowns in capping teeth **A61C 5/08**)

AL M 13/38 ・ Tools not otherwise provided for, for use in connection with dental prostheses or the making thereof

AL M 17/10 ・・ with mouth props, tongue guards, tongue depressors or cheek spreaders

CL M 19/04 ・ Measuring instruments specially adapted for dentistry (radiation diagnosis **A61B 6/14**)

ANNEX 11E A61D [Project-Rapporteur : D105/US] <CE41>

AL M 1/02 ・ Trocars or cannulas for teats; Vaccination appliances

CL M **3/00 Appliances for supporting or fettering animals for operative purposes**

CL M **7/00 Devices or methods for introducing solid, liquid, or gaseous remedies or other materials into or onto the bodies of animals** (for reproduction or fertilisation **A61D 19/00**)

CL M **9/00 Bandages, poultices, compresses specially adapted to veterinary purposes**

CL M **11/00 Washing devices or gaseous curative baths specially adapted to veterinary purposes**

CL M **15/00 Mouth openers**

ANNEX 12E A61F [Project-Rapporteur : D098/DE] <CE41>

CL M 5/02 ・・ Orthopaedic corsets

AL M 5/34 ・・・ Pressure pads filled with air or liquid (valves specially adapted for medical use **A61M 39/00**)

AL M 5/458 ・・・・ adherent or inflatable type

CL M **7/00 Heating or cooling appliances for medical or therapeutic treatment of the human body** (heating or cooling means in connection with bedsteads or mattresses **A47C 21/00**; hyperthermia using electric or magnetic fields or ultrasound **A61N**)

CL M **9/00** **Methods or devices for treatment of the eyes; Devices for putting in contact-lenses; Devices to correct squinting; Apparatus to guide the blind; Protective devices for the eyes, carried on the body or in the hand** (caps with means for protecting the eyes **A42B 1/06**; visors for helmets **A42B 3/22**; eye baths **A61H 35/02**; sunglasses or goggles having the same features as spectacles **G02C**)

CL M 9/02 · Goggles (for swimming **A63B 33/00**)

ANNEX 13E A61J [Project-Rapporteur : D107/US] <CE41>

CL M **1/00** **Containers specially adapted for medical or pharmaceutical purposes** (capsules or the only like for oral use **A61J 3/07**; boxes for medical appliances, doctors' bags **A61B 19/02**; containers with special dispensing means for pills or tablets **B65D 83/04**; containers for radioactive substances **G21F 5/00**)

AL M **1/00** **Containers specially adapted for medical or pharmaceutical purposes** (capsules or the like for oral use **A61J 3/07**; boxes for medical appliances, doctors' bags **A61B 19/02**; containers for radioactive substances **G21F 5/00**)

AL M 1/03 · for pills or tablets (containers for pills or tablets with special dispensing means therefor **B65D 83/04**)

AL M 3/02 · into the form of powders

CL M **7/00** **Devices for administering medicines orally, e.g. spoons** (weighing spoons **G01G 19/56**) **; Pill counting devices; Arrangements for time indication or reminder for taking medicine**

CL M **9/00** **Feeding-bottles in general**

CL M **13/00** **Breast-nipple shields**

CL M **15/00** **Feeding-tubes for therapeutic purposes**

ANNEX 14E A61N [Project-Rapporteur : D014/US] <CE41>

CL M **1/00** **Electrotherapy; Circuits therefor** (**A61N 2/00** takes precedence; electrically conductive preparations for use in therapy or testing in vivo **A61K 50/00**)

CL M 1/08 · · Arrangements or circuits for monitoring, protecting, controlling or indicating (for a single specific type of apparatus **A61N 1/10**-**A61N 1/44**)

CL M 1/38 · · · for producing shock effects

CL M 1/40 · Applying electric fields by inductive or capacitive coupling

CL M **5/00** **Radiation therapy** (devices or apparatus applicable to both therapy and diagnosis **A61B 6/00**; applying radioactive material to the body **A61M 36/00**)

ANNEX 15E A61P [Project-Rapporteur : M711/IE] <CE41>

CL M **Title SPECIFIC THERAPEUTIC ACTIVITY OF CHEMICAL COMPOUNDS OR MEDICINAL PREPARATIONS**

CL N *Note 43/00* *Classification is only made in this group when a specific therapeutic activity for a chemical compound or medicinal preparation has been clearly disclosed, the specific therapeutic activity not being appropriate to any of groups **A61P 1/00-A61P 41/00**.* **[new.]**

ANNEX 16E A61Q [Project-Rapporteur : M711/IE] <CE41>

CL M **Title SPECIFIC USE OF COSMETICS OR SIMILAR TOILET PREPARATIONS**

CL N *Note 90/00* *Classification is only made in this group when a specific use for a cosmetic or similar toilet preparation has been clearly disclosed, the specific use not being appropriate to any of the preceding groups in this subclass.* **[new.]**

ANNEX 17E A62B [Project-Rapporteur : M703/US] <CE41>

CL M **29/00 Devices, e.g. installations, for rendering harmless or for keeping off harmful chemical agents** (respiratory apparatus **A62B 7/00**; gasproof doors, windows, shutters **E06B**)

ANNEX 18E A62C [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

FIRE PREVENTION OR CONTAINMENT; FIRE-EXTINGUISHING FOR PARTICULAR OBJECTS OR PLACES	
Prevention or containment	**2/00**
Flame traps	**4/00**
For particular objects or places	**3/00**
MAKING FIRE-EXTINGUISHING MATERIALS BEFORE USE	**5/00**
HAND TOOLS OR ACCESSORIES	**8/00**
PORTABLE EXTINGUISHERS	
According to operating principle	**11/00**, **13/00**, **19/00**, **25/00**
Knapsack type	**15/00**
Pistol or rifle type	**17/00**

FIRE-FIGHTING VEHICLES	
Land vehicles	**27/00**
Boats	**29/00**
DELIVERY OF FIRE-EXTINGUISHING MATERIALS	**31/00**
HOSE ACCESSORIES	**33/00**
STATIONARILY-INSTALLED EQUIPMENT	**35/00**
CONTROL OF FIRE-FIGHTING EQUIPMENT	**37/00**
OTHER METHODS, EQUIPMENT OR ACCESSORIES	**99/00**

CL D 39/00 (transferred to **A62C 99/00**)

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

ANNEX 19E A62D [Project-Rapporteur : D071/EP] <CE41>

CL M **1/00 Fire-extinguishing compositions; Use of chemical substances in extinguishing fires**

ANNEX 20E A62D [Project-Rapporteur : M703/US] <CE41>

CL M **3/00 Processes for making harmful chemical substances harmless, or less harmful, by effecting a chemical change in the substances** (devices for rendering harmful chemical agents harmless **A62B 29/00**; consuming noxious gases by combustion **F23G 7/06**)

ANNEX 21E A62D [Project-Rapporteur : D071/EP] <CE41>

AL M 7/02 ・ Clear-view sheets which prevent the formation of water drops or ice

CL M **9/00 Composition of chemical substances for use in breathing apparatus**

ANNEX 22E A63B [Project-Rapporteur : D079/GB] <CE41>

CL M **21/00 Exercising apparatus for developing or strengthening the muscles or joints of the body by working against a counterforce, with or without measuring devices** (electric or electronic controls therefor **A63B 24/00**)

CL M **29/00 Apparatus for mountaineering** (helmets **A42B 3/00**; non-skid devices or attachments for footwear, e.g. crampons, **A43C 15/00**; breathing masks or helmets for use at high altitudes **A62B 18/00**; picks **B25D 7/00**)

AL M 29/02 · Mountain guy-ropes or accessories, e.g. avalanche ropes; Means for indicating the location of accidentally buried, e.g. snow-buried, persons

CL M **41/00 Hollow inflatable balls**

AL M 41/12 · Tools or devices for blowing up or closing balls

CL M 55/08 · Wheeled carriers for golf bags

CL M **65/00 Implements for throwing** (throwing toys **A63H 33/18**)

CL M 69/40 · Stationarily-arranged devices for projecting balls (traps for clay-pigeon targets **F41J 9/18**)

CL M 71/06 · Indicating or scoring devices for games or players

AL M 71/16 · · · air-filled

ANNEX 23E B01L [Project-Rapporteur : M099/IB] <CE41>

CL M **7/00 Heating or cooling apparatus** (evaporators **B01D 1/00**; drying gases or vapours, e.g. desiccators, **B01D 53/26**; autoclaves **B01J 3/04**; drying ovens **F26B**; furnaces, ovens **F27**) **; Heat insulating devices**

AL N *7/04 · Heat insulating devices, e.g. jackets for flasks*

CL D 11/00 (transferred to **B01L 99/00**)

AL D 11/02 (transferred to **B01L 7/04**)

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

ANNEX 24E B05B [Project-Rapporteur : D076/GB] <CE41>

CL M **Title SPRAYING APPARATUS; ATOMISING APPARATUS; NOZZLES** (spray-mixers with nozzles **B01F 5/20**; processes for applying liquids or other fluent materials to surfaces by spraying **B05D**)

CL M **1/00 Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves, heating means** (**B05B 3/00**, **B05B 5/00**, **B05B 7/00** take precedence; devices for applying liquids or other fluent materials to surfaces by contact **B05C**; nozzles for ink-jet printing mechanisms **B41J 2/135**; nozzles for liquid-dispensing, e.g. in vehicle service stations, **B67D 7/42**)

CL M 7/04 ・・ with arrangements for mixing liquids or other fluent materials before discharge

CL M **12/00 Arrangements or special adaptations of delivery controlling means in spraying systems**

CL M **15/00 Details of spraying plant or apparatus not otherwise provided for; Accessories**

ANNEX 25E B24D [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

PHYSICAL FEATURES OR CONSTITUENTS OF ABRASIVE BODIES OR SHEETS	**3/00**
ABRASIVE WHEELS	**5/00**, **7/00**, **9/00**, **13/00**
FLEXIBLE ABRASIVE MATERIALS	**11/00**
HAND TOOLS	**15/00**
MANUFACTURE	**18/00**
OTHER TOOLS	**99/00**

CL D 17/00 (transferred to **B24D 99/00**)

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

ANNEX 26E B27K [Project-Rapporteur : M700/SE] <CE41>

CL M **Title PROCESSES, APPARATUS OR SELECTION OF SUBSTANCES FOR IMPREGNATING, STAINING, DYEING OR BLEACHING OF WOOD, OR FOR TREATING OF WOOD WITH PERMEANT LIQUIDS, NOT OTHERWISE PROVIDED FOR** (applying liquids or other fluent materials to surfaces in general **B05**; coating wood or similar material **B44D**) **; CHEMICAL OR PHYSICAL TREATMENT OF CORK, CANE, REED, STRAW OR SIMILAR MATERIALS**

ANNEX 27E B29 [Project-Rapporteur : C441/SE] <CE41>

CL M Note B29

1. This class does not cover the working of plastics sheet material in a manner analogous to the working of paper, which is covered by class **B31**. **[4]**
2. In this class, the following term is used with the meaning indicated:
   - "plastics" means macromolecular compounds or compositions based on such compounds.
3. In this class, the following rules apply:
   a. The working of plastics is, as far as possible, classified primarily according to the particular shaping technique used, e.g. in subclass **B29C**. **[4]**

b. Classification according to production of particular articles in subclass **B29D** is restricted to:
   i. aspects which are characteristic for the production of a particular article, and not classifiable in subclass **B29B** or **B29C**;
   ii. combined operations for making the particular article which are not fully classifiable in subclass **B29C**. **[4]**

c. *Products per se are not classified in this class. However, if a product is characterised by the way it is produced and not by its structure or composition, the production method should be classified in this class.* **[new.]**

ANNEX 28E B29C [Project-Rapporteur : C441/SE] <CE41>

CL M **Title** **SHAPING OR JOINING OF PLASTICS; SHAPING OF SUBSTANCES IN A PLASTIC STATE, IN GENERAL; AFTER- TREATMENT OF THE SHAPED PRODUCTS, e.g. REPAIRING** (working in the manner of metal **B23**; grinding, polishing **B24**; cutting **B26D**, **B26F**; making preforms **B29B 11/00**; making laminated products by combining previously unconnected layers which become one product whose layers will remain together **B32B 37/00-B32B 41/00**)

CL M Note B29C

1. Attention is drawn to Note (3) following the title of class **B29**. **[4]**
2. In this subclass:
   - repairing of articles made from plastics or substances in a plastic state, e.g. of articles shaped or produced by using techniques covered by this subclass or subclass **B29D**, is classified in group **B29C 73/00**;
   - component parts, details, accessories or auxiliary operations which are applicable to more than one moulding technique are classified in groups **B29C 31/00-B29C 37/00**;
   - component parts, details, accessories or auxiliary operations which are only applicable or only of use for one specific shaping technique are classified only in the relevant subgroups of groups **B29C 39/00-B29C 71/00**. **[4,5]**

ANNEX 29E B29D [Project-Rapporteur : C441/SE] <CE41>

CL M Note B29D Attention is drawn to Note (3) following the title of class **B29**. **[4]**

ANNEX 30E B29D [Project-Rapporteur : M099/IB] <CE41>

CL D 31/00 (transferred to **B29D 99/00**)

CL D 31/02 (transferred to **B29D 33/00**)

CL D 31/50 (transferred to **B29D 35/00**)

CL D Note < Deleted / Supprimé >
31/50

AL D 31/502 (transferred to **B29D 35/02**)

AL D 31/505 (transferred to **B29D 35/04**)

AL D 31/508 (transferred to **B29D 35/06**)

AL D 31/51 (transferred to **B29D 35/08**)

AL D 31/512 (transferred to **B29D 35/10**)

AL D 31/515 (transferred to **B29D 35/12**)

AL D 31/518 (transferred to **B29D 35/14**)

CL N ***33/00 Producing bushes for bearings***

CL N ***35/00 Producing footwear***

CL N *Note 35/00*

1. *Classification is made in this group if the moulding technique is of interest.* **[new.]**
2. *The assembling of individual parts by mechanical joining is classified in subclass **A43D**, e.g. by gluing shoe parts **A43D 25/00**.* **[new.]**

AL N *35/02* · *made in one piece using a moulding technique, e.g. by injection moulding or casting*

AL N *35/04* · · *having multilayered parts*

AL N *35/06* · *having soles or heels formed and joined on to preformed uppers using a moulding technique, e.g. by injection moulding, pressing and vulcanising*

AL N *35/08* · · *having multilayered parts*

AL N *35/10* · *having preformed soles or heels joined on to preformed uppers using a moulding technique, e.g. by feeding or injecting plastics material between the parts to be joined*

AL N *35/12* · *Producing parts thereof, e.g. soles, heels or uppers, by a moulding technique*

AL N *35/14* · · *Multilayered parts*

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

ANNEX 31E B32B [Project-Rapporteur : C441/SE] <CE41>

CL M Note
B32B

1. This subclass covers :
   - layered products comprising different kinds of material or layered products not characterised by the particular kind of material used;
   - a product similar to a layered product but comprising only material in the form of a sheet or network embedded in a mass of plastics or of physically-similar substances which mass penetrates the said sheet or network and lies on both sides of the latter (e.g. so that the sheet or network reinforces the plastics substance) provided that the embedded sheet or network extends coherently or connectedly over substantially the whole area of the product; thus the embedded sheet or network may be a fabric or a series of rods connected by cross wires. The manner of making such a product is, however, classified in this subclass only if it is essentially a process of building-up an assembly of layers of which at least one outer layer is preformed. If the embedded material comprises only a series of unconnected rods, the product is not classified in this subclass.
2. This subclass does not cover :
   - processes or apparatus used in, or in connection with, the production or treatment of any product, if the process or apparatus is solely applicable to and fully classifiable in a single other class or subclass for processes or apparatus, e.g. **B05**, **B29C**, **B29D**, **B44D**, **C08J**, **C09J** or **C23**;
   - compositions or preparation or treatment thereof, unless they are essentially restricted to layered products and cannot be fully classified in another class without ignoring this restriction;
   - etched metallic pattern on the surface of a printed circuit board. **[3]**
3. In this subclass, a film formed on a layer by spreading a substance thereon is not considered to constitute a layer itself if it serves only as an adhesive or its purpose is merely to finish a surface of a product.
4. In this subclass, the following terms or expressions are used with the meanings indicated:
   - "layer" is a sheet or strip or anything else having a small thickness relatively to its other dimensions which, together with at least one other layer, exists in a product, whether it pre-existed, e.g. as a separate sheet or strip, or was formed during the production of the layered product. It may or may not be homogeneous or cohesive; it may be an assembly of fibres or pieces of material. It may be discontinuous, e.g. in the form of a grating, honeycomb, or frame. It may or may not be in complete contact with the next layer, e.g. a corrugated layer against a flat layer;
   - "layered product" comprises at least two layers secured together. The term "secured" includes any method of uniting layers, e.g. needling, stitching, gluing, nailing, dovetailing or the interposition of an adhesive or adhesive impregnated support. It may also be an intermediate stage in the production of an article which is not layered in its final form, e.g. a panel with a protective layer which is stripped off when the panel is placed in its position of use. The layers are preformed layers or layers formed in situ on a preformed layer and may consist of coherent solid materials, including honeycombs and other cellular materials or of non-coherent solid materials composed of assemblies of strands, strips, fibres, tiles or the like;

- "filamentary layer" means a layer of threads or filaments of any substance (e.g. wires) of more or less unlimited length placed in an orderly arrangement and secured together; it may be woven, knitted, braided, or netted, or formed of threads crossed or laid side and bonded together;
- "fibrous layer" means a random assembly of fibres or filaments, usually of limited length, e.g. felt, fleece; the fibres may or may not be interengaged or connected, e.g. by adhesive.

