

## **Special Union for the International Patent Classification (IPC Union)**

### **Committee of Experts**

### **Forty-Fourth Session**

**Geneva, February 29 to March 2, 2012**

## **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-fourth session in Geneva from February 29 to March 2, 2012. The following members of the Committee were represented at the session: Austria, Brazil, Canada, China, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Germany, Ireland, Israel, Japan, Mexico, Netherlands, Norway, Portugal, Republic of Korea, Romania, Russian Federation, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States of America (29). Viet Nam was represented as observer. The African Regional Intellectual Property Organization (ARIPO), 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. Antonios Farassopoulos, Head, International Classifications and WIPO Standards Service, who welcomed the participants.

## **OFFICERS**

3. The Committee unanimously elected Mr. Anders Bruun (Sweden) as Chair and Mr. Pascal Weibel (Switzerland) and Miss Catia Valdman (Brazil) as Vice-Chairs.
4. Mr. Antonios Farassopoulos (WIPO) acted as Secretary of the session.

## **ADOPTION OF THE AGENDA**

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

## **REPORT ON THE FIFTH AND THE SIXTH SESSIONS OF THE IP5 WG1-WORKING GROUP ON CLASSIFICATION**

7. The Committee noted brief oral reports by China and the EPO on the fifth and sixth sessions, respectively, of the IP5 WG1-Working Group on Classification (WG1).
8. At its fifth session, the WG1 reviewed the six pilot projects and summarized and evaluated the overall status of the pilot phase of the Common Hybrid Classification (CHC) Project. The WG1 also discussed an amended version of the documents related to quality assurance in the CHC Foundation Project and the CHC-OPS document, and agreed on them in principle. The EPO and the USPTO presented the Cooperative Patent Classification (CPC) which would initially be based on ECLA. The JPO presented a plan to carry out a comparison between File Index (FI) and ECLA in order to identify areas that could be easily harmonized and those which would need further discussion. The Secretariat presented a proposal on a common publication platform displaying IPC, CPC and FI in parallel. It was noted that the ultimate goal was to harmonize CPC and FI and thus include harmonized schemes in the IPC, which would remain the common International Patent Classification system. The WG1 agreed that further discussions were needed before taking a final decision. In addition, a new project was created for sharing training materials. A total of new 20 Action Points were created in order to put forward the CHC Foundation Project.
9. Concerning the sixth session, it was noted that 11 new CHC projects, nine of which were based on a comparative study between ECLA and FI schemes led by the JPO, had been launched. It was also noted that all trilateral Harmony Projects had moved to the IPC phase. The WG1 agreed to pursue the common publication platform in which the IPC, CPC and FI would be displayed optionally in parallel on WIPO's IPC website.

## REPORT ON THE PROGRESS OF THE COOPERATIVE PATENT CLASSIFICATION (CPC)

10. The United States of America and the EPO gave a joint oral presentation on the recent developments concerning the CPC. The [presentation](#) is available on WIPO's website.

11. Furthermore, the Committee discussed the new numbering system to be used for the CPC groups (see Annex 2 to project [CE 443](#)). The CPC subgroups would use the symbol of their IPC parent group with additional numerical digits. The total number of digits after the "/" would remain six as for the IPC. Some concerns were expressed on a potential overlap between the IPC and CPC symbols when subgroups are added into the IPC.

12. When moving CPC groups into the IPC, investigation should be undertaken, on a case by case basis, on whether the CPC symbols can be used unchanged in the IPC. This transfer would be authorized if the file scope of the original symbols remains unchanged when introduced into the IPC and when the transferred groups fit the existing IPC structure. If this is not the case, a reorganization of the IPC scheme should be preferred, aiming however at avoiding intellectual reclassification as much as possible. In all cases, CPC symbols should not be used in the IPC with a different file scope.

## COMMON PUBLICATION PLATFORM FOR THE IPC, CPC AND FI

13. The Secretariat gave an oral [presentation](#) on a common publication platform for the IPC, the CPC and the FI.

14. The purpose of this platform would be to increase awareness of CPC and FI and their relationships with the IPC. It was noted that users would be able to understand CPC and FI more easily with the new platform; therefore such improved knowledge would facilitate the harmonization of CPC and FI, as well as the development of the IPC.

15. It was also noted that the platform would:

- (a) provide users with the possibility to display, on demand, the IPC alone or together with CPC and/or FI in parallel;
- (b) display the numbering system in force in CPC and FI;
- (c) display the version indicators of all CPC and FI groups;
- (d) highlight the differences in titles between CPC or FI and the IPC; and
- (e) enable users to access databases (e.g., Espacenet and IPDL) to display patent documents classified in CPC or FI.

16. The Committee noted that the common publication platform would help all users to access to the three classification schemes. It was also noted that current users of the IPCPUBPREP had a strong desire that the new platform would be backward compatible. The target for the first publication of the IPC, CPC and FI on the common publication platform was set to the second half of 2013.

## AMENDMENTS TO THE IPC

17. Discussions were based on project file [CE 442](#), in particular, on Annex 13 to the project file containing amendments to the IPC approved by the IPC Revision Working Group.
18. With respect to the proposal of systematic maintenance of subclass H02K, Sweden was invited to submit a proposal to the newly created maintenance project [M 741](#), with Sweden as Rapporteur. Concerning the title of group B63B 22/22 proposed by Sweden, the IPC Revision Working Group was invited to verify whether the modified title reflects its intended scope (see Annex 69 to project file [M.014](#)).
19. The Committee adopted, with some modifications, the proposed amendments, which appear in the Technical Annexes to this report. It was decided that these amendments would be included in the next version of the IPC which would enter into force on January 1, 2013.
20. Concerning the Revision Concordance List (RCL), discussions were based on Annex 3 to the project file containing a compilation of RCLs for each revision project. The Committee tentatively adopted the proposed RCL, which appears in Annex III to this report. It was brought to the attention of the Committee that the final checking of RCL should be done before the report adoption.
21. The Committee noted that maintenance corrections should be completed as much as possible by the IPC Revision Working Group. The International Bureau was requested to check for such corrections in definition projects and revision projects when preparing Technical Annexes. It was also noted that the Working Group should pay close attention to all maintenance issues during the Working Group phase.

## REQUESTS FOR REVISION OF THE IPC

22. The Committee considered a revision request submitted by Canada (see Annex 45 to project file [WG 020](#)).
23. Opposition was expressed by some offices, in particular in view of the lack of in-house resources for considering any new revision projects for the year 2012. It was agreed that no new revision project would be created for this revision request for the time being, although support had been received from several offices.
24. The Committee considered this proposal potentially useful and Canada was invited to further investigate the possibility of better adaptation of the proposed scheme to the existing local classification systems, i.e., ECLA and FI, and to provide an estimation of the potential need for intellectual reclassification using project [WG 020](#). The Committee would then reconsider the proposal at its next session.

## AMENDMENTS TO THE GUIDE TO THE IPC, GUIDELINES FOR REVISION OF THE IPC AND IPC-RELATED WIPO STANDARDS

25. Discussions were based on project file [CE 421](#) containing amendments to the *Guide to the IPC (Guide)*, the Guidelines for Revision of the IPC and the Guidelines for Drafting Definitions.
26. The Committee was grateful to Sweden for initiating a proposal on the amendments to the Guidelines for Revision of the IPC. A consolidated proposal prepared by Sweden in Annex 46 integrated comments submitted by offices, in particular, additional proposals submitted by the EPO and by Brazil on the numbering in Appendix IV of the said document. The Committee adopted, with some amendments, the consolidated proposal, which appears in Annex IV to this report.

27. It was noted that Sweden volunteered to prepare an updated version of Appendix II of the said document relating to the rearrangement of main groups, for the next session of the Committee. It was also noted that the EPO volunteered to review the use of the term “arrangement(s) of” in singular or plural in the IPC in depth and submit a proposal, if needed, for possible amendments to the Guidelines for Revision of the IPC and to the Glossary of the *Guide*.

28. The Committee also considered a proposal prepared by the International Bureau on a definition of the term “technical subject(s) of invention(s)” in the Glossary of the *Guide*, and adopted the consolidated proposal in Annex 47, with some modifications, which appears in Annex V to this report.

29. As regards to a proposal submitted by Israel for modification of paragraph 100 of the *Guide*, in order to simplify how to classify “Markush formulae” in class C07, the Committee agreed that creation of new main groups in subclasses under class C07 was not desirable. The Committee finally adopted, with some amendments, the new version of paragraph 100 as proposed in Annex 51, which appears in Annex V to this report.

30. The Committee noted a problem of example patent documents stated in the definition statement of some definition proposals, as pointed by Brazil and commented by Sweden and the United States of America. It was agreed that definitions should not contain references to example patent documents. The Committee further agreed that this statement should be added to the Guidelines for Drafting Definitions under the heading of “General Recommendations”. The International Bureau was invited to update the English and French versions of the document accordingly under project [D 000](#).

31. It was agreed that, during the discussion phase the rapporteurs might include the titles of the relevant IPC places in the definitions; however, these titles would not be included in the published definitions. Concerning the synchronization of the limiting references in the definitions when the scheme is revised, this should be the task of the International Bureau in the framework of the cross-reference checking.

#### **MASTER CLASSIFICATION DATABASE AND RECLASSIFICATION STATUS REPORT**

32. Discussions were based on Annexes 6 and 7 to project file [QC 013](#) prepared by the EPO containing two status reports on the Master Classification Database (MCD), i.e., publication coverage statistics and reclassification coverage statistics.