5. In groups **B32B 1/00**-**B32B 33/00**, at each level of indentation, in the absence of an indication to the contrary, classification is made in the first appropriate place.
6. *If a layered product is characterised by the way it is produced and not by its structure or composition, the production method should be classified in groups **B32B 37/00** or **B32B 38/00**, or in subclass **B29C**, for example in groups **B29C 45/16** or **B29C 47/06**.* **[new.]**
7. The classification of layered products is provided for in many classes, most of which are confined to a particular kind of material. However, in order that this subclass may provide a basis for making a complete search with respect to layered products, all relevant subject matter is classified in this subclass even though it may also be classified in other classes.

ANNEX 32E B43K [Project-Rapporteur : M099/IB] <CE41>

CL M **25/00 Attaching writing implements to wearing apparel or objects involving constructional changes of the implements** (protecting means, e.g. caps, **B43K 23/08**; fastening articles to wearing apparel **A45F 5/02**)

ANNEX 33E B43M [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

FIXING SEALS; INSERTING DOCUMENTS INTO, CLOSING, OR OPENING, ENVELOPES	**1/00**; **3/00**, **5/00**, **7/00**
PAPER-WEIGHTS; DEVICES FOR APPLYING LIQUIDS; STAMP DISPENSERS; DRAWING-PINS OR THUMB-TACKS	**9/00**; **11/00**; **13/00**; **15/00**
OTHER ACCESSORIES	**99/00**

CL D 17/00 (transferred to **B43M 99/00**)

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

ANNEX 34E B60F [Project-Rapporteur : M099/IB] <CE41>

CL M **Title VEHICLES FOR USE BOTH ON RAIL AND ON ROAD; VEHICLES CAPABLE OF TRAVELLING IN OR ON DIFFERENT MEDIA, e.g. AMPHIBIOUS VEHICLES** (air-cushion vehicles **B60V**)

CL M **5/00 Other vehicles capable of travelling in or on different media** (vehicles having alternatively-usable runners and wheels **B62B 13/18**; flying-boats or seaplanes **B64C 35/00**)

ANNEX 35E B60G [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

RIGID SUSPENSION	**1/00**
RESILIENT SUSPENSION	
General structures	
for single wheels; single sets of tandem wheels; pivoted suspension arms and accessories therefor	**3/00**; **5/00**; **7/00**
for rigid axle or axle housing for two or more wheels	**9/00**
Characterised by arrangement, location, or kind of: springs; vibration-dampers; or combined springs and dampers	**11/00**; **13/00**; **15/00**
Characterised by adjustment	**17/00**
SUSPENSIONS WITH MEANS FOR SENSING GROUND UNEVENNESS	**23/00**
INTERCONNECTED SYSTEMS FOR RESILIENTLY-SUSPENDED WHEELS	**21/00**
OTHER SUSPENSION ARRANGEMENTS	**99/00**

CL D 25/00 (transferred to **B60G 99/00**)

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

ANNEX 36E B63G [Project-Rapporteur : M099/IB] <CE41>

AL M 8/08 · Propulsion (nuclear propulsion **B63H 21/18**; submerged exhausting apparatus **F01N 13/12**; propulsion power plants or units per se , see the relevant classes)

ANNEX 37E B64C [Project-Rapporteur : M099/IB] <CE41>

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

ANNEX 38E B65D [Project-Rapporteur : D081/GB] <CE41>

AL M 1/32 · Containers adapted to be temporarily deformed by external pressure to expel contents (containers with disinfecting linings **A61L 2/00**; oil cans **F16N 3/00**)

CL M 33/01 · Ventilation or draining of bags

ANNEX 39E B65D [Project-Rapporteur : M706/SE] <CE41>

CL M Guidance heading 39/00-55/00 **Closure members, other than those folded of paper and incorporated in or attached to the container, for opening of rigid or semi-rigid containers without destroying outer wall portions of the container itself, or of flexible containers presenting similar closing problems**; **Arrangements or devices for preventing refilling of containers**; **Parts of containers co-operating with closure members or characterised by the form of closure members**

ANNEX 40E B65D [Project-Rapporteur : D081/GB] <CE41>

CL M **41/00 Caps, e.g. crown caps, crown seals, i.e. members having parts arranged for engagement with the external periphery of a neck or wall defining a pouring opening or discharge aperture; Protective cap-like covers for closure members, e.g. decorative covers of metal foil or paper** (**B65D 45/00** takes precedence; combinations of caps and protective cap-like covers **B65D 51/18**; making closures by working metal sheet **B21D 51/44**)

CL M only **47/00 Closures with filling and discharging, or with discharging, devices** (pliable tubular containers with valves opening when closure is pressed against surface **B65D 35/00**; caps with pierceable membranes **B65D 41/02**, **B65D 41/32**; brushes combined or associated with containers **A46B 11/00**; dispensers for liquid soap **A47K 5/12**; swabs for applying media to the human body from an integral supply **A61F 13/40**; desk equipment for applying liquid by contact with surfaces **B43M 11/00**)

AL M **47/00 Closures with filling and discharging, or with discharging, devices** (dispensers for liquid soap **A47K 5/12**; desk equipment for applying liquid by contact with surfaces **B43M 11/00**)

AL M 47/18 · · · for discharging drops; Droppers

CL M **53/00 Sealing or packing elements; Sealings formed by liquid or plastic material**

AL M 55/06 · · Deformable or tearable wires, strings, or strips (containers specially constructed to be opened by tear-strips, strings or the like **B65D 17/00**; caps or cap-like closures with tear-strips **B65D 41/32**) ; Use of seals (applying labels to bottles **B65C 3/06**, **B65C 9/00**)

CL M **63/00 Flexible elongated elements, e.g. straps, for bundling or supporting articles**

CL M **65/00 Wrappers or flexible covers; Packaging materials of special type or form** (wrappers or envelopes with shock-absorbing properties **B65D 81/03**)

AL M 79/02 · Arrangements or devices for indicating incorrect storage or transport

CL M 83/06 · for dispensing powdered or granular material

CL M 83/14 · for delivery of liquid or semi-liquid contents by internal gaseous pressure, i.e. aerosol containers

AL M 90/18 · · Castors, rolls, or the like, e.g. detachable

AL M 90/32 · · Arrangements for preventing, or minimising the effect of, excessive or insufficient pressure

AL M 90/46 · · Arrangements for carrying off, or preventing the formation of electrostatic charges

AL M 90/54 · Gates or closures (for manholes **B65D 90/10**)

ANNEX 41E B65H [Project-Rapporteur : M099/IB] <CE41>

CL M 75/34 · · specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material provided for particular purposes, e.g. anchored hoses, power cables (retractors for storing flexible hoses as accessories of dental work stands **A61G 15/18**; vehicle safety belt retractors **B60R 22/34**; hose-storing devices in apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or portable containers **B67D 7/40**; clothes-line supports **D06F 53/00**; spring drums for liftable blinds with horizontal lamellae **E06B 9/322**; spring drums or tape drums for roll-type closures or roller blinds **E06B 9/56**; hauling- or hoisting-chains with arrangements for holding electric cables, hoses or the like **F16G 13/16**; devices for guiding pipes, cables or protective tubing, between relatively movable points, e.g. movable channels, **F16L 3/01**; flexible rulers or tapes with scales **G01B 3/10**; electrical features of stored material, see the relevant subclasses, e.g. **H02G**)

ANNEX 42E B67D [Project-Rapporteur : M099/IB] <CE41>

CL D 5/00 (transferred to **B67D 99/00**)

CL D 5/01 (transferred to **B67D 7/00**)

AL D 5/02 (transferred to **B67D 7/02**)

AL D 5/04 (transferred to **B67D 7/04**)

CL D 5/06 (transferred to **B67D 7/06**)

CL D 5/08 (transferred to **B67D 7/08**)

AL D 5/10 (transferred to **B67D 7/10**)

AL D 5/12 (transferred to **B67D 7/12**)

AL D 5/14 (transferred to **B67D 7/14**)

AL D 5/16 (transferred to **B67D 7/16**)

AL D 5/18 (transferred to **B67D 7/18**)

AL D 5/20 (transferred to **B67D 7/20**)

CL D 5/22 (transferred to **B67D 7/22**)

AL D 5/24 (transferred to **B67D 7/24**)

AL D 5/26 (transferred to **B67D 7/26**)

AL D 5/28 (transferred to **B67D 7/28**)

AL D 5/30 (transferred to **B67D 7/30**)

CL D 5/32 (transferred to **B67D 7/32**)

AL D 5/33 (transferred to **B67D 7/34**)

AL D 5/34 (transferred to **B67D 7/36**)

CL D 5/36 (transferred to **B67D 7/38**)

AL D 5/365 (transferred to **B67D 7/40**)

CL D 5/37 (transferred to **B67D 7/42**)

AL D 5/371 (transferred to **B67D 7/44**)

AL D 5/372 (transferred to **B67D 7/46**)

AL D 5/373 (transferred to **B67D 7/48**)

AL D 5/375 (transferred to **B67D 7/50**)

AL D 5/377 (transferred to **B67D 7/52**)

AL D 5/378 (transferred to **B67D 7/54**)

AL D 5/38 (transferred to **B67D 7/56**)

CL D 5/40 (transferred to **B67D 7/58**)

AL D 5/42 (transferred to **B67D 7/60**)

AL D 5/44 (transferred to **B67D 7/62**)

AL D 5/46 (transferred to **B67D 7/64**)

AL D 5/48 (transferred to **B67D 7/66**)

AL D 5/50 (transferred to **B67D 7/68**)

AL D 5/52 (transferred to **B67D 7/70**)

AL D 5/54 (transferred to **B67D 7/72**)

CL D 5/56 (transferred to **B67D 7/74**)

CL D 5/58 (transferred to **B67D 7/76**)

CL D 5/60 (transferred to **B67D 7/78**)

CL D 5/62 (transferred to **B67D 7/80**)

AL D 5/63 (transferred to **B67D 7/82**)

CL D 5/64 (transferred to **B67D 7/84**)

AL D 5/66 (transferred to **B67D 7/86**)

CL D 5/68 (transferred to **B67D 9/00**)

AL D 5/70 (transferred to **B67D 9/02**)

CL N ***7/00*** ***Apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or into portable containers, e.g. for retail sale purposes*** *(general disposition of plant in stations for supplying fuel to vehicles **B60S 5/02**; for filling or emptying locomotive water tanks, e.g. water columns, **B61K 11/00**; for refuelling aircraft during flight **B64D 39/00**; liquid-handling ground installations specially adapted for fuelling stationary aircraft **B64F 1/28**)*

AL N *7/02* · *for transferring liquids other than fuel or lubricants*

AL N *7/04* · *for transferring fuels, lubricants or mixed fuels and lubricants*

CL N *7/06* · *Details or accessories*

CL N *7/08* · · *Arrangements of devices for controlling, indicating, metering or registering quantity or price of liquid transferred (arrangement of flow- or pressure-control valves **B67D 7/36**; computing, calculating, counting **G06**; coin-freed apparatus for dispensing fluids **G07F 13/00**; prepayment devices for metering liquids **G07F 15/00**)*

AL N *7/10* · · · *operated by keys, push-buttons or cash registers*

AL N *7/12* · · · *operated by movement of delivery hose or nozzle or by devices associated therewith*

AL N *7/14* · · · *responsive to input of recorded programmed information, e.g. on punched cards*

AL N *7/16* · · · *Arrangements of liquid meters*

AL N *7/18* · · · · *of piston type*

AL N *7/20* · · · · *of rotary type*

CL N *7/22* · · · *Arrangements of indicators or registers (indicating or recording in fluid meters **G01F 15/06**)*

AL N *7/24* · · · · *with means for producing or issuing a receipt or record of sale*

AL N *7/26* · · · · *with resetting or zeroing means*

AL N *7/28* · · · *with automatic means for reducing or intermittently interrupting flow before completion of delivery, e.g. to produce dribble feed*

AL N *7/30* · · · *with means for predetermining quantity of liquid to be transferred (**B67D 7/10**, **B67D 7/14** take precedence)*

CL N *7/32* · · *Arrangements of safety or warning devices; Means for preventing unauthorised delivery of liquid*

AL N *7/34* · · · *Means for preventing unauthorised delivery of liquid*

AL N *7/36* · · *Arrangements of flow- or pressure-control valves (associated with nozzles **B67D 7/42**)*

CL N *7/38* · · *Arrangements of hoses, e.g. operative connection with pump motor (hoses in general **F16L 11/00**)*

AL N *7/40* · · · *Suspending, reeling or storing devices (supports for storing lengths of hoses, in general **B65H 75/34**)*

CL N *7/42* · · *Filling nozzles*

AL N *7/44* · · · *automatically closing*

AL N *7/46* · · · · *when liquid in container to be filled reaches a predetermined level*

AL N *7/48* · · · · · *by making use of air suction through an opening closed by the rising liquid*

AL N *7/50* · · · · *and provided with an additional hand lever*

AL N *7/52* · · · · *and provided with additional flow-controlling valve means*

AL N *7/54* · · · *with means for preventing escape of liquid or vapour or for recovering escaped liquid or vapour (**B67D 7/44** takes precedence)*

AL N *7/56* · · *Arrangements of flow-indicators, e.g. transparent compartments, windows, rotary vanes (indicating or recording presence, absence or direction of movement **G01P 13/00**)*

CL N *7/58* · · *Arrangements of pumps*

AL N *7/60* · · · *manually operable*

AL N *7/62* · · · *power operated*

AL N *7/64* · · · · *of piston type*

AL N *7/66* · · · · *of rotary type*

AL N *7/68* · · · *submerged in storage tank or reservoir*

AL N *7/70* · · · *of two or more pumps in series or parallel*

AL N *7/72* · · *Devices for applying air or other gas pressure for forcing liquid to delivery point*

CL N *7/74* · · *Devices for mixing two or more different liquids to be transferred (coin-freed apparatus **G07F 13/06**)*

CL N *7/76* · · *Arrangements of devices for purifying liquids to be transferred, e.g. of filters, of air or water separators*

CL N *7/78* · · *Arrangements of storage tanks, reservoirs or pipe-lines*

CL N *7/80* · · *Arrangements of heating or cooling devices for liquids to be transferred*

AL N *7/82* · · · *Heating only*

CL N *7/84* · · *Casings, cabinets or frameworks; Trolleys or like movable supports*

AL N *7/86* · · *Illuminating arrangements*

CL N ***9/00*** ***Apparatus or devices for transferring liquids when loading or unloading ships*** *(ship-based equipment **B63B 27/00**)*

AL N *9/02* · *using articulated pipes*

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

ANNEX 43E B81C [Project-Rapporteur : M099/IB] <CE41>

CL D 5/00 (transferred to **B81C 99/00**)

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

ANNEX 44E C01G [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

GENERAL METHODS OF PREPARATION	**1/00**
METALLIC COMPOUNDS, IN ALPHABETICAL ORDER OF THE SYMBOL FOR THE METAL	
Ag Silver	**5/00**
As Arsenic	**28/00**
Au Gold	**7/00**
Bi Bismuth	**29/00**
Cd Cadmium	**11/00**
Co Cobalt	**51/00**
Cr Chromium	**37/00**
Cu Copper	**3/00**
Fe Iron	**49/00**
Ga Gallium	**15/00**
Ge Germanium	**17/00**
Hf Hafnium	**27/00**
Hg Mercury	**13/00**
In Indium	**15/00**
Ir Iridium	**55/00**
Mn Manganese	**45/00**
Mo Molybdenum	**39/00**
Nb Niobium	**33/00**
Ni Nickel	**53/00**
Os Osmium	**55/00**
Pb Lead	**21/00**
Pd Palladium	**55/00**
Pt Platinum	**55/00**
Re Rhenium	**47/00**
Rh Rhodium	**55/00**
Ru Ruthenium	**55/00**
Sb Antimony	**30/00**
Sn Tin	**19/00**
Ta Tantalum	**35/00**
Ti Titanium	**23/00**
Tl Thallium	**15/00**
U Uranium	**43/00**

V Vanadium	**31/00**
W Tungsten	**41/00**
Zn Zinc	**9/00**
Zr Zirconium	**25/00**
COMPOUNDS OF TRANSURANIC ELEMENTS	**56/00**
COMPOUNDS OF METALS NOT COVERED BY THE PRECEDING GROUPS	**99/00**

CL D 57/00 (transferred to **C01G 99/00**)

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

ANNEX 45E C07C [Project-Rapporteur : M710/IE] <CE41>

CL M **69/00 Esters of carboxylic acids; Esters of carbonic or haloformic acids**

ANNEX 46E C07F [Project-Rapporteur : M702/EP] <CE41>

CL M Note C07F

1. Attention is drawn to Note (3) after class **C07**, which defines the last place priority rule applied in the range of subclasses **C07C-C07K** and within these subclasses. **[8]**
2. Attention is drawn to Note (6) following the title of class **C07**. **[2]**
3. *Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers.* **[new.]**
4. Therapeutic activity of compounds is further classified in subclass **A61P**. **[7]**
5. In this subclass, organic acid salts, alcoholates, phenates, chelates or mercaptides are classified as the parent compounds. **[2]**

ANNEX 47E C08H [Project-Rapporteur : M099/IB] <CE41>

CL M **Title DERIVATIVES OF NATURAL MACROMOLECULAR COMPOUNDS**
(polysaccharides **C08B**; natural rubber **C08C**; natural resins or their derivatives **C09F**; bituminous materials **C10**)

CL D 5/00 (transferred to **C08H 99/00**)

AL D 5/02 (transferred to **C08H 6/00**)

AL D 5/04 (transferred to **C08H 8/00**)

CL N ***6/00 Macromolecular compounds derived from lignin***

CL N ***8/00 Macromolecular compounds derived from lignocellulosic materials***

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

ANNEX 48E C08L [Project-Rapporteur : M104/DE] <CE41>

CL M **43/00 Compositions of homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing boron, silicon, phosphorus, selenium, tellurium, or a metal; Compositions of derivatives of such polymers**

AL M 55/02 · ABS [Acrylonitrile-Butadiene-Styrene] polymers

CL M **59/00 Compositions of polyacetals; Compositions of derivatives of polyacetals** (of polyvinyl acetals **C08L 29/14**)

AL M 89/04 · Products derived from waste materials, e.g. horn, hoof or hair

AL M 91/08 · · Mineral waxes

CL M **95/00 Compositions of bituminous materials, e.g. asphalt, tar or pitch**

AL M 97/02 · Lignocellulosic material, e.g. wood, straw or bagasse

AL M 101/12 · characterised by physical features, e.g. anisotropy, viscosity or electrical conductivity (liquid crystal materials or compositions **C09K 19/00**)

ANNEX 49E C09D [Project-Rapporteur : M105/DE] <CE41>

CL M **Title COATING COMPOSITIONS, e.g. PAINTS, VARNISHES OR LACQUERS; FILLING PASTES; CHEMICAL PAINT OR INK REMOVERS; INKS; CORRECTING FLUIDS; WOODSTAINS; PASTES OR SOLIDS FOR COLOURING OR PRINTING; USE OF MATERIALS THEREFOR** (cosmetics **A61K**; processes for applying liquids or other fluent materials to surfaces, in general, **B05D**; staining wood **B27K 5/02**; glazes or vitreous enamels **C03C**; organic macromolecular compounds **C08**; organic dyes or closely-related compounds for producing dyes, mordants or lakes, per se , **C09B**; treatment of inorganic materials other than fibrous fillers used as pigments or fillers **C09C**; natural resins, French polish, drying-oils, driers, turpentine, per se , **C09F**; polishing compositions other than French polish, ski waxes **C09G**; preparation of glue or gelatine **C09H**; adhesives or use of materials as adhesives **C09J**; materials for sealing or packing joints or covers **C09K 3/10**; materials for stopping leaks **C09K 3/12**; processes for the electrolytic or electrophoretic production of coatings **C25D**; textile-treating compositions **D06**; paper-making **D21**; conductors, insulators **H01B**)

CL M 5/14 · Paints containing biocides, e.g. fungicides, insecticides or pesticides (**C09D 5/16** takes precedence)

CL M 5/20 · for coatings strippable as coherent films, e.g. temporary coatings strippable as coherent films

CL M 5/36 · Pearl essence, e.g. coatings containing platelet-like pigments for pearl lustre

CL M 5/38 · Paints containing free metal not provided for in groups **C09D 5/00**-**C09D 5/36**

CL M **7/00 Features of coating compositions, not provided for in group C09D 5/00** (driers **C09F 9/00**)

AL M 101/10 · · Esters of organic acids (of both organic acids and inorganic acids **C09D 101/20**)

AL M 101/16 · · Esters of inorganic acids (of both organic acids and inorganic acids **C09D 101/20**)

CL M 133/06 · · of esters containing only carbon, hydrogen and oxygen, the oxygen atom being present only as part of the carboxyl radical

CL M 133/14 · · of esters containing halogen, nitrogen, sulfur or oxygen atoms in addition to the carboxy oxygen

CL M **143/00 Coating compositions based on homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing boron, silicon, phosphorus, selenium, tellurium or a metal; Coating compositions based on derivatives of such polymers**

AL M 155/02 · ABS [Acrylonitrile-Butadiene-Styrene] polymers

AL M 189/04 · Products derived from waste materials, e.g. horn, hoof or hair

AL M 191/08 · · Mineral waxes

CL M **195/00 Coating compositions based on bituminous materials, e.g. asphalt, tar or pitch**

AL M 197/02 · Lignocellulosic material, e.g. wood, straw or bagasse

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ANNEX 50E C09J [Project-Rapporteur : M106/DE] <CE41>

CL M only **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**; processes for applying liquids or other fluent materials to surfaces in general **B05D**; 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 **B65C 5/00**; organic macromolecular compounds **C08**; preparation of glue or gelatine **C09H**; adhesive labels, tag tickets or similar identification of indication means **G09F 3/10**)

AL 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**; processes for applying liquids or other fluent materials to surfaces in general **B05D**; 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**; organic macromolecular compounds **C08**; preparation of glue or gelatine **C09H**; adhesive labels, tag tickets or similar identification of indication means **G09F 3/10**)

AL M 1/02 · containing water-soluble alkali silicates

CL M **5/00** **Adhesive processes in general; Adhesive processes not provided for elsewhere, e.g. relating to primers** (devices for applying glue to surfaces to be joined **B05**, **B27G 11/00**)

CL M 5/04 · involving separate application of adhesive ingredients to the different surfaces to be joined

CL only M **9/00** **Adhesives characterised by their physical nature or the effects produced, e.g. glue sticks** (**C09J 7/00** takes precedence; electrically conductive adhesives specially adapted for use in therapy or testing in vivo **A61K 50/00**)

AL M **9/00** **Adhesives characterised by their physical nature or the effects produced, e.g. glue sticks** (**C09J 7/00** takes precedence)

CL M **11/00** **Features of adhesives not provided for in group C09J 9/00, e.g. additives**

AL M 101/10 · · Esters of organic acids (of both organic acids and inorganic acids **C09J 101/20**)

AL M 101/16 · · Esters of inorganic acids (of both organic acids and inorganic acids **C09J 101/20**)

CL M 133/06 · · of esters containing only carbon, hydrogen and oxygen, the oxygen atom being present only as part of the carboxyl radical

CL M 133/14 · · of esters containing halogen, nitrogen, sulfur or oxygen atoms in addition to the carboxy oxygen

CL M **143/00** **Adhesives based on homopolymers or copolymers of compounds having one or more unsaturated aliphatic radicals, each having only one carbon-to-carbon double bond, and containing boron, silicon, phosphorus, selenium, tellurium, or a metal; Adhesives based on derivatives of such polymers**

AL M 155/02 · ABS [Acrylonitrile-Butadiene-Styrene] polymers

AL M 189/04 · Products derived from waste materials, e.g. horn, hoof or hair

AL M 191/08 · · Mineral waxes

CL M **195/00** **Adhesives based on bituminous materials, e.g. asphalt, tar or pitch**

AL M 197/02 · Lignocellulosic material, e.g. wood, straw or bagasse

ANNEX 51E C10N [Project-Rapporteur : M702/EP] <CE41>

AL M Note 10/00

1. In this group, metals should be indexed according to their group of the Periodic Table. **[4]**
2. *Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers.* **[new.]**

ANNEX 52E C12N [Project-Rapporteur : C436/IL] <CE41>

CL D 5/06 (transferred to **C12N 5/07**)

CL N *5/07 · Animal cells or tissues*

CL N *Note 5/07* *The last place priority rule does not apply between the subgroups of this group.* **[new.]**

CL N *5/071 · · Vertebrate cells or tissues, e.g. human cells or tissues*

CL N *5/073 · · · Embryonic cells or tissues; Foetal cells or tissues*

CL N *5/0735 · · · · Embryonic stem cells; Embryonic germ cells*

CL N *5/074 · · · Adult stem cells*

CL N *5/075 · · · Oocytes; Oogonia*

CL N *5/076 · · · Sperm cells; Spermatogonia*

CL N *5/077 · · · Mesenchymal cells, e.g. bone cells, cartilage cells, marrow stromal cells, fat cells or muscle cells*

CL N *5/0775 · · · · Mesenchymal stem cells; Adipose-tissue derived stem cells*

CL N *5/078 · · · Cells from blood or from the immune system*

CL N *5/0781 · · · · B cells; Progenitors thereof*

CL N *5/0783 · · · · T cells; NK cells; Progenitors of T or NK cells*

CL N *5/0784 · · · · Dendritic cells; Progenitors thereof*

CL N *5/0786 · · · · Monocytes; Macrophages*

CL N *5/0787 · · · · Granulocytes, e.g. basophils, eosinophils, neutrophils or mast cells*

CL N *5/0789 · · · · Stem cells; Multipotent progenitor cells*

CL N *5/079* · · · *Neural cells*

CL N *5/0793* · · · · *Neurons*

CL N *5/0797* · · · · *Stem cells; Progenitor cells*

CL D 5/08 (transferred to **C12N 5/071**)

CL N *5/09* · *Tumour cells*

CL N *5/095* · · *Stem cells; Progenitor cells*

CL N *15/113* · · · *Non-coding nucleic acids modulating the expression of genes, e.g. antisense oligonucleotides*

CL N *15/115* · · · *Aptamers, i.e. nucleic acids binding a target molecule specifically and with high affinity without hybridising therewith*

CL N *15/117* · · · *Nucleic acids having immunomodulatory properties, e.g. containing CpG-motifs*

CL N *15/873* · · · *Techniques for producing new embryos, e.g. nuclear transfer, manipulation of totipotent cells or production of chimeric embryos*

CL N *15/877* · · · · *Techniques for producing new mammalian cloned embryos*

ANNEX 53E C12S [Project-Rapporteur : M099/IB] <CE41>

CL D 13/00 (transferred to **C12S 99/00**)

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

ANNEX 54E C14B [Project-Rapporteur : D197/DE] <CE41>

AL M 1/60 · · Pasting processes (pasting boards **C14B 1/26**; chemical aspects **C14C 7/00**)

CL M **7/00 Special leathers or their manufacture** (with one or more laminae of plastics material only **B32B 9/02**)

AL M 7/02 · Composite leathers (with one or more laminae of plastics material **B32B 9/02**)

ANNEX 55E C14C [Project-Rapporteur : D198/DE] <CE41>

CL M **Title CHEMICAL TREATMENT OF SKINS, HIDES OR LEATHER, e.g. TANNING, IMPREGNATING, FINISHING; APPARATUS THEREFOR; COMPOSITIONS FOR TANNING** (dyeing or bleaching of leather or furs **D06**)

ANNEX 56E C14C [Project-Rapporteur : D197/DE] <CE41>

CL M **7/00 Chemical aspects of pasting processes**

ANNEX 57E C22B [Project-Rapporteur : D116/US] <CE41>

CL M **1/00 Preliminary treatment of ores or scrap**

CL U Note < unchanged >
3/00

AL M 4/08 ・ Apparatus

ANNEX 58E C22C [Project-Rapporteur : D115/US] <CE41>

CL M **Title ALLOYS** (treatment of alloys **C21D**, **C22F**)

CL M **1/00 Making non-ferrous alloys** (by electrothermic methods **C22B 4/00**; by electrolysis **C25C**)

CL M 33/02 ・ by powder metallurgy

ANNEX 59E C22F [Project-Rapporteur : D117/US] <CE41>

CL M **1/00 Changing the physical structure of non-ferrous metals or alloys by heat treatment or by hot or cold working**

CL M 1/02 ・ in inert or controlled atmosphere or vacuum

ANNEX 60E C23C [Project-Rapporteur : C448/JP] <CE41>

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**; single-crystal film growth **C30B**; manufacture of semiconductor devices **H01L**; manufacture of printed circuits **H05K**)

ANNEX 61E C30B [Project-Rapporteur : D141/US] <CE41>

AL M 13/20 · · by induction, e.g. hot wire technique (**C30B 13/18** takes precedence)

AL M 13/28 · Controlling or regulating

CL M **29/00 Single crystals or homogeneous polycrystalline material with defined structure characterised by the material or by their shape**

ANNEX 62E C30B [Project-Rapporteur : M702/EP] <CE41>

CL M Note 29/02-29/54

1. In groups **C30B 29/02-C30B 29/54**, in the absence of an indication to the contrary, a material is classified in the last appropriate place. **[3]**
2. *Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers.* **[new.]**

ANNEX 63E C30B [Project-Rapporteur : D141/US] <CE41>

AL M 31/18 · · Controlling or regulating

CL M **33/00 After-treatment of single crystals or homogeneous polycrystalline material with defined structure** (**C30B 31/00** takes precedence)

ANNEX 64E D01G [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

OPERATIONS BEFORE CARDING; MACHINES THEREFOR

Opening fibre bales; separating and sorting of fibres; opening or cleaning fibres	**7/00**; **5/00**; **9/00**
Severing of continuous filaments; roughening of fibres	**1/00**; **3/00**
Recovery of fibres by breaking-up fibre-containing	**11/00**

articles	
Mixing of fibres, or of fibres with non-fibrous materials	**13/00**
CARDING OR SUBSEQUENT OPERATIONS; MACHINES THEREFOR	
Feeding or conveying fibres for machines; lap-forming; lap-winding; lubricating fibres	**23/00**; **25/00**; **27/00**; **29/00**
Carding and burr-crushing, combing	**15/00**, **19/00**
SILK-DRESSING; TREATMENT OF OAKUM	**17/00**; **35/00**
COMBINATION OF MACHINES OR PROCESSES FOR CONTINUOUS PROCESSING	**21/00**
WARNING OR SAFETY DEVICES	**31/00**
HAND TOOLS FOR TREATMENT OF FIBRES	**33/00**
OTHER PRELIMINARY TREATMENTS	**99/00**

CL D 37/00 (transferred to **D01G 99/00**)

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

ANNEX 65E D06M [Project-Rapporteur : M702/EP] <CE41>

CL M Note D06M

1. In each of the groups **D06M 11/00**-**D06M 15/00**, in the absence of an indication to the contrary, a substance is classified in the last appropriate place. **[5]**
2. In this subclass:
   a. Within each one of main groups **D06M 11/00**-**D06M 15/00**, a mixture of substances is classified at least according to the essential ingredient. If more than one ingredient is essential, the mixture is classified, in the absence of an indication to the contrary, according to the essential ingredient which belongs to the last appropriate place in the sequence of substance.
   b. Treatment by mixtures of substances covered by two or more of main groups **D06M 11/00**-**D06M 15/00** is classified in each appropriate main group. **[5]**
3. In this subclass, the treatment of textiles, not provided for elsewhere in class **D06**, is classified according to the following principles:
   a. Treatment of textiles characterised by the treating agent in groups **D06M 11/00**-**D06M 16/00**.
   b. Treatment of textiles characterised by the process in group **D06M 23/00**. **[5]**
4. Processes using enzymes or micro-organisms in order to:
   i. liberate, separate or purify a pre-existing compound or composition, or to
   ii. treat textiles or clean solid surfaces of materials

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

5. *Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers.* **[new.]**

ANNEX 66E E01D [Project-Rapporteur : D031/US] <CE41>

CL M **15/00 Movable or portable bridges** (arrangement of ship-based outboard ramps or gangways only **B63B 27/00**) **; Floating bridges** (floating bodies or pontoons **B63B**; loading ramps **B65G 69/00**)

AL M **15/00 Movable or portable bridges** (arrangement of ship-based outboard ramps or gangways **B63B 27/14**; loading ramps **B65G 69/28**) **; Floating bridges**

AL M 15/24 · Bridges or similar structures, based on land or on a fixed structure and designed to give access to ships or other floating structures