33. The Committee noted that 98% of patent documents in the MCD published in 2010 and 2011 had been allocated valid IPC symbols. However, the Committee also noted that the percentage, shown in the statistics, seemed exceptionally low for certain offices, sometimes with certain “kind codes”, for example, Israel, Italy with kind codes “A1” and “U1” or the United States of America with kind code “S1”. The EPO was invited to further investigate the reason for such low percentage for each individual office with the help of the offices concerned and report back at the next session of the Committee.

34. The Committee noted that the number of patent families remaining to be reclassified was relatively high for recent revisions, and was decreasing very slowly for previous revisions. The EPO was invited to further identify the offices or projects where the majority of non-reclassified families came from. Offices were also invited to submit reclassification status information to the e-forum, under project [CE 423](#), such as lists of projects where reclassification was not yet completed, with internal target dates for completion of reclassification.

35. The Committee was grateful to the EPO for preparing the MCD publication and reclassification status reports and invited the EPO to regularly submit updated statistics in the same way to the IPC E-forum under project [QC 013](#).

36. The Delegation of China informed the Committee that SIPO had developed a reclassification tool and had put the tool in operation in 2011, with which, a team of experienced classifiers had carried out reclassification of documents up to 2009.01 revisions. It was expected that all the remaining documents to be reclassified would be dealt with before July 1, 2012, when the Chinese patent documentation would officially become part of the PCT Minimum Documentation.

37. The Committee noted that Canada would be willing to participate in the reclassification for certain revision projects and invited interested offices to contact Canada in that respect.

### **MODIFICATION OF THE RECLASSIFICATION DISTRIBUTION ALGORITHM**

38. Discussions were based on Annex 6 to project file [QC 017](#) containing a rapporteur summary, prepared by the EPO, with regard to proposed modification of the reclassification distribution algorithm.

39. The Committee recalled its invitation, at its last session, to the EPO to work closely with the USPTO to further revise criterion (a), and noted a comment by the United States of America (see Annex 5 to the project file), that such revision was no longer needed in view of the future joint use of the CPC by the two offices.

40. The Committee adopted, therefore, the proposed distribution algorithm presented as criteria (b) and (c), and invited the EPO to further consider the practical aspects on how to implement the algorithm when preparing new working lists, bearing in mind that offices should be able to volunteer to reclassify in addition to the families containing their own priority documents, the rest of the families containing their own non-priority documents.

41. The Committee renewed its invitation to the EPO to provide statistics on the impact of each criterion on the reclassification workload of each office.

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

42. Discussions were based on Annexes 14 and 15 to project file [CE 381](#), containing a proposal for an additional paragraph of the Guidelines for Revision of the IPC on how to apply the "best fit" approach in practice, prepared by Sweden, and comments submitted by the United States of America.

43. With respect to the additional paragraph of the Guidelines for Revision of the IPC by Sweden, the Committee adopted, with some modifications, the proposed amendments (see paragraph 126bis of Annex IV to this report).

44. It was noted that the default transfer should be done within the codes of WIPO Standard ST.8, e.g. a particular country code could be used as reclassifying office. The Committee invited the EPO to study this issue. The Committee agreed to start implementing default transfers for projects that had already entered into force in 2006, 2007 and 2008. The Committee would decide on the inclusion of additional projects at its next session.

45. The Committee adopted the list of default transfers approved by the IPC Revision Working Group, contained in Annex 14 to project file [WG 261](#).

#### **REPORT ON THE STATUS OF THE IPC E-FORUM**

46. The Secretariat gave a [presentation](#) on the IPC E-forum 2012 redesign project. This project was launched in 2011 to rework this 10 year-old application which is one of the critical business applications for the IPC. Its first stage whose objectives were to address design and IT security issues and to improve maintainability of the system, was just completed. Its second and last stage covering functional evolutions is planned for completion in May 2012.

47. The Secretariat also gave a live demonstration of the redesigned IPC E-forum and introduced the plan for its move into production immediately after the Committee of Experts meeting.

48. As several delegations expressed their appreciation and the wish to contribute suggestions and user-level feedback on this system, it was agreed that new project [CE 445](#) would be created for this purpose.

#### **REPORT ON THE PROGRESS OF THE WIPO IPCRECLASS PROJECT**

49. The Secretariat also gave a [presentation](#) on the IPCRECLASS project which had been announced in February 2012 as ready for testing by Offices.

50. A general description of the functionalities provided by IPCRECLASS was provided as well as various options to perform IPC reclassification: either on-line or through submission of Result Lists files created outside the system or through the email-based legacy protocol.

51. The Secretariat also gave a live demonstration of on-line reclassification. Submission of Result Lists created off-line and IPC reclassification monitoring were also demonstrated.

52. The Secretariat described the transition plan between current situation and IPCRECLASS future production use, with a test phase in March and an expected production use mid-April 2012.

53. It was also indicated that the move into production would require a freeze of reclassification submissions between April 10 and 13, 2012 and that the EPO would have to produce residual working lists for former IPC revisions (from IPC 2007.01 to 2012.01) by that time. It was also expected that IPC 2013.01 reclassification submissions would be fully processed through IPCRECLASS.

54. Offices reiterated their wish to contribute feedback about this system through the dedicated project [CE 446](#) on the IPC E-forum.

#### **COOPERATION ON THE PROMOTION OF THE IPC BETWEEN WIPO AND THE IPO OF SLOVAK REPUBLIC**

55. The IPO of the Slovak Republic gave a [presentation](#) on the accomplishment of their publication and regular maintenance of the Slovakian version of the IPC. They described how, through a cooperation project with WIPO, a relatively small office could translate and publish the IPC 2012.01 into their national language as well as learn how to maintain future versions.

56. The IPO of Slovak Republic thanked the International Bureau, stressing that this achievement would not have been possible without WIPO tools and shared their experience and recommendations with other offices having similar intentions.

57. The IPO of Slovak Republic also requested the International Bureau to consider a forum for discussion on IT support tools for the IPC.

**NEXT SESSION OF THE COMMITTEE**

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

Geneva, February 25 to March 1, 2013.

*59. This report was unanimously adopted by the Committee by electronic means on March 23, 2012.*

[Annexes follow]



**LISTE DES PARTICIPANTS/  
LIST OF PARTICIPANTS**

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Secrétaire/Secretary: Antonios FARASSOPOULOS (OMPI/WIPO)

V. BUREAU INTERNATIONAL DE L'ORGANISATION MONDIALE DE LA  
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[L'annexe II suit/  
Annex II follows]]

## AGENDA

1. Opening of the session
2. Election of a Chair and two Vice-Chairs
3. Adoption of the agenda
4. Report on the fifth and the sixth sessions of the IP5 WG1-Working Group on Classification  
Oral report by the *FiveIPOffices*.
5. Report on the progress of the Cooperative Patent Classification (CPC)  
Oral report by the USPTO and the EPO. See also project [CE 443](#).
6. Common publication platform for the IPC, CPC and FI  
Presentation by the International Bureau.
7. Amendments to the IPC  
See project [CE 442](#).
8. Requests for revision of the IPC  
See project [WG 020](#).
9. Amendments to the Guide of the IPC, Guidelines for Revision of the IPC and  
IPC-related WIPO Standards  
See project [CE 421](#).
10. Master Classification Database and reclassification status report  
See project [QC 013](#).
11. Modification of the Reclassification Distribution Algorithm  
See project [QC 017](#).
12. Treatment of non-reclassified patent documents in the Master Classification Database  
See projects [CE 381](#) and [WG 261](#).
13. Report on the status of the IPC E-forum  
Presentation by the International Bureau.
14. Report on the progress of the WIPO IPCRECLASS project  
Presentation by the International Bureau.
15. Cooperation on the promotion of the IPC between WIPO and the IPO of Slovak Republic  
Presentation by the Industrial Property Office of the Slovak Republic (IPOSR).
16. Next session of the Committee
17. Adoption of the report
18. Closing of the session

[Annex III follows]

REVISION CONCORDANCE LIST (RCL)/TABLE DE CONCORDANCE

IPC <sup>201201</sup> Official	IPC <sup>2013</sup>	Comment
<a href="#">A</a>		
<a href="#">A47</a>		
<a href="#">A47C</a>		
<a href="#">A47C 1/00</a>		
<a href="#">A47C 1/038</a>	<a href="#">A47C 1/0355</a>	A47C 1/0355 (project M014)
<a href="#">A47C 25/00</a>	<a href="#">A47C 23/00</a> - <a href="#">A47C 23/34</a> , <a href="#">A47C 27/06</a>	A47C 27/06 (project M735)
<a href="#">A47C 25/02</a>	<a href="#">A47C 23/00</a> - <a href="#">A47C 23/34</a> , <a href="#">A47C 27/06</a>	A47C 27/06 (project M735)
<a href="#">A61</a>		
<a href="#">A61F</a>		
<a href="#">A61F 2/00</a>		
<a href="#">A61F 2/04</a>	<a href="#">A61F 2/04</a> , <a href="#">A61F 2/95</a> - <a href="#">A61F 2/97</a>	A61F 2/04 (project A042)
<a href="#">A61F 2/06</a>	<a href="#">A61F 2/06</a> - <a href="#">A61F 2/07</a>	A61F 2/06 (project A042)
<a href="#">A61F 2/82</a>	<a href="#">A61F 2/82</a> - <a href="#">A61F 2/856</a>	A61F 2/82 (project A042)
<a href="#">A61F 2/84</a>	<a href="#">A61F 2/95</a> - <a href="#">A61F 2/97</a>	A61F 2/95 (project A042)
<a href="#">A61F 2/86</a>	<a href="#">A61F 2/86</a> , <a href="#">A61F 2/89</a>	A61F 2/86 (project A042)
<a href="#">A61F 2/90</a>	<a href="#">A61F 2/844</a> - <a href="#">A61F 2/856</a> , <a href="#">A61F 2/90</a> - <a href="#">A61F 2/915</a>	A61F 2/90 (project A042)
<a href="#">A61F 2/92</a>	<a href="#">A61F 2/92</a> - <a href="#">A61F 2/93</a>	A61F 2/92 (project A042)
<a href="#">A61F 2/94</a>	<a href="#">A61F 2/94</a> - <a href="#">A61F 2/945</a>	A61F 2/94 (project A042)
<a href="#">A61G</a>		
<a href="#">A61G 5/00</a>		
<a href="#">A61G 5/04</a>	<a href="#">A61G 5/04</a> , <a href="#">B62K 5/003</a> , <a href="#">B62K 5/023</a>	A61G 5/04 (project A046)
<a href="#">A61M</a>		
<a href="#">A61M 25/00</a>		
<a href="#">A61M 25/10</a>	<a href="#">A61F 2/958</a> , <a href="#">A61F 25/10</a>	A61M 25/10 (Project A042)
<a href="#">A63</a>		
<a href="#">A63C</a>		

<a href="#"><u>A63C 9/00</u></a>	<a href="#"><u>A63C 9/00</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/28</u></a>	A63C 9/00 (project A030)
<a href="#"><u>A63C 9/02</u></a>	<a href="#"><u>A63C 9/02</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/02 (project A030)
<a href="#"><u>A63C 9/04</u></a>	<a href="#"><u>A63C 9/04</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/04 (project A030)
<a href="#"><u>A63C 9/06</u></a>	<a href="#"><u>A63C 9/06</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/06 (project A030)
<a href="#"><u>A63C 9/08</u></a>	<a href="#"><u>A63C 9/08</u></a> , <a href="#"><u>A63C 10/12</u></a>	A63C 9/08 (project A030)
<a href="#"><u>A63C 9/081</u></a>	<a href="#"><u>A63C 9/081</u></a> , <a href="#"><u>A63C 10/12</u></a>	A63C 9/081 (project A030)
<a href="#"><u>A63C 9/082</u></a>	<a href="#"><u>A63C 9/082</u></a> , <a href="#"><u>A63C 10/12</u></a>	A63C 9/082 (project A030)
<a href="#"><u>A63C 9/083</u></a>	<a href="#"><u>A63C 9/083</u></a> , <a href="#"><u>A63C 10/12</u></a>	A63C 9/083 (project A030)
<a href="#"><u>A63C 9/084</u></a>	<a href="#"><u>A63C 9/084</u></a> , <a href="#"><u>A63C 10/12</u></a>	A63C 9/084 (project A030)
<a href="#"><u>A63C 9/085</u></a>	<a href="#"><u>A63C 9/085</u></a> , <a href="#"><u>A63C 10/12</u></a>	A63C 9/085 (project A030)
<a href="#"><u>A63C 9/086</u></a>	<a href="#"><u>A63C 9/086</u></a> , <a href="#"><u>A63C 10/10</u></a> , <a href="#"><u>A63C 10/12</u></a>	A63C 9/086 (project A030)
<a href="#"><u>A63C 9/088</u></a>	<a href="#"><u>A63C 9/088</u></a> , <a href="#"><u>A63C 10/12</u></a>	A63C 9/088 (project A030)
<a href="#"><u>A63C 9/10</u></a>	<a href="#"><u>A63C 9/10</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/10 (project A030)
<a href="#"><u>A63C 9/12</u></a>	<a href="#"><u>A63C 9/12</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/12 (project A030)
<a href="#"><u>A63C 9/14</u></a>	<a href="#"><u>A63C 9/14</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/14 (project A030)
<a href="#"><u>A63C 9/16</u></a>	<a href="#"><u>A63C 9/16</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/16 (project A030)
<a href="#"><u>A63C 9/18</u></a>	<a href="#"><u>A63C 9/18</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/18 (project A030)
<a href="#"><u>A63C 9/20</u></a>	<a href="#"><u>A63C 9/20</u></a> , <a href="#"><u>A63C 10/00</u></a> - <a href="#"><u>A63C 10/10</u></a>	A63C 9/20 (project A030)
<a href="#"><u>A63C 9/22</u></a>	<a href="#"><u>A63C 9/22</u></a> , <a href="#"><u>A63C 10/16</u></a> - <a href="#"><u>A63C 10/22</u></a>	A63C 9/22 (project A030)
<a href="#"><u>A63C 9/24</u></a>	<a href="#"><u>A63C 9/24</u></a> , <a href="#"><u>A63C 10/02</u></a> - <a href="#"><u>A63C 10/06</u></a>	A63C 9/24 (project A030)
<b><u>B</u></b>		
<b><u>B24</u></b>		
<b><u>B24B</u></b>		
<a href="#"><u>B24B 37/00</u></a>	<a href="#"><u>B24B 37/00</u></a> , <a href="#"><u>B24B 37/005</u></a> - <a href="#"><u>B24B 37/015</u></a> , <a href="#"><u>B24B 37/11</u></a> , <a href="#"><u>B24B 37/27</u></a> , <a href="#"><u>B24B 37/34</u></a>	B24B 37/00 (project A033)
<a href="#"><u>B24B 37/02</u></a>	<a href="#"><u>B24B 37/005</u></a> - <a href="#"><u>B24B 37/015</u></a> , <a href="#"><u>B24B 37/02</u></a> , <a href="#"><u>B24B 37/025</u></a> , <a href="#"><u>B24B 37/11</u></a> , <a href="#"><u>B24B 37/27</u></a>	B24B 37/02 (project A033)



<a href="#"><u>B24B 37/04</u></a>	<a href="#"><u>B24B 37/005 - B24B 37/015, B24B 37/04 - B24B 37/10, B24B 37/12 - B24B 37/26, B24B 37/28 - B24B 37/32</u></a>	B24B 37/04 (project A033)
<a href="#"><u>B24B 41/00</u></a>		
<a href="#"><u>B24B 41/06</u></a>	<a href="#"><u>B24B 37/27 - B24B 37/32, B24B 41/06</u></a>	B24B 41/06 (project A033)
<a href="#"><u>B24B 49/00</u></a>	<a href="#"><u>B24B 37/005 - B24B 37/015, B24B 49/00</u></a>	B24B 49/00 (project A033)
<a href="#"><u>B24B 53/00</u></a>		
<a href="#"><u>B24B 53/02</u></a>	<a href="#"><u>B24B 53/017, B24B 53/02</u></a>	B24B 53/02 (project A033)
<a href="#"><u>B24B 53/04</u></a>	<a href="#"><u>B24B 53/017, B24B 53/04</u></a>	B24B 53/04 (project A033)
<b><a href="#"><u>B60</u></a></b>		
<b><a href="#"><u>B60R</u></a></b>		
<a href="#"><u>B60R 25/00</u></a>	<a href="#"><u>B60R 25/00 - B60R 25/01, B60R 25/09, B60R 25/20 - B60R 25/40</u></a>	B60R 25/00 (project A055)
<a href="#"><u>B60R 25/02</u></a>	<a href="#"><u>B60R 25/02 - B60R 25/023</u></a>	B60R 25/02 (project A055)
<a href="#"><u>B60R 25/04</u></a>	<a href="#"><u>B60R 25/02 - B60R 25/045</u></a>	B60R 25/04 (project A055)
<a href="#"><u>B60R 25/10</u></a>	<a href="#"><u>B60R 25/10 - B60R 25/104</u></a>	B60R 25/10 (project A055)
<b><a href="#"><u>B60W</u></a></b>		
<a href="#"><u>B60W 10/00</u></a>		
<a href="#"><u>B60W 10/10</u></a>	<a href="#"><u>B60W 10/10 - B60W 10/119</u></a>	B60W 10/10 (project A038)
<a href="#"><u>B60W 10/12</u></a>	<a href="#"><u>B60W 10/12 - B60W 10/16</u></a>	B60W 10/12 (project A038)
<a href="#"><u>B60W 10/18</u></a>	<a href="#"><u>B60W 10/18 - B60W 10/198</u></a>	B60W 10/18 (project A038)
<a href="#"><u>B60W 30/00</u></a>		
<a href="#"><u>B60W 30/02</u></a>	<a href="#"><u>B60W 30/02, B60W 30/045 - B60W 30/055</u></a>	B60W 30/02 (project A038)
<a href="#"><u>B60W 30/08</u></a>	<a href="#"><u>B60W 30/08 - B60W 30/095</u></a>	B60W 30/08 (project A038)
<a href="#"><u>B60W 30/16</u></a>	<a href="#"><u>B60W 30/16 - B60W 30/17</u></a>	B60W 30/16 (project A038)
<a href="#"><u>B60W 30/18</u></a>	<a href="#"><u>B60W 30/18 - B60W 30/194</u></a>	B60W 30/18 (project A038)
<a href="#"><u>B60W 40/00</u></a>		
<a href="#"><u>B60W</u></a>	<a href="#"><u>B60W 40/06 - B60W 40/076</u></a>	B60W 40/06 (project A038)