CL M **19/00 Details of bridges**

AL M 19/06 · Arrangement, construction, or bridging of expansion joints

AL M 19/10 · Railings; Protectors against smoke or gases, e.g. of locomotives; Maintenance travellers; Fastening of pipes or cables to bridges

CL M 19/12 · Grating or flooring for bridges; Fastening railway sleepers or tracks to bridges

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ANNEX 67E F01N [Project-Rapporteur : M099/IB] <CE41>

CL D 7/00 (transferred to **F01N 13/00**,**F01N 99/00**)

AL D 7/02 (transferred to **F01N 13/02**)

AL D 7/04 (transferred to **F01N 13/04**)

AL D 7/06 (transferred to **F01N 13/06**)

CL D 7/08 (transferred to **F01N 13/08**)

CL D 7/10 (transferred to **F01N 13/10**)

AL D 7/12 (transferred to **F01N 13/12**)

CL D 7/14 (transferred to **F01N 13/14**)

AL D 7/16 (transferred to **F01N 13/16**)

CL D 7/18 (transferred to **F01N 13/18**)

AL D 7/20 (transferred to **F01N 13/20**)

CL N ***13/00 Exhaust or silencing apparatus characterised by constructional features***

AL N *13/02 · having two or more separate silencers in series*

AL N *13/04 · having two or more silencers in parallel, e.g. having interconnections for multi-cylinder engines*

AL N *13/06 · specially adapted for star-arrangement of cylinders, e.g. exhaust manifolds*

CL N *13/08 · Other arrangements or adaptations of exhaust conduits*

CL N *13/10 · · of exhaust manifolds*

AL N *13/12 · specially adapted for submerged exhausting*

CL N *13/14 · having thermal insulation*

AL N *13/16 · Selection of particular materials*

CL N *13/18 · Construction facilitating manufacture, assembly or disassembly*

AL N *13/20 · having flared outlets, e.g. of fish-tail shape*

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

ANNEX 68E F02M [Project-Rapporteur : M099/IB] <CE41>

AL M 31/04 · · combustion-air or fuel-air mixture (electrically **F02M 31/12**; by using heat from working cylinders or cylinder heads **F02M 31/14**; heating of combustion-air as an engine starting aid **F02N 19/04**)

ANNEX 69E F02N [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

STARTING BY MUSCLE POWER	**1/00**, **3/00**, **5/00**
STARTING OTHERWISE	
With mechanical energy storage	**5/00**
By fluid motor; by electric motor	**7/00**; **11/00**
By direct action in the working chamber: by fluid pressure; by explosives	**9/00**; **13/00**
By other apparatus, details, accessories	**15/00**
OTHER MEANS OR AIDS FOR STARTING	**19/00**, **99/00**

CL D 17/00 (transferred to **F02N 99/00**)

AL D 17/02 (transferred to **F02N 19/02**)

AL D 17/04 (transferred to **F02N 19/04**)

AL D 17/047 (transferred to **F02N 19/06**)

AL D 17/053 (transferred to **F02N 19/08**)

AL D 17/06 (transferred to **F02N 19/10**)

AL D 17/08 (transferred to **F02N 19/00**)

CL N ***19/00 Starting aids for combustion engines, not otherwise provided for***

AL N *19/02* · *Aiding engine start by thermal means, e.g. using lighted wicks (using electrically-heated glowing plugs **F02P 19/02**)*

AL N *19/04* · · *by heating of fluids used in engines (heating of lubricants **F01M 5/02**)*

AL N *19/06* · · · *by heating of combustion-air by flame generating means, e.g. flame glow-plugs*

AL N *19/08* · · · · *Arrangement thereof*

AL N *19/10* · · · *by heating of engine coolants*

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

ANNEX 70E F02P [Project-Rapporteur : M099/IB] <CE41>

AL M 21/04 · Burning-cartridges or like inserts being arranged in engine working chambers (as starting aid **F02N 19/02**)

ANNEX 71E F03C [Project-Rapporteur : M099/IB] <CE41>

AL M 1/02 · with multiple cylinders, characterised by the number or arrangement of cylinders (with movable cylinders **F03C 1/22**; of flexible-wall type **F03C 7/00**)

CL D 5/00 (transferred to **F03C 99/00**)

AL D 5/02 (transferred to **F03C 7/00**)

CL N ***7/00 Engines of flexible-wall type***

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

ANNEX 72E F04B [Project-Rapporteur : M099/IB] <CE41>

CL M **13/00 Pumps specially modified to deliver fixed or variable measured quantities** (for transferring liquid from bulk storage containers or reservoirs into vehicles or into portable containers **B67D 7/58**)

AL M 19/04 · Pumps for special use (for transferring liquids from bulk storage containers or reservoirs into vehicles or into portable containers **B67D 7/58**)

ANNEX 73E F16G [Project-Rapporteur : D103/DE] <CE41>

CL M **9/00 Ropes or cables specially adapted for driving, or for being driven by, pulleys or other gearing elements**

CL M **11/00 Means for fastening cables or ropes to one another or to other objects** (cable clamps for suspension bridge cables **E01D 19/16**) **; Caps or sleeves for fixing on cables or ropes** (attaching ropes or cables to lift cars or cages **B66B 7/08**, to winch drums or barrels **B66D 1/34**; rope clamps in earth drilling **E21B 19/12**)

AL M 11/12 · Connections or attachments, e.g. turnbuckles, adapted for straining of cables, ropes or wire

AL M 11/14 · Devices or coupling-pieces designed for easy formation of adjustable loops, e.g. choker hooks; Hooks or eyes with integral parts designed to facilitate quick attachment to cables or ropes at any point, e.g. by forming loops

AL M 13/02 · Driving-chains

CL M **17/00 Hooks as integral parts of chains** (hooks for cranes **B66C 1/34**)

ANNEX 74E F16L [Project-Rapporteur : M099/IB] <CE41>

CL M Note F16L

1. In this subclass, the following terms are used with the meanings indicated:
   - "pipe" means a conduit of closed cross-section, which is specially adapted to convey fluids, materials or objects;
   - "hose" means a pipe, as defined above, which has flexibility as an essential characteristic. **[5]**
2. Attention is drawn to the following places:

A61M 39/00	Tube connectors, tube couplings or branch units, specially adapted for medical use
B05B 1/20	Perforated pipes
B63B 35/03	Pipe-laying vessels
B64D 39/04	Adaptation of hose constructions for refuelling aircraft during flight

B67D 7/36	Arrangements of hoses in apparatus for transferring liquids, e.g. fuel, from bulk to vehicles or portable containers
E01D 19/10	Fastening of pipes or cables to bridges
E03B	Water supply installations
E03D 11/17	Means for connecting water-closet bowls to the flushing pipe
E03D 11/18	Siphons for water-closets
E03F 3/04	Pipes or fittings specially adapted to sewers
E04D 13/08	Down pipes for roof drainage; Clamping means therefor
E04F 17/00	Vertical ducts, channels in buildings, e.g. chimneys
E21F 1/04	Air ducts for ventilation of mines or tunnels; Connections therefor
E21F 17/02	Suspension devices for tubes or the like in mines or tunnels
F01N	Gas flow silencers or exhaust apparatus for machines or engines
F16N 21/00	Conduits, junctions for lubrication systems
F17C 3/02	Thermal insulation of vessels not under pressure for storing liquified or solidified gases, e.g. Dewar flask
F22B 37/10	Water tubes of steam boilers
F23J 13/04	Joints, connections for chimneys or flues
F24H 9/12	Connecting circulation pipes to heaters
F28F 9/04	Arrangements for sealing elements into header boxes or end plates of heat-exchangers
G21C 15/22	Structural association of coolant tubes with headers or other pipes in nuclear reactors
H02G 3/04	Protective tubing or conduits for electric cables
H02G 3/30	Installations of electric cables or lines on walls, floors or ceilings **[7]**
H02G 3/36	Installations of electric cables or lines in walls, floors or ceilings **[7]**

ANNEX 75E F17D [Project-Rapporteur : M099/IB] <CE41>

AL M **1/00** **Pipe-line systems** (conveying articles or materials through a pipe-line by means of a fluid carrier **B65G 51/00**, **B65G 53/00**; dispensing, delivering or transferring liquids **B67D**; apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or into portable containers, e.g. for retail sale purposes, **B67D 7/00**; conveying material which has been excavated by a dredger or soil shifter through a pipe-line **E02F 7/10**; sewer pipe-line systems **E03F 3/00**; thermal insulation of pipe-lines **F16L 59/00**; central heating systems **F24D**)

CL M **1/00** only **Pipe-line systems** (conveying articles or materials through a pipe-line by means of a fluid carrier **B65G 51/00**, **B65G 53/00**; dispensing, delivering or transferring liquids **B67D**; apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or into portable containers, e.g. for retail sale purposes, **B67D 7/00**; conveying material which has been excavated by a dredger or soil shifter through a pipe-line **E02F 7/10**; sewer pipe-line systems **E03F 3/00**; preventing freezing by heating **F16L 53/00**; thermal insulation of pipe-lines **F16L 59/00**; central heating systems **F24D**)

ANNEX 76E F21K [Project-Rapporteur : M099/IB] <CE41>

CL D 7/00 (transferred to **F21K 99/00**)

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

ANNEX 77E F21S [Project-Rapporteur : D055/DE] <CE41>

CL M 8/10 ・ specially adapted for vehicles

CL M **11/00 Non-electric lighting devices or systems using daylight**

ANNEX 78E F21V [Project-Rapporteur : D055/DE] <CE41>

AL M 7/20 ・・ specially adapted for facilitating cooling, e.g. with fins

CL M **13/00 Producing particular characteristics or distribution of the light emitted by means of a combination of elements specified in two or more of main groups F21V 1/00-F21V 11/00** (changing the characteristics or distribution of the light emitted by adjustment of parts **F21V 14/00**)

AL M 15/04 ・ Resilient mountings, e.g. shock-absorbers

CL M **21/00 Supporting, suspending, or attaching arrangements for lighting devices** (**F21V 17/00**, **F21V 19/00** take precedence) **; Hand grips**

CL M 21/10 ・ Pendants, arms or standards; Fixing lighting devices to pendants, arms or standards (adjustable mounting **F21V 21/14**)

CL M **23/00 Arrangement of electric circuit elements in or on lighting devices**

CL M **25/00 Safety devices structurally associated with lighting devices** (gas-tight or water-tight arrangements **F21V 31/00**)

CL M **27/00 Cable-stowing arrangements structurally associated with lighting devices, e.g. reels**

CL M **29/00 Cooling or heating arrangements** (reflectors specially adapted for cooling **F21V 7/20**; only cooling of air-treatment systems with air-flow over lighting fixtures **F24F 3/056**; lighting fixtures combined with outlets for air-treatment systems **F24F 13/078**; cooling of projectors **G03B 21/16**; cooling arrangements structurally associated with electric lamps **H01J 61/02**, **H01K 1/00**)

AL M **29/00 Cooling or heating arrangements** (reflectors specially adapted for cooling **F21V 7/20**; cooling of air-treatment systems with air-flow over lighting fixtures **F24F 3/056**; lighting fixtures combined with outlets for air-treatment systems **F24F 13/078**; cooling of projectors **G03B 21/16**)

ANNEX 79E F23D [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

BURNERS FOR PULVERULENT FUEL	**1/00**
BURNERS FOR COMBUSTION OF A LIQUID	
Using capillary action	**3/00**
Using fuel evaporation; direct spraying action	**5/00**; **11/00**
Using fuel impingement on a surface	**7/00**, **9/00**
BURNERS FOR COMBUSTION OF A GAS	**14/00**
BURNERS FOR COMBUSTION OF GASEOUS OR LIQUID OR PULVERULENT FUEL	**17/00**
ASSEMBLIES OF TWO OR MORE BURNERS	**23/00**
OTHER BURNERS	**99/00**

CL D 21/00 (transferred to **F23D 99/00**)

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

ANNEX 80E F23G [Project-Rapporteur : M102/SE] <CE41>

CL M **Title CREMATION FURNACES; CONSUMING WASTE OR LOW GRADE FUELS BY COMBUSTION**

CL D Note F23G < Deleted >

CL M Subclass index

CREMATION	**1/00**
CONSUMING WASTE OR LOW-GRADE FUELS BY COMBUSTION	
Processes; Functional types of apparatus	**5/00**
Adaptation for specific waste or fuels	**7/00**
Details; Accessories	**5/44**
Control or safety arrangements	**5/50**

CL M **1/00 Methods or apparatus specially adapted for cremation of human or animal carcasses**

CL M **5/00 Methods or apparatus, e.g. incinerators, specially adapted for combustion of waste or low-grade fuels**

CL M 5/02 · including pretreatment

CL M 5/027 · · pyrolising or gasifying (pyrolisation of sludge **C02F 11/00**; destructive distillation of carbonaceous materials **C10B 53/00**)

CL M 5/08 · including supplementary heating

AL M 5/10 · · using electric means

CL M 5/20 · with combustion in rotating or oscillating drums

CL M 5/24 · with combustion in a vertical, substantially cylindrical, combustion chamber

CL M 5/30 · with combustion in a fluidised bed

CL M 5/32 · in which the waste or low-grade fuel is subjected to a whirling movement, e.g. cyclonic incinerators

CL M 5/34 · in which the waste or low-grade fuel is burnt in a pit or arranged in a heap for combustion

CL M 5/36 · with combustion in a conical combustion chamber, e.g. "teepee" incinerators (**F23G 5/22** takes precedence)

CL M 5/38 · having multi-hearth arrangements

CL M 5/40 · Portable or mobile apparatus

CL M **7/00 Methods or apparatus, e.g. incinerators, specially adapted for combustion of specific waste or low grade fuels, e.g. chemicals** (**F23G 1/00** takes precedence; incinerator closets **A47K 11/02**; oxidation of sludge **C02F 11/06**; incinerating radioactive waste **G21F 9/00**)

CL M 7/06 · of waste gases or noxious gases, e.g. exhaust gases (exhaust apparatus for engines with means for rendering the exhaust innocuous, e.g. by thermal or catalytic conversion, **F01N 3/08**; combustion of uncombusted material from primary combustion within apparatus for combustion of solid or fluent fuel **F23B**, **F23C**)

AL M 7/14 · of contaminated soil, e.g. soil contaminated by oil

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ANNEX 81E F23M [Project-Rapporteur : M099/IB] <CE41>

CL D 13/00 (transferred to **F23M 99/00**)

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

ANNEX 82E F27D [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

CONSTRUCTIONAL FEATURES	**1/00**
HANDLING AND SUPPORTING CHARGE	**3/00**, **5/00**, **15/00**
PREHEATING CHARGE; COOLING; USING WASTE HEAT OR GASES	**13/00**; **9/00**, **15/02**; **17/00**
ARRANGEMENTS OF ELECTRIC HEATING ELEMENTS	**11/00**
ARRANGEMENTS OF CONTROL AND SAFETY DEVICES	**19/00**, **21/00**
OTHER FEATURES; OTHER DETAILS	**7/00**; **25/00**, **27/00**, **99/00**

CL D 23/00 (transferred to **F27D 99/00**)

AL D 23/02 (transferred to **F27D 25/00**)

AL D 23/04 (transferred to **F27D 27/00**)

CL N ***25/00 Devices for removing incrustations***

CL N ***27/00 Stirring devices for molten material*** *(**F27D 3/14** takes precedence)*

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

ANNEX 83E G01F [Project-Rapporteur : M099/IB] <CE41>

CL M **Title** **MEASURING VOLUME, VOLUME FLOW, MASS FLOW, OR LIQUID LEVEL; METERING BY VOLUME** (milk flow sensing devices in milking machines or devices **A01J 5/01**; measuring or recording blood flow **A61B 5/02**, **A61B 8/06**; metering media to the human body **A61M 5/168**; burettes or pipettes **B01L 3/02**; arrangements of liquid volume meters or volume-flow meters in liquid-delivering apparatus, e.g. for retail sale purposes, **B67D 7/16**; pumps, fluid motors, details common to measuring or metering devices and pumps or fluid motors **F01**-**F04**; locating, determining distance or velocity using reflection or reradiation of radio waves, analogous arrangements using other waves **G01S**; systems for ratio control **G05D 11/00**)

ANNEX 84E G01L [Project-Rapporteur : C448/JP] <CE41>

CL M **Title** **MEASURING FORCE, STRESS, TORQUE, WORK, MECHANICAL POWER, MECHANICAL EFFICIENCY, OR FLUID PRESSURE** (methods or devices for measuring specially adapted for metal-rolling mills **B21B 38/00**; sensing pressure changes for compensating measurements of other variables or for compensating readings of instruments for variations in pressure, see **G01D** or other relevant subclasses for the variable

measured; weighing **G01G**; converting a pattern of forces into electrical signals **G06K 11/00**)

ANNEX 85E G01N [Project-Rapporteur : C448/JP] <CE41>

CL M **13/00 Investigating surface or boundary effects, e.g. wetting power; Investigating diffusion effects; Analysing materials by determining surface, boundary, or diffusion effects** (scanning-probe techniques or apparatus **G01Q**)