<a href="#"><u>40/06</u></a>		
<a href="#"><u>B60W 40/08</u></a>	<a href="#"><u>B60W 40/08</u></a> - <a href="#"><u>B60W 40/09</u></a>	B60W 40/08 (project A038)
<a href="#"><u>B60W 40/10</u></a>	<a href="#"><u>B60W 40/10</u></a> - <a href="#"><u>B60W 40/114</u></a>	B60W 40/10 (project A038)
<a href="#"><u>B60W 40/12</u></a>	<a href="#"><u>B60W 40/12</u></a> - <a href="#"><u>B60W 40/13</u></a>	B60W 40/12 (project A038)
<a href="#"><u>B60W 50/00</u></a>		
<a href="#"><u>B60W 50/02</u></a>	<a href="#"><u>B60W 50/02</u></a> - <a href="#"><u>B60W 50/038</u></a>	B60W 50/02 (project A038)
<a href="#"><u>B60W 50/08</u></a>	<a href="#"><u>B60W 50/08</u></a> - <a href="#"><u>B60W 50/016</u></a>	B60W 50/08 (project A038)
<b><a href="#"><u>B62</u></a></b>		
<b><a href="#"><u>B62K</u></a></b>		
<a href="#"><u>B62K 5/00</u></a>	<a href="#"><u>B62K 5/00</u></a> - <a href="#"><u>B62K 5/05</u></a>	B62K 5/00 (Project A046)
<a href="#"><u>B62K 5/04</u></a>	<a href="#"><u>B62K 5/02</u></a> , <a href="#"><u>B62K 5/05</u></a>	B62K 5/05 (Project A046)
<b><a href="#"><u>B62M</u></a></b>		
<a href="#"><u>B62M 1/00</u></a>		
<a href="#"><u>B62M 1/02</u></a>	<a href="#"><u>B62M 1/36</u></a>	B62M 1/36 (project A045)
<a href="#"><u>B62M 1/04</u></a>	<a href="#"><u>B62M 1/24</u></a>	B62M 1/24 (project A045)
<a href="#"><u>B62M 1/06</u></a>	<a href="#"><u>B62M 1/00</u></a> - <a href="#"><u>B62M 1/38</u></a>	B62M 1/36 (project A045)
<a href="#"><u>B62M 1/08</u></a>	<a href="#"><u>B62M 1/32</u></a> , <a href="#"><u>B62M 1/38</u></a>	B62M 1/38 (project A045)
<b><a href="#"><u>B65</u></a></b>		
<b><a href="#"><u>B65B</u></a></b>		
<a href="#"><u>B65B 9/00</u></a>		
<a href="#"><u>B65B 9/06</u></a>	<a href="#"><u>B65B 9/06</u></a> - <a href="#"><u>B65B 9/073</u></a>	B65B 9/06 (project A034)
<a href="#"><u>B65B 9/08</u></a>	<a href="#"><u>B65B 9/08</u></a> - <a href="#"><u>B65B 9/093</u></a>	B65B 9/08 (project A034)
<a href="#"><u>B65B 9/20</u></a>	<a href="#"><u>B65B 9/20</u></a> - <a href="#"><u>B65B 9/213</u></a>	B65B 9/20 (project A034)
<b><a href="#"><u>D</u></a></b>		
<b><a href="#"><u>D04</u></a></b>		
<b><a href="#"><u>D04H</u></a></b>		
<a href="#"><u>D04H 1/00</u></a>		

<a href="#"><u>D04H 1/04</u></a>	<a href="#"><u>D04H 1/04</u></a> - <a href="#"><u>D04H 1/32</u></a>	D04H 1/04 (project F003)
<a href="#"><u>D04H 1/06</u></a>	<a href="#"><u>D04H 1/06</u></a> - <a href="#"><u>D04H 1/073</u></a>	D04H 1/06 (project F003)
<a href="#"><u>D04H 1/08</u></a>	<a href="#"><u>D04H 1/08</u></a> - <a href="#"><u>D04H 1/09</u></a>	D04H 1/08 (project F003)
<a href="#"><u>D04H 1/40</u></a>	<a href="#"><u>D04H 1/40</u></a> - <a href="#"><u>D04H 1/655</u></a>	D04H 1/40 (project F003)
<a href="#"><u>D04H 1/42</u></a>	<a href="#"><u>D04H 1/42</u></a> - <a href="#"><u>D04H 1/4391</u></a>	D04H 1/42 (project F003)
<a href="#"><u>D04H 1/46</u></a>	<a href="#"><u>D04H 1/46</u></a> , <a href="#"><u>D04H 1/492</u></a> - <a href="#"><u>D04H 1/498</u></a>	D04H 1/46 (project F003)
<a href="#"><u>D04H 1/48</u></a>	<a href="#"><u>D04H 1/48</u></a> - <a href="#"><u>D04H 1/49</u></a>	D04H 1/48 (project F003)
<a href="#"><u>D04H 1/50</u></a>	<a href="#"><u>D04H 1/482</u></a> , <a href="#"><u>D04H 1/50</u></a>	D04H 1/50 (project F003)
<a href="#"><u>D04H 1/54</u></a>	<a href="#"><u>D04H 1/54</u></a> - <a href="#"><u>D04H 1/559</u></a>	D04H 1/54 (project F003)
<a href="#"><u>D04H 1/58</u></a>	<a href="#"><u>D04H 1/58</u></a> - <a href="#"><u>D04H 1/68</u></a>	D04H 1/58 (project F003)
<a href="#"><u>D04H 1/64</u></a>	<a href="#"><u>D04H 1/64</u></a> - <a href="#"><u>D04H 1/68</u></a>	D04H 1/64 (project F003)
<a href="#"><u>D04H 1/66</u></a>	<a href="#"><u>D04H 1/645</u></a> - <a href="#"><u>D04H 1/66</u></a>	D04H 1/66 (project F003)
<a href="#"><u>D04H 1/68</u></a>	<a href="#"><u>D04H 1/645</u></a> - <a href="#"><u>D04H 1/655</u></a> , <a href="#"><u>D04H 1/68</u></a>	D04H 1/68 (project F003)
<a href="#"><u>D04H 1/70</u></a>	<a href="#"><u>D04H 1/70</u></a> - <a href="#"><u>D04H 1/76</u></a>	D04H 1/70 (project F003)
<a href="#"><u>D04H 1/72</u></a>	<a href="#"><u>D04H 1/72</u></a> - <a href="#"><u>D04H 1/736</u></a>	D04H 1/72 (project F003)
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<a href="#"><u>D04H 3/03</u></a>	<a href="#"><u>D04H 3/03</u></a> - <a href="#"><u>D04H 3/037</u></a>	D04H 3/03 (project F003)
<a href="#"><u>D04H 3/04</u></a>	<a href="#"><u>D04H 3/04</u></a> - <a href="#"><u>D04H 3/045</u></a>	D04H 3/04 (project F003)
<a href="#"><u>D04H 3/07</u></a>	<a href="#"><u>D04H 3/07</u></a> - <a href="#"><u>D04H 3/077</u></a>	D04H 3/07 (project F003)
<a href="#"><u>D04H 3/10</u></a>	<a href="#"><u>D04H 3/10</u></a> - <a href="#"><u>D04H 3/115</u></a>	D04H 3/10 (project F003)
<a href="#"><u>D04H 3/14</u></a>	<a href="#"><u>D04H 3/14</u></a> - <a href="#"><u>D04H 3/153</u></a>	D04H 3/14 proect F003)
<a href="#"><u>D04H 5/00</u></a>	<a href="#"><u>D04H 5/00</u></a> - <a href="#"><u>D04H 5/12</u></a>	D04H 5/00 (project F003)
<a href="#"><u>D04H 5/02</u></a>	<a href="#"><u>D04H 5/02</u></a> - <a href="#"><u>D04H 5/03</u></a>	D04H 5/02 (project F003)
<a href="#"><u>D04H 5/08</u></a>	<a href="#"><u>D04H 5/08</u></a> - <a href="#"><u>D04H 5/10</u></a>	D04H 5/08 (project F003)

<a href="#">D04H 18/00</a>	<a href="#">D04H 18/00</a> - <a href="#">D04H 18/04</a>	D04H 18/00 (project F003)
<b><u>E</u></b>		
<b><u>E21</u></b>		
<b><u>E21B</u></b>		
<a href="#">E21B 47/00</a>	<a href="#">E21B 47/00</a> - <a href="#">E21B 47/26</a>	E21B 47/00 (project A037)
<a href="#">E21B 47/01</a>	<a href="#">E21B 47/01</a> - <a href="#">E21B 47/017</a>	E21B 47/01 (project A037)
<a href="#">E21B 47/022</a>	<a href="#">E21B 47/022</a> - <a href="#">E21B 47/0236</a>	E21B 47/022 (project A037)
<a href="#">E21B 47/04</a>	<a href="#">E21B 47/04</a> - <a href="#">E21B 47/053</a>	E21B 47/04 (project A037)
<a href="#">E21B 47/06</a>	<a href="#">E21B 47/06</a> - <a href="#">E21B 47/07</a>	E21B 47/06 (project A037)
<a href="#">E21B 47/08</a>	<a href="#">E21B 47/08</a> - <a href="#">E21B 47/085</a>	E21B 47/08 (project A037)
<a href="#">E21B 47/09</a>	<a href="#">E21B 47/09</a> - <a href="#">E21B 47/098</a>	E21B 47/09 (project A037)
<a href="#">E21B 47/10</a>	<a href="#">E21B 47/10</a> - <a href="#">E21B 47/117</a>	E21B 47/10 (project A037)
<a href="#">E21B 47/12</a>	<a href="#">E21B 47/12</a> - <a href="#">E21B 47/24</a>	E21B 47/12 (project A037)
<a href="#">E21B 47/18</a>	<a href="#">E21B 47/18</a> - <a href="#">E21B 47/24</a>	E21B 47/18 (project A037)
<b><u>F</u></b>		
<b><u>F16</u></b>		
<b><u>F16H</u></b>		
<a href="#">F16H 48/00</a>	<a href="#">F16H 48/00</a> , <a href="#">F16H 48/05</a> , <a href="#">F16H 48/36</a> , <a href="#">F16H 48/38</a> , <a href="#">F16H 48/40</a> , <a href="#">F16H 48/42</a>	F16H 48/00 (project A036)
<a href="#">F16H 48/02</a>	<a href="#">F16H 48/00</a> , <a href="#">F16H 48/05</a> - <a href="#">F16H 48/42</a>	F16H 48/00 (project A036)
<a href="#">F16H 48/04</a>	<a href="#">F16H 48/00</a> , <a href="#">F16H 48/05</a> - <a href="#">F16H 48/42</a>	F16H 48/00 (project A036)
<a href="#">F16H 48/10</a>	<a href="#">F16H 48/10</a> , <a href="#">F16H 48/11</a>	F16H 48/10 (project A036)
<a href="#">F16H 48/12</a>	<a href="#">F16H 48/12</a> , <a href="#">F16H 48/19</a>	F16H 48/12 (project A036)
<a href="#">F16H 48/20</a>	<a href="#">F16H 48/20</a> , <a href="#">F16H 48/27</a> , <a href="#">F16H 48/295</a>	F16H 48/20 (project A036)
<a href="#">F16H 48/28</a>	<a href="#">F16H 48/28</a> , <a href="#">F16H 48/285</a> , <a href="#">F16H 48/29</a>	F16H 48/28 (project A036)
<a href="#">F16H 48/30</a>	<a href="#">F16H 48/30</a> , <a href="#">F16H 48/32</a> , <a href="#">F16H 48/34</a>	F16H 48/30 (project A036)
<a href="#">F16H 57/00</a>	<a href="#">F16H 57/00</a> , <a href="#">F16H 57/01</a>	F16H 57/00 (project A035)

<a href="#"><u>F16H 57/02</u></a>	<a href="#"><u>F16H 57/02</u></a> - <a href="#"><u>F16H 57/039</u></a>	F16H 57/02 (project A035)
<b><u>F41</u></b>		
<b><u>F41B</u></b>		
<a href="#"><u>F41B 11/00</u></a>	<a href="#"><u>F41B 11/00</u></a> , <a href="#"><u>F41B 11/50</u></a> - <a href="#"><u>F41B 11/89</u></a>	F41B 11/00 (project A053)
<a href="#"><u>F41B 11/02</u></a>	<a href="#"><u>F41B 11/50</u></a> - <a href="#"><u>F41B 11/57</u></a>	F41B 11/50 (project A053)
<a href="#"><u>F41B 11/04</u></a>	<a href="#"><u>F41B 11/81</u></a>	F41B 11/81 (project A053)
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<a href="#"><u>F41B 11/08</u></a>	<a href="#"><u>F41B 11/83</u></a>	F41B 11/83 (project A053)
<a href="#"><u>F41B 11/12</u></a>	<a href="#"><u>F41B 11/64</u></a> - <a href="#"><u>F41B 11/648</u></a>	F41B 11/64 (project A053)
<a href="#"><u>F41B 11/14</u></a>	<a href="#"><u>F41B 11/642</u></a> - <a href="#"><u>F41B 11/648</u></a>	F41B 11/642 (project A053)
<a href="#"><u>F41B 11/16</u></a>	<a href="#"><u>F41B 11/644</u></a> - <a href="#"><u>F41B 11/645</u></a>	F41B 11/644 (project A053)
<a href="#"><u>F41B 11/18</u></a>	<a href="#"><u>F41B 11/646</u></a> - <a href="#"><u>F41B 11/648</u></a>	F41B 11/646 (project A053)
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<a href="#"><u>F41B 11/26</u></a>	<a href="#"><u>F41B 11/68</u></a> - <a href="#"><u>F41B 11/684</u></a>	F41B 11/68 (project A053)
<a href="#"><u>F41B 11/28</u></a>	<a href="#"><u>F41B 11/681</u></a> - <a href="#"><u>F41B 11/684</u></a>	F41B 11/681 (project A053)
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<a href="#"><u>F41B 11/32</u></a>	<a href="#"><u>F41B 11/72</u></a> - <a href="#"><u>F41B 11/723</u></a>	F41B 11/72 (project A053)
<a href="#"><u>F41B 11/34</u></a>	<a href="#"><u>F41B 11/73</u></a>	F41B 11/73 (project A053)
<b><u>G</u></b>		
<b><u>G01</u></b>		
<b><u>G01C</u></b>		
<a href="#"><u>G01C 19/00</u></a>		
<a href="#"><u>G01C 19/56</u></a>	<a href="#"><u>G01C 19/56</u></a> - <a href="#"><u>G01C 19/5783</u></a>	G01C 19/56 (project A040)
<b><u>G01P</u></b>		

<a href="#"><u>G01P 9/00</u></a>	<a href="#"><u>G01C 19/00</u></a> - <a href="#"><u>G01C 19/72</u></a>	G01C 19/00 (project C458)
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<a href="#"><u>G01P 15/18</u></a>	<a href="#"><u>G01C 19/00</u></a> - <a href="#"><u>G01C 19/72</u></a> , <a href="#"><u>G01P 15/02</u></a> , <a href="#"><u>G01P 15/14</u></a> , <a href="#"><u>G01P 15/16</u></a> , <a href="#"><u>G01P 15/18</u></a>	G01C 19/00, G01P 15/18 (project C458)
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<b><a href="#"><u>G03F</u></a></b>		
<a href="#"><u>G03F 1/00</u></a>	<a href="#"><u>G03F 1/00</u></a> - <a href="#"><u>G03F 1/86</u></a>	G03F 1/00 (project A023)
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<a href="#"><u>G03F 1/06</u></a>	<a href="#"><u>G03F 1/92</u></a>	G03F 1/92 (project A023)
<a href="#"><u>G03F 1/08</u></a>	<a href="#"><u>G03F 1/00</u></a> - <a href="#"><u>G03F 1/86</u></a>	G03F 1/00 (project A023)
<a href="#"><u>G03F 1/10</u></a>	<a href="#"><u>G03F 1/00</u></a> - <a href="#"><u>G03F 1/86</u></a>	G03F 1/00 (project A023)
<a href="#"><u>G03F 1/12</u></a>	<a href="#"><u>G03F 1/00</u></a> - <a href="#"><u>G03F 1/86</u></a>	G03F 1/00 (project A023)
<a href="#"><u>G03F 1/14</u></a>	<a href="#"><u>G03F 1/00</u></a> - <a href="#"><u>G03F 1/86</u></a>	G03F 1/00 (project A023)
<a href="#"><u>G03F 1/16</u></a>	<a href="#"><u>G03F 1/00</u></a> - <a href="#"><u>G03F 1/86</u></a>	G03F 1/00 (project A023)
<b><a href="#"><u>G04</u></a></b>		
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<a href="#"><u>G04C 9/02</u></a>	<a href="#"><u>G04R 20/00</u></a> - <a href="#"><u>G04R 60/14</u></a>	G04R 20/00, G04R 40/00, G04R 60/00 (project A041)
<a href="#"><u>G04C 11/00</u></a>		
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<a href="#"><u>G04G</u></a>		