CL D 13/10 (transferred to **G01Q 10/00-G01Q 90/00**)

AL D 13/12 (transferred to **G01Q 60/10**)

AL D 13/14 (transferred to **G01Q 60/18**)

AL D 13/16 (transferred to **G01Q 60/24**)

AL D 13/18 (transferred to **G01Q 60/44**)

AL D 13/20 (transferred to **G01Q 60/46**)

AL D 13/22 (transferred to **G01Q 60/50**)

AL D 13/24 (transferred to **G01Q 60/60**)

ANNEX 86E G01Q [Project-Rapporteur : C448/JP] <CE41>

CL N ***Title*** ***SCANNING-PROBE TECHNIQUES OR APPARATUS; APPLICATIONS OF SCANNING-PROBE TECHNIQUES, e.g. SCANNING-PROBE MICROSCOPY [SPM]***

CL N *Note G01Q* *In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, classification is made in the first appropriate place.* **[new.]**

CL N ***10/00 Scanning or positioning arrangements, i.e. arrangements for actively controlling the movement or position of the probe***

CL N ***20/00 Monitoring the movement or position of the probe***

CL N ***30/00 Auxiliary means serving to assist or improve the scanning probe techniques or apparatus, e.g. display or data processing devices***

CL N ***40/00 Calibration, e.g. of probes***

CL N ***60/00 Particular types of SPM [Scanning-Probe Microscopy] or apparatus therefor; Essential components thereof***

CL N *60/02 · Multiple-type SPM, i.e. involving two or more SPM techniques*

CL N *60/10* · *STM [Scanning Tunnelling Microscopy] or apparatus therefor, e.g. STM probes*

CL N *60/18* · *SNOM [Scanning Near-Field Optical Microscopy] or apparatus therefor, e.g. SNOM probes*

CL N *60/24* · *AFM [Atomic Force Microscopy] or apparatus therefor, e.g. AFM probes*

CL N *60/44* · *SICM [Scanning Ion-Conductance Microscopy] or apparatus therefor, e.g. SICM probes*

CL N *60/46* · *SCM [Scanning Capacitance Microscopy] or apparatus therefor, e.g. SCM probes*

CL N *60/50* · *MFM [Magnetic Force Microscopy] or apparatus therefor, e.g. MFM probes*

CL N *60/58* · *SThM [Scanning Thermal Microscopy] or apparatus therefor, e.g. SThM probes*

CL N *60/60* · *SECM [Scanning Electro-Chemical Microscopy] or apparatus therefor, e.g. SECM probes*

CL N ***70/00 General aspects of SPM probes, their manufacture or their related instrumentation, insofar as they are not specially adapted to a single SPM technique covered by group G01Q 60/00***

CL N ***80/00 Applications, other than SPM, of scanning-probe techniques*** *(manufacture or treatment of micro-structures **B81C**; manufacture or treatment of nano-structures **B82B 3/00**; recording or reproducing information using near-field interaction **G11B 9/12**, **G11B 11/24** or **G11B 13/08**)*

CL N ***90/00 Scanning-probe techniques or apparatus not otherwise provided for***

ANNEX 87E G02B [Project-Rapporteur : C448/JP] <CE41>

CL M **21/00 Microscopes** (eyepieces **G02B 25/00**; polarising systems **G02B 27/28**; measuring microscopes **G01B 9/04**; microtomes **G01N 1/06**; scanning-probe techniques or apparatus **G01Q**)

ANNEX 88E G04G [Project-Rapporteur : M099/IB] <CE41>

CL M Subclass index

PRODUCING TIMING PULSES	**3/00**
TIME-SETTING; SYNCHRONISING	**5/00**; **7/00**
TIME- OR DATE-INDICATING	
Visual; optical signals; acoustic signals	**9/00**; **11/00**; **13/00**
OPERATING A DEVICE AT PRESELECTED TIMES	**15/00**
STRUCTURAL DETAILS; HOUSINGS	**17/00**
ELECTRIC POWER SUPPLY CIRCUITS	**19/00**
INPUT OR OUTPUT DEVICES INTEGRATED IN TIME-PIECES	**21/00**
OTHER SUBJECTS	**99/00**

CL D 1/00 (transferred to **G04G 99/00**)

AL D 1/02 (transferred to **G04G 21/00**)

AL D 1/04 (transferred to **G04G 21/02**)

AL D 1/06 (transferred to **G04G 21/04**)

AL D 1/08 (transferred to **G04G 21/06**)

AL D 1/10 (transferred to **G04G 21/08**)

CL N ***21/00 Input or output devices integrated in time-pieces***

AL N *21/02 · Detectors of external physical values, e.g. temperature*

AL N *21/04 · using radio waves*

AL N *21/06 · using voice*

AL N *21/08 · Touch switches specially adapted for time-pieces*

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

ANNEX 89E G05B [Project-Rapporteur : M099/IB] <CE41>

CL M only Note G05B

1. This subclass covers features of control systems or elements for regulating specific variables, which are clearly more generally applicable.
2. This subclass does not cover : **[7]**
   a. systems for controlling or regulating non-electric variables in general, which are covered by subclass **G05D**; **[7]**

b. systems for regulating electric or magnetic variables in general, which are covered by subclass **G05F**; **[7]**

c. systems specially adapted for the control of particular machines or apparatus provided for in a single other subclass, which are classified in the relevant subclass for such machines or apparatus, provided that there is specific provision for control or regulation relevant to the special adaptation (see Note (5), below). Otherwise, classification is made in the most appropriate place in this subclass. **[7]**

3. In this subclass, the following terms or expressions are used with the meanings indicated:
   - "automatic controller" means a system, circuit, or device in which a signal from the detecting element is compared with a signal representing the desired value and which operates in such a way as to reduce the deviation. The automatic controller generally does not include the sensitive element, i.e. that element which measures the value of the condition to be corrected, or the correcting element, i.e. that element which adjusts the condition to be corrected;
   - "electric" includes "electromechanical", "electrohydraulic" or "electropneumatic".
4. In this subclass, details of specific control systems are classified in the group relevant to the system, if not otherwise provided for.
5. This Note lists places in the IPC where there is specific provision of the kind referred to in Note (2)(c), above; where such provision is at a general level, the places are listed under the heading "General references"; where the provision is related to programme control, the places are listed under the heading "Places related to group **G05B 19/00**". **[7]**

General references **[7]**

A01K 73/04	Spreading or positioning of drawn nets for fishing **[7]**
A61G 13/02,	
A61G 15/02	Adjustable operating tables, operating chairs, or dental chairs **[7]**
B01D 3/42	Distillation **[7]**
B01D 24/48,	
B01D 29/60,	
B01D 37/04,	
B01D 46/44	Filtration **[7]**
B01D 53/30	Separation of gases or vapours by gas-analysis apparatus **[7]**
B01D 61/00	Separation using semi-permeable membranes **[7]**
B01J 4/00	Feed or outlet in chemical or physical processes **[7]**
B01J 38/14	Oxygen content in oxidation gas for regeneration or reactivation of catalysts **[7]**
B01J 47/14	Ion-exchange processes **[7]**
B05B 12/02	Delivery in spraying systems **[7]**
B21B 37/00,	
B21B 39/00	Metal-rolling mills **[7]**

B21K 31/00	Positioning tool carriers for forging, pressing or hammering **[7]**
B22D 11/16	Continuous casting of metals **[7]**
B22D 13/12	Centrifugal casting of metals **[7]**
B22D 17/32	Pressure or injection die casting of metals **[7]**
B22D 18/08	Pressure or vacuum casting of metals **[7]**
B22D 46/00	Casting of metals in general **[7]**
B23B 39/26	Tool or work positioning for boring or drilling **[7]**
B23D 36/00	Machines for shearing or similar cutting stock travelling otherwise than in the direction of the cut **[7]**
B23Q 5/00	Driving or feeding mechanisms of machine tools **[7]**
B23Q 15/00	Feed movement, cutting velocity or position of machine tools **[7]**
B23Q 35/00	Copying from a pattern or master model for machine tools **[7]**
B24B 47/22	Position of grinding tool or work **[7]**
B25J 13/00	Manipulators **[7]**
B26D 5/02	Position of cutters in cutting machines **[7]**
B29C 39/00to	
B29C 51/00	Shaping techniques for plastic substances **[7]**
B30B 15/14,	
B30B 15/16	Presses **[7]**
B41B 27/00	Composing machines **[7]**
B41F 33/00	Printing machines or presses **[7]**
B41J 11/42	Feeding sheets or webs in typewriters **[7]**
B41L 39/00	Apparatus or devices for manifolding, duplicating or printing for commercial purposes **[7]**
B41L 47/56	Addressing machines **[7]**
B60G 17/00to	
B60G 21/00	Vehicle suspension **[7]**
B60T 7/00to	
B60T 15/00	Vehicle brakes **[7]**
B65B 57/00	Machines for packaging **[7]**
B65G 43/00	Conveyers **[7]**
E02F 3/43	Sequence of drive operations for dredging or soil-shifting **[7]**
E21B 44/00	Earth drilling operations **[7]**
F01K 1/16	Steam accumulators **[7]**
F01K 3/00,	
F01K 7/00,	
F01K 13/02	Steam engine plants **[7]**
F02C 7/05	Air intakes for gas-turbine or jet-propulsion plants **[7]**
F02C 9/00	Gas-turbine plants; Fuel supply in air-breathing jet-propulsion plants

[7]

F02D	Combustion engines **[7]**
F02K 1/15,	
F02K 1/76	Jet pipes or nozzles in jet-propulsion plants **[7]**
F02K 7/00to	
F02K 9/00	Jet-propulsion plants **[7]**
F04B 1/00,	
F04B 27/00,	
F04B 49/00	Positive-displacement machines **[7]**
F04D 15/00,	
F04D 27/00	Non-positive-displacement pumps, pumping installations, or systems **[7]**
F16D 43/00,	
F16D 48/00	Clutches **[7]**
F16F 15/02	Suppression of vibrations using fluid means **[7]**
F16H 59/00to	
F16H 63/00	Gearings **[7]**
F22B 35/00	Steam boilers **[7]**
F23G 5/50	Incineration of waste **[7]**
F23N	Combustion in combustion apparatus **[7]**
F24B 1/18	Combustion in open fires using solid fuel **[7]**
F24J 2/40	Solar heating **[7]**
F26B 25/22	Drying processes of solid materials or objects **[7]**
F28B 11/00	Steam or vapour condensers **[7]**
F28D 15/06	Heat-exchange apparatus with intermediate heat-transfer medium in closed tubes passing into or through conduit walls, in which the medium condenses and evaporates **[7]**
F28F 27/00	Heat-exchanges or heat-transfer apparatus in general **[7]**
G06F 11/00	Computers **[7]**
G08G	Traffic **[7]**
G09G	Indicating devices using static means to present variable information **[7]**
G11B 15/00,	
G11B 19/00	Driving, starting or stopping of record carriers **[7]**
G21C 7/00	Nuclear reaction **[7]**
G21D 3/00	Nuclear power plant **[7]**
H01J 37/30	Electron-beam or ion-beam tubes used for localised treatment of objects **[7]**
H02P	Electric motors, generators, or dynamo-electric converters **[7]**

Places related to group **G05B 19/00** (programme-control systems) **[7]**

A61J 7/04	Programmed medicine dispensers **[7]**
A61L 2/24	Disinfection or sterilising **[7]**
A61N 1/36	Heart pace-makers **[7]**
A63H 17/39	Steering-mechanisms for toy vehicles **[7]**
B04B 13/00	Centrifuges **[7]**
B21B 37/24	Thickness of work produced by metal-rolling mills **[7]**
B21D 7/12	Bending metal rods, profiles, or tubes **[7]**
B23B 39/08,	
B23B 39/24	Boring or drilling machines **[7]**
B23H 7/20	Electrical discharge or electrochemical machining **[7]**
B23P 21/00	Assembling of parts to compose units **[7]**
B24B 51/00	Series of individual steps in grinding a workpiece **[7]**
B25J 9/00	Manipulators **[7]**
B30B 15/26	Presses **[7]**
B41F 33/16	Sequence of operations in printing machines or presses **[7]**
B41J 11/44	Feeding sheets or webs in typewriters **[7]**
B41L 39/16	Sequence of operations in apparatus or devices for manifolding, duplicating or printing for commercial purposes **[7]**
B41L 47/64	Selecting text or image to be printed in addressing machines **[7]**
B60L 15/20	Traction-motor speed of electrically-propelled vehicles **[7]**
B65H 31/24	Piling articles **[7]**
B66C 13/48,	
B66C 23/58	Crane drives **[7]**
B67D 7/14	Dispensing, delivering or transferring liquids **[7]**
D05B 19/00,	
D05B 21/00	Sewing machines **[7]**
D05C 5/04	Embroidering machines **[7]**
D06F 33/00	Operations in washing machines **[7]**
F02D 27/02,	
F02D 28/00	Combustion engines **[7]**
F02D 41/26	Supply of combustible mixture or its constituents to combustion engines **[7]**
F15B 21/02	Fluid-pressure actuator systems **[7]**
F23N 5/20,	
F23N 5/22	Combustion in combustion apparatus **[7]**
G01G 19/38	Weighing apparatus **[7]**
G04C 23/08,	
G04C 23/34	Electromechanical clocks or watches **[7]**
G06C 21/00	Mechanically operating digital computers **[7]**

G06F 9/00	Control units for electric digital data processing **[7]**
G06F 13/10	Peripheral devices for electric digital data processing **[7]**
G06F 15/00	Electrically operating digital computers **[7]**
G06G 7/06	Electrically or magnetically operating analogue computers **[7]**
G09B 7/12	Electrically-operated teaching apparatus or devices **[7]**
H01H 43/00	Electric switches **[7]**
H01J 37/30	Electron-beam or ion-beam tubes used for localised treatment of objects **[7]**
H03K 17/296	Electronic switching or gating **[7]**
H04Q 3/54	Selecting arrangements in electric communication technique **[7]**

AL M Note G05B

1. This subclass covers features of control systems or elements for regulating specific variables, which are clearly more generally applicable.
2. This subclass does not cover : **[7]**
   a. systems for controlling or regulating non-electric variables in general, which are covered by subclass **G05D**; **[7]**
   b. systems for regulating electric or magnetic variables in general, which are covered by subclass **G05F**; **[7]**
   c. systems specially adapted for the control of particular machines or apparatus provided for in a single other subclass, which are classified in the relevant subclass for such machines or apparatus, provided that there is specific provision for control or regulation relevant to the special adaptation (see Note (5), below). Otherwise, classification is made in the most appropriate place in this subclass. **[7]**
3. In this subclass, the following terms or expressions are used with the meanings indicated:
   - "automatic controller" means a system, circuit, or device in which a signal from the detecting element is compared with a signal representing the desired value and which operates in such a way as to reduce the deviation. The automatic controller generally does not include the sensitive element, i.e. that element which measures the value of the condition to be corrected, or the correcting element, i.e. that element which adjusts the condition to be corrected;
   - "electric" includes "electromechanical", "electrohydraulic" or "electropneumatic".
4. In this subclass, details of specific control systems are classified in the group relevant to the system, if not otherwise provided for.
5. This Note lists places in the IPC where there is specific provision of the kind referred to in Note (2)(c), above; where such provision is at a general level, the places are listed under the heading "General references"; where the provision is related to programme control, the places are listed under the heading "Places related to group **G05B 19/00**". **[7]**

General references **[7]**

A01K 73/04	Spreading or positioning of drawn nets for fishing **[7]**
A61G 13/02, **A61G 15/02**	Adjustable operating tables, operating chairs, or dental chairs **[7]**

B01D 3/42	Distillation **[7]**
B01D 24/48,	
B01D 29/60,	
B01D 37/04,	
B01D 46/44	Filtration **[7]**
B01D 53/30	Separation of gases or vapours by gas-analysis apparatus **[7]**
B01D 61/00	Separation using semi-permeable membranes **[7]**
B01J 4/00	Feed or outlet in chemical or physical processes **[7]**
B01J 38/14	Oxygen content in oxidation gas for regeneration or reactivation of catalysts **[7]**
B01J 47/14	Ion-exchange processes **[7]**
B05B 12/02	Delivery in spraying systems **[7]**
B21B 37/00,	
B21B 39/00	Metal-rolling mills **[7]**
B21K 31/00	Positioning tool carriers for forging, pressing or hammering **[7]**
B22D 11/16	Continuous casting of metals **[7]**
B22D 13/12	Centrifugal casting of metals **[7]**
B22D 17/32	Pressure or injection die casting of metals **[7]**
B22D 18/08	Pressure or vacuum casting of metals **[7]**
B22D 46/00	Casting of metals in general **[7]**
B23B 39/26	Tool or work positioning for boring or drilling **[7]**
B23D 36/00	Machines for shearing or similar cutting stock travelling otherwise than in the direction of the cut **[7]**
B23Q 5/00	Driving or feeding mechanisms of machine tools **[7]**
B23Q 15/00	Feed movement, cutting velocity or position of machine tools **[7]**
B23Q 35/00	Copying from a pattern or master model for machine tools **[7]**
B24B 47/22	Position of grinding tool or work **[7]**
B25J 13/00	Manipulators **[7]**
B26D 5/02	Position of cutters in cutting machines **[7]**
B29C 39/00to	
B29C 51/00	Shaping techniques for plastic substances **[7]**
B30B 15/14,	
B30B 15/16	Presses **[7]**
B41B 27/00	Composing machines **[7]**
B41F 33/00	Printing machines or presses **[7]**
B41J 11/42	Feeding sheets or webs in typewriters **[7]**
B41L 39/00	Apparatus or devices for manifolding, duplicating or printing for commercial purposes **[7]**
B41L 47/56	Addressing machines **[7]**