<a href="#"><u>7/00</u></a>		
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<a href="#"><u>G04G</u></a> <a href="#"><u>21/00</u></a>		
<a href="#"><u>G04G</u></a> <a href="#"><u>21/04</u></a>	<a href="#"><u>G04G 21/04</u></a> , <a href="#"><u>G04R 20/00</u></a> - <a href="#"><u>G04R 60/14</u></a>	G04G 21/04 (project A041)
<a href="#"><u>G06</u></a>		
<a href="#"><u>G06F</u></a>		
<a href="#"><u>G06F</u></a> <a href="#"><u>3/00</u></a>		
<a href="#"><u>G06F</u></a> <a href="#"><u>3/033</u></a>	<a href="#"><u>G06F 3/033</u></a> , <a href="#"><u>G06F 3/0338</u></a> - <a href="#"><u>G06F 3/0362</u></a> , <a href="#"><u>G06F 3/041</u></a>	G06F 3/033 (project F006)
<a href="#"><u>G06F</u></a> <a href="#"><u>3/037</u></a>	<a href="#"><u>G06F 3/0338</u></a> - <a href="#"><u>G06F 3/0362</u></a> , <a href="#"><u>G06F 3/037</u></a> , <a href="#"><u>G06F 3/041</u></a>	G06F 3/037 (project F006)
<a href="#"><u>G06F</u></a> <a href="#"><u>3/038</u></a>	<a href="#"><u>G06F 3/0338</u></a> - <a href="#"><u>G06F 3/0362</u></a> , <a href="#"><u>G06F 3/038</u></a> , <a href="#"><u>G06F 3/041</u></a>	G06F 3/038 (project F006)
<a href="#"><u>G06F</u></a> <a href="#"><u>3/039</u></a>	<a href="#"><u>G06F 3/0338</u></a> - <a href="#"><u>G06F 3/0362</u></a> , <a href="#"><u>G06F 3/039</u></a> , <a href="#"><u>G06F 3/041</u></a>	G06F 3/039 (project F006)
<a href="#"><u>G06F</u></a> <a href="#"><u>3/048</u></a>	<a href="#"><u>G06F 3/048</u></a> , <a href="#"><u>G06F 3/0481</u></a> - <a href="#"><u>G06F 3/0489</u></a>	G06F 3/048 (project A051)
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<a href="#"><u>G06F</u></a> <a href="#"><u>21/02</u></a>	<a href="#"><u>G06F 21/70</u></a> - <a href="#"><u>G06F 21/81</u></a>	G06F 21/70 (project A044)
<a href="#"><u>G06F</u></a> <a href="#"><u>21/04</u></a>	<a href="#"><u>G06F 21/82</u></a> - <a href="#"><u>G06F 21/85</u></a>	G06F 21/82 (project A044)
<a href="#"><u>G06F</u></a> <a href="#"><u>21/06</u></a>	<a href="#"><u>G06F 21/86</u></a> - <a href="#"><u>G06F 21/88</u></a>	G06F 21/86 (project A044)
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<a href="#"><u>G06F</u></a> <a href="#"><u>21/22</u></a>	<a href="#"><u>G06F 21/10</u></a> - <a href="#"><u>G06F 21/16</u></a>	G06F 21/10 (project A044)
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<a href="#"><u>G09</u></a>		
<a href="#"><u>G09G</u></a>		
<a href="#"><u>G09G</u></a> <a href="#"><u>3/00</u></a>		
<a href="#"><u>G09G</u></a> <a href="#"><u>3/28</u></a>	<a href="#"><u>G09G 3/28</u></a> , <a href="#"><u>G09G 3/2807</u></a> - <a href="#"><u>G09G 3/2813</u></a>	G09G 3/28 (project A054)
<a href="#"><u>G09G</u></a> <a href="#"><u>3/288</u></a>	<a href="#"><u>G09G 3/288</u></a> , <a href="#"><u>G09G 3/291</u></a> - <a href="#"><u>G09G 3/299</u></a>	G09G 3/288 (project A054)
<a href="#"><u>G10</u></a>		

<b><u>G10L</u></b>		
<b><u>G10L</u></b> <b><u>11/00</u></b>	<a href="#">G10L 25/00</a> - <a href="#">G10L 25/75</a>	G10L 25/00 (project F004)
<b><u>G10L</u></b> <b><u>11/02</u></b>	<a href="#">G10L 25/78</a> - <a href="#">G10L 25/87</a>	G10L 25/78 (project F004)
<b><u>G10L</u></b> <b><u>11/04</u></b>	<a href="#">G10L 25/90</a>	G10L 25/90 (project F004)
<b><u>G10L</u></b> <b><u>11/06</u></b>	<a href="#">G10L 25/93</a>	G10L 25/93 (project F004)
<b><u>G10L</u></b> <b><u>13/00</u></b>		
<b><u>G10L</u></b> <b><u>13/02</u></b>	<a href="#">G10L 13/02</a> - <a href="#">G10L 13/033</a>	G10L 13/02 (project F004)
<b><u>G10L</u></b> <b><u>13/04</u></b>	<a href="#">G10L 13/04</a> - <a href="#">G10L 13/047</a>	G10L 13/04 (project F004)
<b><u>G10L</u></b> <b><u>13/06</u></b>	<a href="#">G10L 13/06</a> - <a href="#">G10L 13/07</a>	G10L 13/06 (project F004)
<b><u>G10L</u></b> <b><u>13/08</u></b>	<a href="#">G10L 13/08</a> - <a href="#">G10L 13/10</a>	G10L 13/08 (project F004)
<b><u>G10L</u></b> <b><u>15/00</u></b>	<a href="#">G10L 15/00</a> - <a href="#">G10L 15/01</a>	G10L 15/00 (project F004)
<b><u>G10L</u></b> <b><u>15/04</u></b>	<a href="#">G10L 15/04</a> - <a href="#">G10L 15/05</a>	G10L 15/04 (project F004)
<b><u>G10L</u></b> <b><u>15/06</u></b>	<a href="#">G10L 15/06</a> - <a href="#">G10L 15/07</a>	G10L 15/06 (project F004)
<b><u>G10L</u></b> <b><u>15/18</u></b>	<a href="#">G10L 15/18</a> - <a href="#">G10L 15/197</a>	G10L 15/18 (project F004)
<b><u>G10L</u></b> <b><u>15/24</u></b>	<a href="#">G10L 15/24</a> - <a href="#">G10L 15/25</a>	G10L 15/24 (project F004)
<b><u>G10L</u></b> <b><u>15/28</u></b>	<a href="#">G10L 15/28</a> - <a href="#">G10L 15/34</a>	G10L 15/28 (project F004)
<b><u>G10L</u></b> <b><u>17/00</u></b>	<a href="#">G10L 17/00</a> - <a href="#">G10L 17/26</a>	G10L 17/00 (project F004)
<b><u>G10L</u></b> <b><u>19/00</u></b>	<a href="#">G10L 19/00</a> - <a href="#">G10L 19/018</a>	G10L 19/00 (project F004)
<b><u>G10L</u></b> <b><u>19/02</u></b>	<a href="#">G10L 19/02</a> - <a href="#">G10L 19/038</a>	G10L 19/02 (project F004)
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<b><u>G10L</u></b> <b><u>19/06</u></b>	<a href="#">G10L 19/06</a> - <a href="#">G10L 19/07</a>	G10L 19/06 (project F004)
<b><u>G10L</u></b> <b><u>19/08</u></b>	<a href="#">G10L 19/08</a> - <a href="#">G10L 19/097</a>	G10L 19/08 (project F004)
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<b><u>G10L</u></b> <b><u>19/12</u></b>	<a href="#">G10L 19/12</a> - <a href="#">G10L 19/135</a>	G10L 19/12 (project F004)
<b><u>G10L</u></b>	<a href="#">G10L 19/04</a> , <a href="#">G10L 19/16</a> - <a href="#">G10L 19/26</a>	G10L 19/04 (project F004)



<a href="#"><u>19/14</u></a>		
<a href="#"><u>G10L 21/00</u></a>	<a href="#"><u>G10L 21/00</u></a> - <a href="#"><u>G10L 21/013</u></a>	G10L 21/00 (project F004)
<a href="#"><u>G10L 21/02</u></a>	<a href="#"><u>G10L 21/02</u></a> - <a href="#"><u>G10L 21/0388</u></a>	G10L 21/02 (project F004)
<a href="#"><u>G10L 21/04</u></a>	<a href="#"><u>G10L 21/04</u></a> - <a href="#"><u>G10L 21/057</u></a>	G10L 21/04 (project F004)
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<b><a href="#"><u>G11B</u></a></b>		
<a href="#"><u>G11B 7/00</u></a>		
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<a href="#"><u>G11B 7/125</u></a>	<a href="#"><u>G11B 7/125</u></a> - <a href="#"><u>G11B 7/128</u></a>	G11B 7/125 (project F002)
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<a href="#"><u>G11B 7/20</u></a>	<a href="#"><u>G11B 7/12</u></a> - <a href="#"><u>G11B 7/14</u></a>	G11B 7/14 (project F002)
<a href="#"><u>G11B 7/24</u></a>	<a href="#"><u>G11B 7/24</u></a> , <a href="#"><u>G11B 7/24003</u></a> - <a href="#"><u>G11B 7/24097</u></a>	G11B 7/24 (project F001)
<a href="#"><u>G11B 7/243</u></a>	<a href="#"><u>G11B 7/243</u></a> , <a href="#"><u>G11B 7/2433</u></a> - <a href="#"><u>G11B 7/2437</u></a>	G11B 7/243 (project F001)
<a href="#"><u>G11B 7/246</u></a>	<a href="#"><u>G11B 7/246</u></a> , <a href="#"><u>G11B 7/2463</u></a> - <a href="#"><u>G11B 7/2467</u></a>	G11B 7/246 (project F001)
<a href="#"><u>G11B 7/247</u></a>	<a href="#"><u>G11B 7/247</u></a> , <a href="#"><u>G11B 7/2472</u></a> - <a href="#"><u>G11B 7/2478</u></a>	G11B 7/247 (project F001)
<a href="#"><u>G11B 7/249</u></a>	<a href="#"><u>G11B 7/249</u></a> , <a href="#"><u>G11B 7/2492</u></a> - <a href="#"><u>G11B 7/2498</u></a>	G11B 7/249 (project F001)
<a href="#"><u>G11B 7/253</u></a>	<a href="#"><u>G11B 7/253</u></a> , <a href="#"><u>G11B 7/2531</u></a> - <a href="#"><u>G11B 7/2539</u></a>	G11B 7/253 (project F001)
<a href="#"><u>G11B 7/254</u></a>	<a href="#"><u>G11B 7/254</u></a> , <a href="#"><u>G11B 7/2542</u></a> - <a href="#"><u>G11B 7/2548</u></a>	G11B 7/254 (project F001)
<a href="#"><u>G11B 7/257</u></a>	<a href="#"><u>G11B 7/257</u></a> , <a href="#"><u>G11B 7/2572</u></a> - <a href="#"><u>G11B 7/2578</u></a>	G11B 7/257 (project F001)
<a href="#"><u>G11B 7/258</u></a>	<a href="#"><u>G11B 7/258</u></a> , <a href="#"><u>G11B 7/2585</u></a> - <a href="#"><u>G11B 7/2595</u></a>	G11B 7/258 (project F001)