B60G 17/00to	
B60G 21/00	Vehicle suspension **[7]**
B60T 7/00to	
B60T 15/00	Vehicle brakes **[7]**
B65B 57/00	Machines for packaging **[7]**
B65G 43/00	Conveyers **[7]**
E02F 3/43	Sequence of drive operations for dredging or soil-shifting **[7]**
E21B 44/00	Earth drilling operations **[7]**
F01K 1/12,	
F01K 1/16	Steam accumulators **[7]**
F01K 3/00,	
F01K 7/00,	
F01K 13/02	Steam engine plants **[7]**
F02C 7/05	Air intakes for gas-turbine or jet-propulsion plants **[7]**
F02C 9/00	Gas-turbine plants; Fuel supply in air-breathing jet-propulsion plants **[7]**
F02D	Combustion engines **[7]**
F02K 1/15,	
F02K 1/76	Jet pipes or nozzles in jet-propulsion plants **[7]**
F02K 7/00to	
F02K 9/00	Jet-propulsion plants **[7]**
F04B 1/00,	
F04B 27/00,	
F04B 49/00	Positive-displacement machines **[7]**
F04D 15/00,	
F04D 27/00	Non-positive-displacement pumps, pumping installations, or systems **[7]**
F16D 43/00,	
F16D 48/00	Clutches **[7]**
F16F 15/02	Suppression of vibrations using fluid means **[7]**
F16H 59/00to	
F16H 63/00	Gearings **[7]**
F22B 35/00	Steam boilers **[7]**
F23G 5/50	Incineration of waste **[7]**
F23N	Combustion in combustion apparatus **[7]**
F24B 1/18	Combustion in open fires using solid fuel **[7]**
F24J 2/40	Solar heating **[7]**
F26B 25/22	Drying processes of solid materials or objects **[7]**
F28B 11/00	Steam or vapour condensers **[7]**

F28D 15/06	Heat-exchange apparatus with intermediate heat-transfer medium in closed tubes passing into or through conduit walls, in which the medium condenses and evaporates **[7]**
F28F 27/00	Heat-exchanges or heat-transfer apparatus in general **[7]**
G06F 11/00	Computers **[7]**
G08G	Traffic **[7]**
G09G	Indicating devices using static means to present variable information **[7]**
G11B 15/00,	
G11B 19/00	Driving, starting or stopping of record carriers **[7]**
G21C 7/00	Nuclear reaction **[7]**
G21D 3/00	Nuclear power plant **[7]**
H01J 37/30	Electron-beam or ion-beam tubes used for localised treatment of objects **[7]**
H02P	Electric motors, generators, or dynamo-electric converters **[7]**

Places related to group **G05B 19/00** (programme-control systems) **[7]**

A61J 7/04	Programmed medicine dispensers **[7]**
A61L 2/24	Disinfection or sterilising **[7]**
A61N 1/36	Heart pace-makers **[7]**
A63H 17/39	Steering-mechanisms for toy vehicles **[7]**
B04B 13/00	Centrifuges **[7]**
B21B 37/24	Thickness of work produced by metal-rolling mills **[7]**
B21D 7/12	Bending metal rods, profiles, or tubes **[7]**
B23B 39/08,	
B23B 39/24	Boring or drilling machines **[7]**
B23H 7/20	Electrical discharge or electrochemical machining **[7]**
B23P 21/00	Assembling of parts to compose units **[7]**
B24B 51/00	Series of individual steps in grinding a workpiece **[7]**
B25J 9/00	Manipulators **[7]**
B30B 15/26	Presses **[7]**
B41F 33/16	Sequence of operations in printing machines or presses **[7]**
B41J 11/44	Feeding sheets or webs in typewriters **[7]**
B41L 39/16	Sequence of operations in apparatus or devices for manifolding, duplicating or printing for commercial purposes **[7]**
B41L 47/64	Selecting text or image to be printed in addressing machines **[7]**
B60L 15/20	Traction-motor speed of electrically-propelled vehicles **[7]**
B65H 31/24	Piling articles **[7]**
B66C 13/48,	
B66C 23/58	Crane drives **[7]**
B67D 7/14	Dispensing, delivering or transferring liquids **[7]**

D05B 19/00,	
D05B 21/00	Sewing machines **[7]**
D05C 5/04	Embroidering machines **[7]**
D06F 33/00	Operations in washing machines **[7]**
F02D 27/02,	
F02D 28/00	Combustion engines **[7]**
F02D 41/26	Supply of combustible mixture or its constituents to combustion engines **[7]**
F15B 21/02	Fluid-pressure actuator systems **[7]**
F23N 5/20,	
F23N 5/22	Combustion in combustion apparatus **[7]**
G01G 19/38	Weighing apparatus **[7]**
G04C 23/08,	
G04C 23/34	Electromechanical clocks or watches **[7]**
G06C 21/00	Mechanically operating digital computers **[7]**
G06F 9/00	Control units for electric digital data processing **[7]**
G06F 13/10	Peripheral devices for electric digital data processing **[7]**
G06F 15/00	Electrically operating digital computers **[7]**
G06G 7/06	Electrically or magnetically operating analogue computers **[7]**
G09B 7/04,	
G09B 7/08,	
G09B 7/12	Electrically-operated teaching apparatus or devices **[7]**
H01H 43/00	Electric switches **[7]**
H01J 37/30	Electron-beam or ion-beam tubes used for localised treatment of objects **[7]**
H03K 17/296	Electronic switching or gating **[7]**
H04Q 3/54	Selecting arrangements in electric communication technique **[7]**

ANNEX 90E G05D [Project-Rapporteur : M099/IB] <CE41>

CL M Note only G05D

1. This subclass does not cover features of general applicability to regulating systems, e.g. anti-hunting arrangements, which are covered by subclass **G05B**.
2. In this subclass, the following term is used with the meaning indicated:
   - "systems" includes self-contained devices such as speed governors, pressure regulators.
3. Control systems specially adapted for particular apparatus, machines or processes are classified in the subclasses for the apparatus, machines or processes, provided that there is specific provision for control or regulation relevant to the special adaptation, either at a detailed level (e.g. **A21B 1/40**: "for regulating temperature in

welding parameters in arc welding"). Otherwise, classification is made in the most appropriate place in this subclass.

The following are lists of places where there is specific provision of the kind referred to above. Where such provision is at a detailed level, the places have been grouped according to the main groups of this subclass. Where the provision is at a general level (e.g. of a kind appropriate to more than one of the main groups specified in the lists, or to main groups **G05D 27/00** or **G05D 29/00**), the places are listed under the title "General References".

Places related to **G05D 1/00**

A01B 69/00	Agricultural machines or implements
A63H 17/36	Toy vehicles
B60V 1/11	Air-cushion vehicles
B60W 30/10	Road vehicle path control **[8]**
B62D 1/00	Steering controls of motor vehicles or trailers, i.e. means for initiating a change of direction
B62D 6/00	Arrangements for automatically controlling the steering depending on driving conditions
B62D 55/116	Chassis of endless-tracked vehicles
B63H 25/00	Marine steering; control of waterborne vessels
B64C 13/00- **B64C 15/00**	Controlling aircraft
B64D 25/11	Controlling attitude or direction of aircraft ejector seats
B64G 1/24	Cosmonautic vehicles
F41G 7/00	Self-propelled missiles
F42B 15/01	Guided missiles
F42B 19/01	Marine torpedoes

Places related to **G05D 3/00**

A43D 119/00	Footwear manufacture
B21K 31/00	Tool carriers in forging or pressing
B23B 39/26	Pattern-controlled boring or drilling tools
B23D 1/30 , **B23D 3/06** , **B23D 5/04**	Planing or slotting machines controlled by copying device
B23H 7/18	Electrode to workpiece spacing in electric discharge and electrochemical machining
B23K 26/02	Workpiece in laser welding or cutting
B23K 37/04	Workpiece in welding
B23K 37/06	Molten metal in welding
B23Q 5/20	Spindles in machine tools
B23Q 15/00 , **B23Q 16/00**	Tool or work position in machine tools
B23Q 35/00	Tools controlled by pattern or master model

B24B 17/00	Grinding controlled by patterns, drawings, magnetic tape or the like
B24B 47/22	Starting position in grinding
B30B 15/24	Actuating members in presses
B62D 55/116	Chassis of tracked vehicles
B65H 23/18	Web-advancing mechanisms
E02F 3/43	Dippers or buckets in dredgers
F15B 9/00	Fluid-pressure servomotors with follow-up action
F24J 2/38	Tracking of solar heat collectors
G03F 9/00	Photomechanical production of patterned or textured surfaces
G11B 5/588	Rotating heads in information storage systems
G21C 7/12	Movement of control elements in nuclear reactors

Places related to **G05D 5/00**

A24B 7/14	Tobacco cutting
B05C 11/02	Thickness of coating of fluent material on surface
B21B 37/16	Thickness, width, diameter or other transverse dimensions of the products of metal-rolling mills
C03B 18/04	Dimension of glass ribbon
D21F 7/06	Thickness of layer in paper making

Places related to **G05D 7/00**

A45D 20/26	Air in hair drying helmets
A61M 5/168	Flow of media to the human body
B03C 3/36	Gases or vapour in electrostatic separators
B05C 11/10	Fluent material in coating devices
B67D 1/12	Dispensing beverages on draught
B67D 7/28	Transferring liquids
C10K 1/28	Gas purifiers
E21B 21/08	Flushing boreholes
E21B 43/12	Obtaining liquids from wells
F01D 17/00	Flow in non-positive-displacement machines or systems
F01M 1/16	Lubrication arrangements
F01P 7/00	Coolant flow in cooling devices
F02C 9/00	Gas-turbine working fluid
F16L 55/027	Throttle passages in pipes
F24F 11/00	Air-flow or supply of heating or cooling fluids in air treatment arrangements
F26B 21/12	Air or gas flow in dryers
G01G 11/08	Continuous flow weighing apparatus
G21D 3/14	Coolant in nuclear power plant

Places related to **G05D 9/00**

B01D 21/34	Liquid level in sedimentation arrangements
B41L 27/04	Ink level in printing, manifolding or duplicating arrangements
F22D 5/00	Feed water for boilers
H01J 1/10 , **H01J 13/14**	Liquid pool electrodes in electric discharge tubes or lamps

Places related to **G05D 11/00**

B01D 21/32	Density in sedimentation arrangements
B01F 15/04	Mixers
B24C 7/00	Abrasive blasts
B28C 7/00	Mixtures of clays or cements
B65G 53/66	Bulk material conveyers
F02K 3/075	Flow ratio in jet-propulsion plants

Places related to **G05D 13/00**

B21C 1/12	Drum speed in metal drawing
B23Q 15/00	Cutting velocity of tool or work
B30B 15/20	Ram speed in presses
B60K 31/00	Setting or limiting speed of vehicles
B60L 15/00	Electrically-propelled vehicles
B60W 30/14	Road vehicle cruise control **[8]**
B64D 31/08	Cruising speed of aircraft
D01D 1/09	Feed rate in manufacture of artificial filaments, threads, fibres, bristles or ribbons
D01G 15/36	Carding machines
D02H 13/14	Warping, beaming or leasing machines
D03D 51/16	Cyclically varying speed of looms
G01N 30/32	Speed of fluid carrier in chemical analysis
G11B 15/46	Filamentary or web record carriers or heads for such carriers in information storage systems
G11B 19/28	Non-filamentary, non-web record carriers, or heads for such carriers in information storage systems

Places related to **G05D 15/00**

B25D 9/26	Portable percussive tools
B30B 15/22	Ram pressure in presses
B65H 59/00	Tension in filamentary material
B65H 77/00	Tension in webs, tapes, filamentary material
B66D 1/50	Rope, cable or chain tension
D03D 49/04	Tension in looms
D05B 47/04	Tension in sewing machines
D21F 3/06	Pressure in paper-making machines
F26B 13/12	Drying fabrics

F26B 21/10 Pressure in dryers

G11B 15/43 Record carrier tension in information storage arrangements

Places related to **G05D 16/00**

B60C 23/00 Tyre pressure

B63C 11/08 Air within diving suit

B64D 13/00 Aircraft air-pressure

B65G 53/66 Bulk material conveyers

D01D 1/09 Manufacture of artificial filaments, threads, fibres, bristles or ribbons

E21B 21/08 Flushing boreholes

F01M 1/16 Lubrication arrangements

G01N 30/32 Pressure of fluid carrier in chemical analysis

H01J 7/14 Pressure in electric discharge tubes or lamps

H01K 1/52 Pressure in electric incandescent lamps

Places related to **G05D 19/00**

B25D 9/26 Portable percussion tools

B65G 27/32 Jigging conveyers

Places related to **G05D 21/00**

B01D 21/32 Density in sedimentation arrangements

B01D 53/30 Treating gases or vapours

G01N 30/34 Composition of fluid carrier in chemical analysis

Places related to **G05D 22/00**

A01G 25/16 Watering gardens, fields, sports grounds or the like

A01K 41/04 Poultry incubators

A24B 9/00 Tobacco products

F24F 11/00 Air conditioning

F26B 21/08 Dryers

Places related to **G05D 23/00**

A21B 1/40 Bakers' ovens

A45D 6/20 Hair curlers

B21C 31/00 Metal extruding

B60C 23/00 Tyre temperature

B64G 1/50 Cosmonautic vehicles

C03B 18/00 Float baths in glass making

D01D 1/09 Manufacture of artificial filaments, threads, fibres, bristles or ribbons

D04B 35/30 Knitting machines

D06F 75/26 Hand irons

D21F 5/06 Paper-making machines

F01M 5/00 Lubricant in lubrication arrangements

F16N 7/08 Arrangements for supplying oil or unspecified lubricant from a

	reservoir
F22G 5/00	Steam superheat
F26B 21/10	Dryers
G01N 30/30	Temperature of fluid carrier in chemical analysis
H01M 10/50	Electric storage cells
H05B 6/06 , **H05B 6/50** , **H05B 6/68**	Dielectric, induction or microwave heating
H05G 1/36	Anode of X-ray tube

Places related to **G05D 25/00**

B41B 21/08	Photographic composing machines
H01S 3/10 , **H05B 33/08** , **H05B 35/00**-**H05B 43/00**	Lasers and other light sources

General references

A01D 41/127	Combines **[7]**
A01J 5/007	Milking machines
B23K 9/095	Welding parameters
B23Q 35/00	Copying
B24B 17/00 , **B24B 49/00**	Grinding or polishing
B24C 7/00	Abrasive blasts
B67D 1/12	Dispensing beverages on draught
F23C 10/28	Combustion apparatus in which combustion takes place in a fluidised bed of fuel or other particles **[7]**
G03G 21/20	Electrographic, electrophotographic or magnetographic processes
H02P 5/00-**H02P 9/00**	Dynamo-electric motors or generators

AL M Note G05D

1. This subclass does not cover features of general applicability to regulating systems, e.g. anti-hunting arrangements, which are covered by subclass **G05B**.
2. In this subclass, the following term is used with the meaning indicated:
   - "systems" includes self-contained devices such as speed governors, pressure regulators.
3. Control systems specially adapted for particular apparatus, machines or processes are classified in the subclasses for the apparatus, machines or processes, provided that there is specific provision for control or regulation relevant to the special adaptation, either at a detailed level (e.g. **A21B 1/40**: "for regulating temperature in bakers' ovens") or at a general level (e.g. **B23K 9/095**: "for automatic control of welding parameters in arc welding"). Otherwise, classification is made in the most appropriate place in this subclass.

   The following are lists of places where there is specific provision of the kind referred to above. Where such provision is at a detailed level, the places have been

grouped according to the main groups of this subclass. Where the provision is at a general level (e.g. of a kind appropriate to more than one of the main groups specified in the lists, or to main groups **G05D 27/00**or **G05D 29/00**), the places are listed under the title "General References".