<b><u>H</u></b>		
<b><u>H01</u></b>		
<b><u>H01G</u></b>		
<b><u>H01G</u></b> <b><u>9/00</u></b>		
<b><u>H01G</u></b> <b><u>9/016</u></b>	<a href="#">H01G 11/66</a> - <a href="#">H01G 11/76</a>	H01G 11/66 (project A049)
<b><u>H01G</u></b> <b><u>9/038</u></b>	<a href="#">H01G 11/54</a> - <a href="#">H01G 11/64</a>	H01G 11/54 (project A049)
<b><u>H01G</u></b> <b><u>9/058</u></b>	<a href="#">H01G 11/22</a> - <a href="#">H01G 11/50</a>	H01G 11/22 (project A049)
<b><u>H01G</u></b> <b><u>9/155</u></b>	<a href="#">H01G 11/00</a> - <a href="#">H01G 11/86</a>	H01G 11/00 (project A049)
<b><u>H01G</u></b> <b><u>9/22</u></b>	<a href="#">H01G 9/22</a> , <a href="#">H01G 11/02</a>	H01G 9/22, H01G 11/02 (project A049)
<b><u>H01G</u></b> <b><u>11/00</u></b>		
<b><u>H01G</u></b> <b><u>13/00</u></b>	<a href="#">H01G 11/84</a> - <a href="#">H01G 11/86</a> , <a href="#">H01G 13/00</a>	H01G 13/00 (project A049)
<b><u>H01G</u></b> <b><u>15/00</u></b>	<a href="#">H01G 11/08</a> , <a href="#">H01G 15/00</a>	H01G 15/00 (project A049)
<b><u>H01L</u></b>		
<b><u>H01L</u></b> <b><u>31/00</u></b>		
<b><u>H01L</u></b> <b><u>31/06</u></b>	<a href="#">H01L 31/06</a> - <a href="#">H01L 31/061</a> , <a href="#">H01L 31/078</a>	H01L 31/06 (project F005)
<b><u>H01L</u></b> <b><u>31/062</u></b>	<a href="#">H01L 31/062</a> , <a href="#">H01L 31/078</a>	H01L 31/062 (project F005)
<b><u>H01L</u></b> <b><u>31/065</u></b>	<a href="#">H01L 31/065</a> , <a href="#">H01L 31/078</a>	H01L 31/065 (project F005)
<b><u>H01L</u></b> <b><u>31/068</u></b>	<a href="#">H01L 31/068</a> - <a href="#">H01L 31/0693</a>	H01L 31/068 (project F005)
<b><u>H01L</u></b> <b><u>31/07</u></b>	<a href="#">H01L 31/07</a> , <a href="#">H01L 31/078</a>	H01L 31/07 (project F005)
<b><u>H01L</u></b> <b><u>31/072</u></b>	<a href="#">H01L 31/072</a> - <a href="#">H01L 31/0749</a>	H01L 31/072 (project F005)
<b><u>H01L</u></b> <b><u>31/075</u></b>	<a href="#">H01L 31/075</a> - <a href="#">H01L 31/077</a>	H01L 31/075 (project F005)
<b><u>H01L</u></b> <b><u>31/078</u></b>	<a href="#">H01L 31/078</a>	H01L 31/078 (project F005)
<b><u>H01L</u></b> <b><u>41/00</u></b>	<a href="#">H01L 41/00</a> , <a href="#">H01L 41/47</a>	H01L 41/00 (Project A043)
<b><u>H01L</u></b> <b><u>41/22</u></b>	<a href="#">H01L 41/22</a> - <a href="#">H01L 41/37</a> , <a href="#">H01L 41/47</a>	H01L 41/22, H01L 41/47(project A043)
<b><u>H01L</u></b> <b><u>41/24</u></b>	<a href="#">H01L 41/39</a> - <a href="#">H01L 41/43</a> , <a href="#">H01L 41/47</a>	H01L 41/39, H01L 41/47 (project A043)
<b><u>H01L</u></b>	<a href="#">H01L 41/45</a>	H01L 41/45 (project A043)

<a href="#">41/26</a>		
<b><a href="#">H04</a></b>		
<b><a href="#">H04B</a></b>		
<a href="#">H04B 10/00</a>	<a href="#">H04B 10/00</a> - <a href="#">H04B 10/90</a>	H04B 10/00 (project A047)
<a href="#">H04B 10/02</a>	<a href="#">H04B 10/00</a> - <a href="#">H04B 10/90</a>	H04B 10/00 (project A047)
<a href="#">H04B 10/04</a>	<a href="#">H04B 10/50</a> - <a href="#">H04B 10/588</a>	H04B 10/50 (project A047)
<a href="#">H04B 10/06</a>	<a href="#">H04B 10/60</a> - <a href="#">H04B 10/69</a>	H04B 10/60 (project A047)
<a href="#">H04B 10/08</a>	<a href="#">H04B 10/07</a> - <a href="#">H04B 10/079</a>	H04B 10/07 (project A047)
<a href="#">H04B 10/10</a>	<a href="#">H04B 10/11</a> - <a href="#">H04B 10/118</a>	H04B 10/11 (project A047)
<a href="#">H04B 10/105</a>	<a href="#">H04B 10/118</a>	H04B 10/118 (project A047)
<a href="#">H04B 10/12</a>	<a href="#">H04B 10/25</a> - <a href="#">H04B 10/2587</a>	H04B 10/25 (project A047)
<a href="#">H04B 10/13</a>	<a href="#">H04B 10/2581</a>	H04B 10/2581 (project A047)
<a href="#">H04B 10/135</a>	<a href="#">H04B 10/25</a> - <a href="#">H04B 10/2575</a> , <a href="#">H04B 10/2587</a>	H04B 10/25 (project A047)
<a href="#">H04B 10/14</a>	<a href="#">H04B 10/40</a> - <a href="#">H04B 10/69</a>	H04B 10/40, H04B 10/50, H04B 10/60 (project A047)
<a href="#">H04B 10/142</a>	<a href="#">H04B 10/40</a> - <a href="#">H04B 10/588</a> , <a href="#">H04B 10/61</a> - <a href="#">H04B 10/64</a>	H04B 10/40, H04B 10/50, H04B 10/61 (project A047)
<a href="#">H04B 10/145</a>	<a href="#">H04B 10/50</a> - <a href="#">H04B 10/588</a>	H04B 10/50 (project A047)
<a href="#">H04B 10/148</a>	<a href="#">H04B 10/61</a> - <a href="#">H04B 10/64</a>	H04B 10/61 (project A047)
<a href="#">H04B 10/152</a>	<a href="#">H04B 10/40</a> - <a href="#">H04B 10/588</a> , <a href="#">H04B 10/66</a> - <a href="#">H04B 10/69</a>	H04B 10/40, H04B 10/50, H04B 10/66 (project A047)
<a href="#">H04B 10/155</a>	<a href="#">H04B 10/50</a> - <a href="#">H04B 10/588</a>	H04B 10/50 (project A047)
<a href="#">H04B 10/158</a>	<a href="#">H04B 10/66</a> - <a href="#">H04B 10/69</a>	H04B 10/66 (project A047)
<a href="#">H04B 10/16</a>	<a href="#">H04B 10/29</a>	H04B 10/29 (project A047)
<a href="#">H04B 10/17</a>	<a href="#">H04B 10/291</a> - <a href="#">H04B 10/299</a>	H04B 10/291 (project A047)
<a href="#">H04B 10/18</a>	<a href="#">H04B 10/2507</a> - <a href="#">H04B 10/2569</a>	H04B 10/2507 (project A047)
<a href="#">H04B 10/20</a>	<a href="#">H04B 10/27</a> - <a href="#">H04B 10/278</a>	H04B 10/27 (project A047)
<a href="#">H04B 10/207</a>	<a href="#">H04B 10/272</a>	H04B 10/272 (project A047)

<a href="#"><u>H04B 10/213</u></a>	<a href="#"><u>H04B 10/275</u></a> , <a href="#"><u>H04B 10/278</u></a>	H04B 10/27 (project A047)
<a href="#"><u>H04B 10/22</u></a>	<a href="#"><u>H04B 10/25</u></a> - <a href="#"><u>H04B 10/2587</u></a> , <a href="#"><u>H04B 10/80</u></a>	H04B 10/25, H04B 10/80 (project A047)
<a href="#"><u>H04B 10/24</u></a>	<a href="#"><u>H04B 10/11</u></a> - <a href="#"><u>H04B 10/118</u></a> , <a href="#"><u>H04B 10/25</u></a> - <a href="#"><u>H04B 10/2587</u></a>	H04B 10/11, H04B 10/25 (project A047)
<a href="#"><u>H04B 10/26</u></a>	<a href="#"><u>H04B 10/11</u></a> - <a href="#"><u>H04B 10/118</u></a> , <a href="#"><u>H04B 10/2587</u></a>	H04B 10/11, H04B 10/2587 (project A047)
<a href="#"><u>H04B 10/28</u></a>	<a href="#"><u>H04B 10/43</u></a>	H04B 10/43 (project A047)
<a href="#"><u>H04B 10/30</u></a>	<a href="#"><u>H04B 10/80</u></a> , <a href="#"><u>H04B 10/90</u></a>	H04B 10/80, H04B 10/90 (project A047)
<a href="#"><u>H04L</u></a>		
<a href="#"><u>H04L 12/00</u></a>		
<a href="#"><u>H04L 12/54</u></a>	<a href="#"><u>H04L 12/54</u></a> , <a href="#"><u>H04L 12/70</u></a> - <a href="#"><u>H04L 12/955</u></a>	H04L 12/54, H04L 12/70 (Project A050)
<a href="#"><u>H04L 12/56</u></a>	<a href="#"><u>H04L 12/70</u></a> - <a href="#"><u>H04L 12/955</u></a>	H04L 12/70 (project A050)

[Annex IV follows/  
L'annexe IV suit]

## AMENDMENTS TO THE *GUIDELINES FOR REVISION OF THE IPC*

*adopted by the Committee on Experts of the IPC Union at its thirty-seventh session and modified at its forty-fourth session*

### INTRODUCTION

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3. *Deleted*

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15. When necessary, the scope of a place can be restricted by limiting references (see paragraphs 37 and 38 below). However, titles that positively state the scope in a way that makes references unnecessary are preferable. For example, it is better to say “1/00 *Electric motors*” rather than “1/00 *Motors (non-electric motors 3/00)*”, even though both wordings define the same scope.