Places related to **G05D 1/00**

A01B 69/00	Agricultural machines or implements
A63H 17/36	Toy vehicles
B60V 1/11	Air-cushion vehicles
B60W 30/10	Road vehicle path control **[8]**
B62D 1/00	Steering controls of motor vehicles or trailers, i.e. means for initiating a change of direction
B62D 6/00	Arrangements for automatically controlling the steering depending on driving conditions
B62D 55/116	Chassis of endless-tracked vehicles
B63H 25/00	Marine steering; control of waterborne vessels
B64C 13/00-B64C 15/00	Controlling aircraft
B64D 25/11	Controlling attitude or direction of aircraft ejector seats
B64G 1/24	Cosmonautic vehicles
F41G 7/00	Self-propelled missiles
F42B 15/01	Guided missiles
F42B 19/01	Marine torpedoes

Places related to **G05D 3/00**

A43D 119/00	Footwear manufacture
B21K 31/00	Tool carriers in forging or pressing
B23B 39/26	Pattern-controlled boring or drilling tools
B23D 1/30,**B23D 3/06**,**B23D 5/04**	Planing or slotting machines controlled by copying device
B23H 7/18	Electrode to workpiece spacing in electric discharge and electrochemical machining
B23K 26/02	Workpiece in laser welding or cutting
B23K 37/04	Workpiece in welding
B23K 37/06	Molten metal in welding
B23Q 5/20	Spindles in machine tools
B23Q 15/00,**B23Q 16/00**	Tool or work position in machine tools
B23Q 35/00	Tools controlled by pattern or master model
B24B 17/00	Grinding controlled by patterns, drawings, magnetic tape or the like
B24B 47/22	Starting position in grinding
B30B 15/24	Actuating members in presses
B62D 55/116	Chassis of tracked vehicles

B65H 23/18	Web-advancing mechanisms
E02F 3/43	Dippers or buckets in dredgers
F15B 9/00	Fluid-pressure servomotors with follow-up action
F24J 2/38	Tracking of solar heat collectors
G03F 9/00	Photomechanical production of patterned or textured surfaces
G11B 5/588	Rotating heads in information storage systems
G21C 7/12	Movement of control elements in nuclear reactors

Places related to **G05D 5/00**

A24B 7/14	Tobacco cutting
B05C 11/02	Thickness of coating of fluent material on surface
B21B 37/16	Thickness, width, diameter or other transverse dimensions of the products of metal-rolling mills
C03B 18/04	Dimension of glass ribbon
D21F 7/06	Thickness of layer in paper making

Places related to **G05D 7/00**

A45D 20/26	Air in hair drying helmets
A61M 5/168	Flow of media to the human body
B03C 3/36	Gases or vapour in electrostatic separators
B05C 11/10	Fluent material in coating devices
B67D 1/12	Dispensing beverages on draught
B67D 7/28	Transferring liquids
C10K 1/28	Gas purifiers
E21B 21/08	Flushing boreholes
E21B 43/12	Obtaining liquids from wells
F01D 17/00	Flow in non-positive-displacement machines or systems
F01M 1/16	Lubrication arrangements
F01P 7/00	Coolant flow in cooling devices
F02C 9/16, **F02C 9/50**	Gas-turbine working fluid
F16L 55/027	Throttle passages in pipes
F24F 11/00	Air-flow or supply of heating or cooling fluids in air treatment arrangements
F26B 21/12	Air or gas flow in dryers
G01G 11/08	Continuous flow weighing apparatus
G21D 3/14	Coolant in nuclear power plant

Places related to **G05D 9/00**

B01D 21/34	Liquid level in sedimentation arrangements
B41L 27/04	Ink level in printing, manifolding or duplicating arrangements
F22D 5/00	Feed water for boilers
H01J 1/10, **H01J**	Liquid pool electrodes in electric discharge tubes or lamps

13/14

Places related to **G05D 11/00**

B01D 21/32	Density in sedimentation arrangements
B01F 15/04	Mixers
B24C 7/00	Abrasive blasts
B28C 7/00	Mixtures of clays or cements
B65G 53/66	Bulk material conveyers
F02K 3/075	Flow ratio in jet-propulsion plants

Places related to **G05D 13/00**

B21C 1/12	Drum speed in metal drawing
B23Q 15/00	Cutting velocity of tool or work
B30B 15/20	Ram speed in presses
B60K 31/00	Setting or limiting speed of vehicles
B60L 15/00	Electrically-propelled vehicles
B60W 30/14	Road vehicle cruise control **[8]**
B64D 31/08	Cruising speed of aircraft
D01D 1/09	Feed rate in manufacture of artificial filaments, threads, fibres, bristles or ribbons
D01G 15/36	Carding machines
D02H 13/14	Warping, beaming or leasing machines
D03D 51/16	Cyclically varying speed of looms
G01N 30/32	Speed of fluid carrier in chemical analysis
G11B 15/46	Filamentary or web record carriers or heads for such carriers in information storage systems
G11B 19/28	Non-filamentary, non-web record carriers, or heads for such carriers in information storage systems

Places related to **G05D 15/00**

B25D 9/26	Portable percussive tools
B30B 15/22	Ram pressure in presses
B65H 59/00	Tension in filamentary material
B65H 77/00	Tension in webs, tapes, filamentary material
B66D 1/50	Rope, cable or chain tension
D03D 49/04	Tension in looms
D05B 47/04	Tension in sewing machines
D21F 3/06	Pressure in paper-making machines
F26B 13/12	Drying fabrics
F26B 21/10	Pressure in dryers
G11B 15/43	Record carrier tension in information storage arrangements

Places related to **G05D 16/00**

B60C 23/00	Tyre pressure

B63C 11/08	Air within diving suit
B64D 13/00	Aircraft air-pressure
B65G 53/66	Bulk material conveyers
D01D 1/09	Manufacture of artificial filaments, threads, fibres, bristles or ribbons
E21B 21/08	Flushing boreholes
F01M 1/16	Lubrication arrangements
G01N 30/32	Pressure of fluid carrier in chemical analysis
H01J 7/14	Pressure in electric discharge tubes or lamps
H01K 1/52	Pressure in electric incandescent lamps

Places related to **G05D 19/00**

B25D 9/26	Portable percussion tools
B65G 27/32	Jigging conveyers

Places related to **G05D 21/00**

B01D 21/32	Density in sedimentation arrangements
B01D 53/30	Treating gases or vapours
G01N 30/34	Composition of fluid carrier in chemical analysis

Places related to **G05D 22/00**

A01G 25/16	Watering gardens, fields, sports grounds or the like
A01K 41/04	Poultry incubators
A24B 9/00	Tobacco products
F24F 11/00	Air conditioning
F26B 21/08	Dryers

Places related to **G05D 23/00**

A21B 1/40	Bakers' ovens
A45D 6/20	Hair curlers
B21C 31/00	Metal extruding
B60C 23/00	Tyre temperature
B64G 1/50	Cosmonautic vehicles
C03B 18/18, **C03B 18/22**	Float baths in glass making
D01D 1/09	Manufacture of artificial filaments, threads, fibres, bristles or ribbons
D04B 35/30	Knitting machines
D06F 75/26	Hand irons
D21F 5/06	Paper-making machines
F01M 5/00	Lubricant in lubrication arrangements
F16N 7/08	Arrangements for supplying oil or unspecified lubricant from a reservoir
F22G 5/00	Steam superheat
F26B 21/10	Dryers
G01N 30/30	Temperature of fluid carrier in chemical analysis

H01M 10/50	Electric storage cells
H05B 6/06, **H05B 6/50**, **H05B 6/68**	Dielectric, induction or microwave heating
H05G 1/36	Anode of X-ray tube

Places related to **G05D 25/00**

B41B 21/08	Photographic composing machines
H01S 3/10,**H05B 33/08**, **H05B 35/00**-**H05B 43/00**	Lasers and other light sources

General references

A01D 41/127	Combines **[7]**
A01J 5/007	Milking machines
B23K 9/095	Welding parameters
B23Q 35/00	Copying
B24B 17/00, **B24B 49/00**	Grinding or polishing
B24C 7/00	Abrasive blasts
B67D 1/12	Dispensing beverages on draught
F23C 10/28	Combustion apparatus in which combustion takes place in a fluidised bed of fuel or other particles **[7]**
G03G 21/20	Electrographic, electrophotographic or magnetographic processes
H02P 5/00-**H02P 9/00**	Dynamo-electric motors or generators

ANNEX 91E G06N [Project-Rapporteur : M099/IB] <CE41>

CL D 1/00 (transferred to **G06N 99/00**)

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

ANNEX 92E G10 [Project-Rapporteur : M110/EP] <CE41>

CL U Note < unchanged >
G10

CL M Class index

ACOUSTICS; OPERATIONS ON SOUND WAVES

Speech analysis or synthesis; speech recognition; **G10L**

audio analysis or processing	
Methods or devices for transmission of sound or protection against sound, not otherwise provided for	**11/00**, **13/00**
Acoustics not otherwise provided for	**15/00**
WIND INSTRUMENTS	
General features; details or accessories	**7/00**; **9/00**
Organs, harmoniums or similar instruments	**1/00**, **3/00**
Accordions, concertinas or similar instruments; other types of instruments	**11/00**; **7/00**
Whistles; horns	**5/00**; **9/00**
STRINGED INSTRUMENTS	
General features; details or accessories	**1/00**; **3/00**
Pianos, harpsichords, spinets or similar stringed musical instruments with one or more keyboards; tools and methods for the manufacture or maintenance thereof	**1/00**, **3/00**; **9/00**
Other instruments	**1/00**
PERCUSSION INSTRUMENTS	
Bells, rattles or similar instruments	**1/00**, **3/00**
Other instruments	**13/00**
OTHER PARTICULAR DEVICES; DEVICES USING UNDEFINED PRINCIPLES; COMBINATIONS OF INSTRUMENTS; MUSIC ACCESSORIES	
Electrophonic musical instruments	**G10H**
Automatic musical instruments	**G10F**
Sirens; devices with vibrators	**7/00**; **9/00**
Combinations: of pianos with other instruments; of other instruments	**5/00**; **15/00**
Music accessories	**G10G**
INSTRUMENTS NOT OTHERWISE PROVIDED FOR	**17/00**

ANNEX 93E G10B [Project-Rapporteur : M110/EP] <CE41>

CL M **Title ORGANS; HARMONIUMS OR LIKE WIND-ACTUATED MUSICAL INSTRUMENTS** (mouth organs **G10D 7/12**; accordions **G10D 11/00**; aspects of automatic actuation **G10F 1/12**; combinations of microphones, pick-ups or amplifiers with musical instruments **G10H**; electronic organs **G10H 7/00**)

CL M **1/00 General design**

CL M **3/00 Details or accessories**

AL M 3/02 ・ Blowers

AL M 3/08 · Pipes, e.g. open pipes or reed pipes

AL M 3/12 · Keys or keyboards; Manuals

AL M 3/22 · Details specially adapted for electrically-operated organs, e.g. contacts therein

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ANNEX 94E G10C [Project-Rapporteur : M110/EP] <CE41>

CL M **Title PIANOS, HARPSICHORDS, SPINETS OR SIMILAR STRINGED MUSICAL INSTRUMENTS WITH ONE OR MORE KEYBOARDS** (non-musical aspects of toy pianos **A63H 5/00**; aspects of automatic actuation **G10F**; combinations of microphones, pick-ups or amplifiers with musical instruments **G10H**)

CL M **1/00 General design**

AL M 1/06 · of harpsichords, spinets or similar stringed instruments

CL M **3/00 Details or accessories**

CL M **5/00 Combinations with other musical instruments, e.g. with bells or xylophones**

CL M **9/00 Methods or tools specially adapted for the manufacture or maintenance of musical instruments covered by this subclass**

ANNEX 95E G10D [Project-Rapporteur : M110/EP] <CE41>

CL M **Title STRINGED MUSICAL INSTRUMENTS; WIND-ACTUATED MUSICAL INSTRUMENTS; ACCORDIONS OR CONCERTINAS; PERCUSSION MUSICAL INSTRUMENTS; MUSICAL INSTRUMENTS NOT OTHERWISE PROVIDED FOR** (automatic musical instruments **G10F**; combinations of musical instruments with microphones, pick-ups or amplifiers **G10H**; sound-producing devices not regarded as musical instruments **G10K**)

CL N *Note G10D*

1. *This subclass covers certain stringed musical instruments that can optionally include a keyboard, e.g. zithers.* **[new.]**
2. *This subclass does not cover pianos, harpsichords, spinets or similar stringed instruments provided by design with one or more keyboards, which are covered by subclass **G10C**.* **[new.]**

CL M **1/00 General design of stringed musical instruments, e.g. violins, harps, mandolins, guitars, banjos or zithers**

CL M **3/00 Details of, or accessories for, stringed musical instruments, e.g. slide-bars**

AL M 3/08 · · in the form of keyboards

AL M 3/12 · Anchoring devices for strings, e.g. tail pieces or hitchpins

AL M 3/14 · Tuning devices, e.g. pegs, pins or friction discs

AL M 3/18 · Chin-rests, hand-rests or guards as part of the instrument

CL M **7/00 General design of wind-actuated musical instruments, e.g. flutes, ocarinas, oboes, clarinets, bagpipes, saxophones, trumpets or mouth-organs** (accordions or concertinas **G10D 11/00**; organs or harmoniums **G10B**; whistles **G10K**)

AL M 7/02 · of the type wherein an air current is directed against a ramp edge, e.g. flutes or recorders

AL M 7/06 · of the type with a beating reed [Rohrblatt] or reeds, e.g. oboes, clarinets, bassoons or bagpipes

AL M 7/10 · of the type with a cupped mouthpiece, e.g. cornets, orchestral trumpets or trombones

AL M 7/12 · of the type with free reeds [Zunge], e.g. mouth-organs or trumpets for children

CL M **11/00 Accordions, concertinas or the like; Keyboards therefor**

CL M **13/00 Percussion musical instruments, e.g. drums, tambourines, timpani, castanets, cymbals, triangles, gongs or plates; Details or accessories**

AL M 13/06 · Castanets, cymbals, triangles or other single-toned percussion musical instruments (bells **G10K 1/00**)

CL M **15/00 Combinations of different musical instruments** (combinations with pianos, harpsichords, spinets or similar stringed instruments with one or more keyboards **G10C 5/00**)

ANNEX 96E G10F [Project-Rapporteur : M110/EP] <CE41>

CL M **Title AUTOMATIC MUSICAL INSTRUMENTS** (non-musical aspects of toy instruments **A63H 5/00**; sound-recording or reproducing **G11B**; working in association with recording or reproducing apparatus **G11B 31/02**)

AL M 1/08 · Percussion musical instruments

AL M 1/16 · Stringed musical instruments other than pianofortes

CL M **5/00 Details or accessories**

AL M 5/06 · · Driving or setting of tune barrels, discs, or the like; Winding, rewinding, or guiding of tune sheets or the like

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ANNEX 97E G10G [Project-Rapporteur : M110/EP] <CE41>

CL M **Title** **AIDS FOR MUSIC** (teaching music **G09B 15/00**) **; SUPPORTS FOR MUSICAL INSTRUMENTS; OTHER AUXILIARY DEVICES OR ACCESSORIES FOR MUSIC OR MUSICAL INSTRUMENTS** (metronomes **G04F 5/02**)

CL M **7/00** **Other auxiliary devices or accessories, e.g. conductors' batons or separate holders for resin or strings**

ANNEX 98E G10H [Project-Rapporteur : M110/EP] <CE41>

CL M **Title** **ELECTROPHONIC MUSICAL INSTRUMENTS; INSTRUMENTS IN WHICH THE TONES ARE GENERATED BY ELECTROMECHANICAL MEANS OR ELECTRONIC GENERATORS, OR IN WHICH THE TONES ARE SYNTHESISED FROM A DATA STORE**

CL M Note G10H This subclass covers musical instruments in which individual notes are constituted as electric oscillations under the control of a performer and the oscillations are converted to sound-vibrations by a loudspeaker or equivalent device.

CL M 1/02 · Means for controlling the tone frequencies, e.g. attack or decay; Means for producing special musical effects, e.g. vibratos or glissandos

AL M 1/12 · · · by filtering complex waveforms (**G10H 1/14**, **G10H 1/16** take precedence)

AL M 3/12 · using mechanical resonant generators, e.g. strings or percussion instruments, the tones of which are picked up by electromechanical transducers, the electrical signals being further manipulated or amplified and subsequently converted to sound by a loudspeaker or equivalent device

AL M 3/18 · · · using strings, e.g. electric guitars

AL M 5/14 · using electromechanical resonators, e.g. quartz crystals, as frequency-determining elements

AL M 5/16 · using cathode ray tubes

ANNEX 99E G10K [Project-Rapporteur : M110/EP] <CE41>

CL M **Title** **SOUND-PRODUCING DEVICES** (sound-producing toys **A63H 5/00**) **; METHODS OR DEVICES FOR PROTECTING AGAINST, OR FOR DAMPING, NOISE OR OTHER ACOUSTIC WAVES IN GENERAL; ACOUSTICS NOT OTHERWISE PROVIDED FOR**

CL M **1/00** **Devices in which sound is produced by striking a resonating body, e.g. bells, chimes or gongs** (combinations with clocks or watches **G04B**, **G04C**; multi-toned musical instruments **G10D 13/08**; automatic carillons **G10F 1/10**)

CL M **9/00 Devices in which sound is produced by vibrating a diaphragm or analogous element, e.g. fog horns, vehicle hooters or buzzers** (loudspeakers or like acoustic electromechanical transducers **H04R**)

AL M 9/18 · Details, e.g. bulbs, pumps, pistons, switches or casings

CL M **11/00 Methods or devices for transmitting, conducting or directing sound in general; Methods or devices for protecting against, or for damping, noise or other acoustic waves in general**

AL M 11/16 · Methods or devices for protecting against, or for damping, noise or other acoustic waves in general (**G10K 11/36** takes precedence)

AL D Note 11/16 < Deleted / Supprimé >

AL M Note 11/168 When classifying in this group, classification is also made in subclass **B32B**, insofar as any layered product is concerned. **[6]**

AL M 11/24 · · for conducting sound through solid bodies, e.g. wires

AL M 11/28 · · · using reflection, e.g. parabolic reflectors

ANNEX 100E G10L [Project-Rapporteur : C451/EP] <CE41>

CL M **Title SPEECH ANALYSIS OR SYNTHESIS; SPEECH RECOGNITION; AUDIO ANALYSIS OR PROCESSING**

CL N *Note G10L* This subclass does not cover :

- *devices for the storage of speech or audio signals, which are covered by subclasses **G11B** and **G11C**;* **[new.]**
- *encoding of compressed speech signals for transmission or storage, which is covered by group **H03M 7/30**.* **[new.]**

CL M **11/00 Determination or detection of speech or audio characteristics not restricted to a single one of groups G10L 15/00-G10L 21/00**

AL M 11/02 · Detection of presence or absence of speech signals

CL M **13/00 Speech synthesis; Text to speech systems**

AL M 13/04 · · Details of speech synthesis systems, e.g. synthesiser structure or memory management

AL M 13/08 · Text analysis or generation of parameters for speech synthesis out of text, e.g. grapheme to phoneme translation, prosody generation or stress or intonation determination

AL M 15/08 · Speech classification or search

AL M 15/12 · · using dynamic programming techniques, e.g. Dynamic Time Warping [DTW]

AL M 15/14 ・・ using statistical models, e.g. Hidden Markov Models [HMM] (**G10L 15/18** takes precedence)

AL M 15/20 ・ Speech recognition techniques specially adapted for robustness in adverse environments, e.g. in noise or of stress induced speech (**G10L 21/02** takes precedence)

CL M **19/00 Speech or audio signal analysis-synthesis techniques for redundancy reduction, e.g. in vocoders; Coding or decoding of speech or audio signals, e.g. for compression or expansion, source-filter models or psychoacoustic analysis**

AL M 19/02 ・ using spectral analysis, e.g. transform vocoders or subband vocoders

AL M 19/12 ・・・ Determination or coding of a code excitation, e.g. in code excited linear prediction [CELP] vocoders

AL M 19/14 ・・ Details not provided for in groups **G10L 19/06**-**G10L 19/12**, e.g. gain coding, post filtering design or vocoder structure

AL M **21/00 Processing of the speech signal to produce another audible or non-audible signal, e.g. visual or tactile, in order to modify its quality or its intelligibility** (**G10L 19/00** takes precedence)

CL only M **21/00 Processing of the speech signal to produce another audible or non-audible signal, e.g. visual or tactile, in order to modify its quality or its intelligibility** (**G10L 19/00** takes precedence; speech to text systems **G10L 15/00**)

AL M 21/02 ・ Speech enhancement, e.g. noise reduction or echo cancellation (reducing echo effects in line transmission systems **H04B 3/20**; echo suppression in hand-free telephones **H04M 9/08**)

AL M 21/06 ・ Transformation of speech into a non-audible representation, e.g. speech visualisation or speech processing for tactile aids (**G10L 15/26** takes precedence)

ANNEX 101E G12B [Project-Rapporteur : C448/JP] <CE41>

CL M **3/00 Details of movements not otherwise provided for** (damping of shock or vibrations in general **F16F**; avoiding out-of-balance forces **F16F 15/00**; testing balance **G01M**)

CL D 21/00 (transferred to **G01Q 10/00**-**G01Q 90/00**)

CL D Note 21/00 < Deleted >

AL D 21/02 (transferred to **G01Q 60/00**-**G01Q 70/00**)

AL D 21/04 (transferred to **G01Q 60/10**)

AL D 21/06 (transferred to **G01Q 60/18**)

AL D 21/08 (transferred to **G01Q 60/24**)

AL D 21/10 (transferred to **G01Q 60/50**)

AL D 21/12 (transferred to **G01Q 60/24**)

AL D 21/20 (transferred to **G01Q 10/00**)

AL D 21/22 (transferred to **G01Q 10/00**)

AL D 21/24 (transferred to **G01Q 10/00**)

ANNEX 102E G21J [Project-Rapporteur : D078/GB] <CE41>

CL M **Title NUCLEAR EXPLOSIVES; APPLICATIONS THEREOF**

CL M **5/00 Detection arrangements for nuclear explosions**

ANNEX 103E H01F [Project-Rapporteur : M702/EP] <CE41>

CL N *Note 1/00* *Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers.* **[new.]**

ANNEX 104E H01J [Project-Rapporteur : C448/JP] <CE41>

CL M **37/00 Discharge tubes with provision for introducing objects or material to be exposed to the discharge, e.g. for the purpose of examination or processing thereof** (**H01J 33/00**, **H01J 40/00**, **H01J 41/00**, **H01J 47/00**, **H01J 49/00** take precedence; scanning-probe techniques or apparatus **G01Q**; contactless testing of electronic circuits using electron beams **G01R 31/305**)

ANNEX 105E H01L [Project-Rapporteur : D011/DE] <CE41>

CL M **Title SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR** (use of semiconductor devices for measuring **G01**; resistors in general **H01C**; magnets, inductors, transformers **H01F**; capacitors in general **H01G**; electrolytic devices **H01G 9/00**; batteries, accumulators **H01M**; waveguides, resonators, or lines of the waveguide type **H01P**; line connectors, current collectors **H01R**; stimulated-emission devices **H01S**; electromechanical resonators **H03H**; loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers **H04R**; electric light sources in general **H05B**; printed circuits, hybrid circuits, casings or constructional details of electrical apparatus, manufacture of assemblages of electrical components **H05K**; use of semiconductor devices in circuits having a particular application, see the subclass for the application)

ANNEX 106E H01L [Project-Rapporteur : M702/EP] <CE41>

CL M Note H01L

1. This subclass covers :
   - electric solid state devices which are not covered by any other subclass and details thereof, and includes: semiconductor devices adapted for rectifying, amplifying, oscillating or switching; semiconductor devices sensitive to radiation; electric solid state devices using thermoelectric, superconductive, piezo-electric, electrostrictive, magnetostrictive, galvano-magnetic or bulk negative resistance effects and integrated circuit devices; **[2]**
   - photoresistors, magnetic field dependent resistors, field effect resistors, capacitors with potential-jump barrier, resistors with potential-jump barrier or surface barrier, incoherent light emitting diodes and thin-film or thick-film circuits; **[2]**
   - processes and apparatus adapted for the manufacture or treatment of such devices, except where such processes relate to single-step processes for which provision exists elsewhere. **[2]**
2. In this subclass, the following terms or expressions are used with the meaning indicated:
   - "wafer" means a slice of semiconductor or crystalline substrate material, which can be modified by impurity diffusion (doping), ion implantation or epitaxy, and whose active surface can be processed into arrays of discrete components or integrated circuits; **[8]**
   - "solid state body" means the body of material within which, or at the surface of which, the physical effects characteristic of the device occur. In thermoelectric devices, it includes all materials in the current path.

   Regions in or on the body of the device (other than the solid state body itself), which exert an influence on the solid state body electrically, are considered to be "electrodes" whether or not an external electrical connection is made thereto. An electrode may include several portions and the term includes metallic regions which exert influence on the solid state body through an insulating region (e.g. capacitive coupling) and inductive coupling arrangements to the body. The dielectric region in a capacitive arrangement is regarded as part of the electrode. In arrangements including several portions, only those portions which exert an influence on the solid state body by virtue of their shape, size, or disposition or the material of which they are formed are considered to be part of the electrode. The other portions are considered to be "arrangements for conducting electric current to or from the solid state body" or "interconnections between solid state components formed in or on a common substrate", i.e. leads; **[2]**

   - "device" means an electric circuit element; where an electric circuit element is one of a plurality of elements formed in or on a common substrate it is referred to as a "component"; **[2]**
   - "complete device" is a device in its fully assembled state which may or may not require further treatment, e.g. electroforming, before it is ready for use but which does not require the addition of further structural units; **[2]**
   - "parts" includes all structural units which are included in a complete device; **[2]**
   - "container" is an enclosure forming part of the complete device and is

essentially a solid construction in which the body of the device is placed, or which is formed around the body without forming an intimate layer thereon. An enclosure which consists of one or more layers formed on the body and in intimate contact therewith is referred to as an "encapsulation"; **[2]**

- "integrated circuit" is a device where all components, e.g. diodes, resistors, are built up on a common substrate and form the device including interconnections between the components; **[2]**
- "assembly" of a device is the building up of the device from its component constructional units and includes the provision of fillings in containers. **[2]**

3. In this subclass, both the process or apparatus for the manufacture or treatment of a device and the device itself are classified, whenever both of these are described sufficiently to be of interest. **[6]**
4. *Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers.* **[new.]**

ANNEX 107E H01S [Project-Rapporteur : M702/EP] <CE41>

CL N *Note 5/00* *Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers.* **[new.]**

ANNEX 108E H04M [Project-Rapporteur : M103/SE] <CE41>

CL M **Title** **TELEPHONIC COMMUNICATION** (circuits for controlling other apparatus via a telephone cable and not involving telephone switching apparatus **G08**)

CL M Note H04M

1. This subclass covers :
   - telephonic communication systems combined with other electrical systems;
   - testing arrangements specially adapted for telephonic communication systems.
2. In this subclass, the following terms or expressions are used with the meanings indicated:
   - "subscriber" is a general term for terminal equipment, e.g. telephones for public use;
   - "substation" means subscriber or monitoring equipment which may connect a single subscriber to a line without choice as to subscriber;
   - "satellite" is a type of exchange the operation of which depends upon control signals received from a supervisory exchange;
   - "switching centres" includes exchanges and satellites.

CL M Subclass index

TELEPHONIC SYSTEMS
Combined; party-line systems; prepayment systems **11/00**; **13/00**; **17/00**
EQUIPMENT AND ARRANGEMENTS
Equipment **1/00**
Exchanges: automatic; manual **3/00**; **5/00**
Interconnection arrangements: centralised; non-centralised **7/00**; **9/00**
Monitoring and control; supply arrangements **15/00**; **19/00**
SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS **99/00**

CL M **1/00** **Substation equipment, e.g. for use by subscribers** (subscriber services or facilities provided at exchanges **H04M 3/00**; prepayment telephone coin boxes **H04M 17/00**; current supply arrangements **H04M 19/08**)

CL M 1/03 · · Constructional features of telephone transmitters or receivers, e.g. telephone hand-sets

CL M 1/04 · · Supports for telephone transmitters or receivers

AL M 1/05 · · · specially adapted for use on head, throat or breast

AL M 1/08 · · · · associated with switches operated by the weight of the receiver or hand-set

CL M 1/15 · · Protecting or guiding telephone cords

CL M 1/18 · · Telephone sets specially adapted for use in ships, mines, or other places exposed to adverse environment (**H04M 1/19** takes precedence)

CL M 1/19 · · Arrangements of transmitters, receivers, or complete sets to prevent eavesdropping, to attenuate local noise or to prevent undesired transmission; Mouthpieces or receivers specially adapted therefor (circuit arrangements for preventing eavesdropping **H04M 1/68**; telephone cabinets **E04H 1/14**)

CL M 1/21 · · Combinations with auxiliary equipment, e.g. with clocks or memoranda pads

CL M 1/22 · · Illumination; Arrangements for improving the visibility of characters on dials

CL M 1/24 · Arrangements for testing

CL M 1/253 · Telephone sets using digital voice transmission

CL M 1/26 · Devices for calling a subscriber (**H04M 1/66** takes precedence)

CL M 1/274 · · · with provision for storing more than one subscriber number at a time

AL M 1/2745 · · · · using static electronic memories, i.e. memories whose operation does not require relative movement between storage means and a transducer, e.g. chips

AL M 1/515 · · by generating or selecting signals other than trains of pulses of similar shape, or signals other than currents of one or more different frequencies, e.g. generation of dc signals of alternating polarity, coded pulses or impedance dialling

AL M 1/52 · · Arrangements wherein a dial or the like is mechanically coupled to a line selector

AL M 1/54 · · · Arrangements wherein a dial or the like generates identifying signals, e.g. in party-line systems

CL M 1/58 · Anti-side-tone circuits

AL M 1/677 · · Preventing the dialling or sending of predetermined telephone numbers or selected types of telephone numbers, e.g. long distance numbers

AL M 1/737 · · · characterised by transmission of electromagnetic waves other than radio waves, e.g. infra-red waves

AL M 1/76 · · Compensating for differences in line impedance

CL M 1/78 · Circuit arrangements in which low-frequency speech signals proceed in one direction on the line, while speech signals proceeding in the other direction on the line are modulated on a high-frequency carrier signal

CL M 3/02 · Calling substations, e.g. by ringing (selective calling **H04Q**)

AL M 3/04 · · the calling signal being supplied from the final selector

AL M 3/06 · · the calling signal being supplied from the subscriber's line circuit

AL M 3/10 · · Providing fault- or trouble-signals

CL M 3/22 · Arrangements for supervision, monitoring or testing

AL M 3/34 · · · Testing for cross-talk

CL M 3/36 · · Statistical metering, e.g. recording occasions when traffic exceeds capacity of trunks

CL M 3/487 · · Arrangements for providing information services, e.g. recorded voice services or time announcements

CL M 3/60 · Semi-automatic systems, i.e. systems in which the numerical selection of the outgoing line is under the control of an operator

AL M 5/12 · Calling substations, e.g. by ringing

AL M 5/20 · · Arrangements for indicating the numbers of the incoming lines

CL M **7/00 Arrangements for interconnection between switching centres**

CL U 7/06 < unchanged >

CL M 7/12 · for working between exchanges having different types of switching equipment, e.g. power-driven and step by step or decimal and non-decimal

CL M **9/00 Arrangements for interconnection not involving centralised switching**

CL M 9/08 · Two-way loud-speaking telephone systems with means for conditioning the signal, e.g. for suppressing echoes for one or both directions of traffic

CL M **11/00 Telephonic communication systems specially adapted for combination with other electrical systems**

CL M 11/02 · with bell or annunciator systems

CL M 11/04 · with alarm systems, e.g. fire, police or burglar alarm systems

CL M 11/06 · Simultaneous speech and data transmission, e.g. telegraphic transmission over the same conductors

CL M 11/08 · specially adapted for optional reception of entertainment or informative matter

CL M 11/10 · with dictation recording and playback systems

CL M **15/00 Arrangements for metering, time-control or time-indication**

CL M 15/02 · Severing connection after a predetermined time

AL M 15/06 · · Recording class or number of calling party or called party

AL M 15/26 · · with a meter at the exchange controlled by an operator

AL M 15/30 · · the meter not being controlled from an exchange

CL M 15/38 · Metering by apparatus other than mechanical step-by-step counter type

AL M 17/02 · Coin-freed or check-freed systems

AL M 19/02 · providing ringing current or supervisory tones, e.g. dialling tone or busy tone

AL M 19/04 · · the ringing-current being generated at the substations

AL M 19/06 · in which current supply sources at subordinate switching centres are charged from the main exchange

CL M 19/08 · with current supply sources at the substations (generating ringing current **H04M 19/04**)

ANNEX 109E H04R [Project-Rapporteur : M110/EP] <CE41>

CL M 3/12 · for distributing signals to two or more loudspeakers

CL M 5/02 · Spatial or constructional arrangements of loudspeakers

CL U 5/02 < unchanged >

AL M 9/06 · Loudspeakers

AL M 11/02 · Loudspeakers

AL M 19/02 · Loudspeakers (**H04R 19/01** takes precedence)

CL M **27/00 Public address systems** (circuits for preventing acoustic reaction **H04R 3/02**; circuits for distributing signals to loudspeakers **H04R 3/12**; amplifiers **H03F**)

[End of Technical Annexes and of document]