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20. Titles should normally be in plural form, except when it might confuse users as to the scope of a place.

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

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25. The full names of chemical elements should be used whenever possible. When groupings of elements are given in the IPC, they should follow the definitions given in the Note at the beginning of section C of the IPC.

26. Except in chemical formulae, Greek letters should be spelt out, e.g. “alpha” instead of “ $\alpha$ ”, in order to facilitate text searching.

27. Classification symbols should always be given in their complete form, for example “A22C 21/00” and not “21/00”. When two or more classification places are listed together, their classification symbols should also be written in their complete form, for example “B21C, B21D” and not “B21C, D” or “A22C 21/00, A22C 23/00” and not “A22C 21/00, 23/00”.

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

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30. Other preferred terms and expressions:

- The term “processes” should be preferred over the term “methods”. Moreover, only one of the terms should be used within a given scheme.
- The term “apparatus” should be used rather than “machines”, since it is more generic. Exceptions can be made when it is accepted practice in a particular art to use the term “machines”, for example in expressions such as “dynamo-electric machines” or “sewing machines”.
- The term “functional” may be used only if its meaning is clear in the context given, for example as in “Computing devices characterised by the combination of hydraulic or pneumatic functional elements with at least one other type of functional element”. Otherwise, it should be replaced by a clearer wording.
- The term “material” should normally be used only in its singular form, except when the plural form is required for accuracy.
- The terms “invention(s)” and “inventive” should be avoided, with the exception of the expressions “invention information” and “inventive thing(s)” that are used with the meanings defined in the Guide.
- The expression “characterised by ...” should be used rather than alternative expressions such as “having special ...” when a group is intended to provide for things distinguished by a particular detail or feature. Example:  
In a main group for balls, the subgroup title “characterised by their coverings” should be preferred over “special coverings” (A63B 39/00).
- The expression “arrangement of ...” should be used rather than alternative expressions such as “mounting or disposition of ...” when a group is intended to provide for things distinguished by a particular way of incorporating a part or detail.
- The broader expression “arrangements for ...” should be used rather than alternative expressions such as “devices for ...” or “apparatus for ...”, except when a restricted meaning is intended. Example:  
“Arrangements for adjusting the toe-clamps” is a broader expression than “tools”, “devices” or “apparatus” for the same purpose (A63C 9/22).
- The expression “specially adapted for ...” should be used instead of “peculiar to ...” or similar alternative expressions when a group is intended to provide for things that have been modified or specially designed for a certain application or for solving a particular problem. Examples:  
“Furniture specially adapted for vessels” should be preferred over “Furniture peculiar to vessels” (B63B 29/04).  
“Arrangement or operation of ventilating devices, specially adapted for lavatories” should be preferred over “Special arrangement or operation of ventilating devices” (E03D 9/04).

30bis British English spelling and terminology should be used in the classification schemes. For example, "tyre", "aluminium", "colour", "travelling" and "characterised" should be used instead of "tire", "aluminum", "color", "traveling" and "characterized". Corresponding US English expressions should be indicated in the Definitions if necessary.

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37. Limiting references should always be presented both in the classification schemes and in the Definitions. A limiting reference is a reference associated with a classification place that excludes specified subject matter from the scope of this classification place, when this subject matter would otherwise be covered by that place. Precedence references are a type of limiting reference.

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39. References from function-oriented to application-oriented places, and references out of residual places, should normally only be presented in the Definitions, under the heading "References relevant to classification", and not in the schemes. However, in some cases where references of this type are considered limiting or necessary for the correct use of the classification they are included in the scheme. See for example F04C 7/00 "Oscillating-piston machines or pumps (such pumps specially adapted for elastic fluids F04C 21/00)", where the reference points to an otherwise identically worded application-oriented group in the same subclass.

40. Informative references have no effect on the scope of the place where they stand. They should only be presented in the definitions, under the heading "Informative references", and not in the schemes. Examples of such references are:

- References from application-oriented places to general places:  
A01C 3/04 Manure loaders (loaders in general B65G)
- References between different application places for related subject matter:  
A21C 15/04 Cutting or slicing machines or devices specially adapted for baked articles other than bread (for cutting or slicing bread B26B, B26D).
- References to related places which do not overlap:  
A44C 3/00 Medals; Badges (frames or housings for storing same A47G 1/12)

41. References in an application-oriented place to a function-oriented place are always informative.

Example:

- A47C 1/00 Chairs adapted for special purposes (features relating to vertical adjustability A47C 3/20)

42. If a reference does not relate to all parts of a multipart title it should be placed after the last title part that it relates to. If it is not obvious to which title part(s) a reference relates (e.g. when it relates to only two of three title parts) the order of title parts should be chosen so that the applicability of references is clear. Otherwise the wording of a reference should make clear to which part of the title it refers. Alternatively a note could be introduced instead of a reference.

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44. References that are presented at a higher hierarchical level should not be repeated at a lower hierarchical level. However, references at lower levels are acceptable, when they point to more specific places within a broader area that is indicated by a reference in a hierarchically higher place.

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48. The use of examples should be preferred over titles which have a main part that actually serves as an example. For example, "*Cutting tools, e.g. knives*" should be preferred over "*Knives or other cutting tools*" or "*Knives; Other cutting tools*".

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60. *Deleted*

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#### Selection of General Classification Rules

77. When creating a new subclass, it should be considered whether the first place priority rule should be used. When revising a minor part of an existing scheme where a particular general classification rule is used, introduction of a different general classification rule should only be considered if it will not cause confusion for users.

78. Strategies such as indexing or multi-aspect classification may be used if it is considered particularly advantageous for search purposes.

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91. Indexing schemes shall therefore not be created to cover aspects of subject matter that are already provided for by the classification schemes they are associated with. New entries that are based on the same principles as existing subdivisions of a classification scheme should only be created as classification groups. In particular, indexing schemes should never be created that merely specify:

- further variations of a general concept already covered by the classification scheme;
- details of the subject matter covered in existing classification groups.

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Indications, Transfers and Revision Concordance Data

122. When indicating the status of an entry during the working phase of a project, for example, when submitting a proposal, the following indications should be used:

- “N” for new entries;
- “C” for entries with modified file scope;
- “M” for groups or subclasses where changes do not impact the file scope;
- “D” for deleted entries;
- “U” for entries that are unchanged, but presented in order to show the hierarchy of the scheme to simplify understanding.

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126. As a result of the approval of the RCL relating to a revision project, an indication of modification of file scope (“C”) should be added to those existing places which were included in the RCL, even though their title was not modified. On the other hand the “C” should be removed from those places that were approved with a “C” in the revision project but which were not included in the RCL.

126bis. Concurrently with the establishment of the RCL the rapporteurs should also prepare a Default Transfer Symbols (DTS). This list decides how documents in deleted groups or groups with changed file scope (“source groups”) that have not been reclassified at the end of a revision cycle will be automatically transferred. If possible, the default transfer should be made to a single destination group, but in some cases a default transfer to two or more groups will be necessary. Depending on the type of revision many different situations can arise. This is a list of typical cases:

Situation	Destination group
a) The source group gets new subgroups	The source group
b) The source group is deleted and replaced by a new group with identical or broader scope	The new group
c) The source group is deleted and replaced by more than one new group	The parent group of the new groups, if there is a single one. If there isn't a single one, all the most likely parent groups.
d) The file scope of the source group is broadened, e.g. by a modified title	The source group
e) The file scope of the source group is narrowed otherwise than by subdivision, e.g. by the addition of a limiting reference	The source group, and the group to which subject matter is transferred. If there isn't a single group, all the most likely groups (or their parent groups, if such exist).

In other situations the rapporteurs should use their judgment in order to find the best places for the default transfer. For example, statistics of actual transfers, if available, could be used for finding destination groups.

#### Checking of References, Class Indexes and Subclass Indexes

127. At the end of each revision project, the rapporteur should check all references that point to a revised area and make sure that those affected by the amendments are updated. This check may be carried out with the aid of the Cross Reference List (CRL), a reversed list of references prepared by the International Bureau, listing for a given place in the IPC all places in schemes and definitions where reference is made to that place.

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#### Changing the Symbols of Existing Classification Places

129. Renumbering of a group should take place if the scope of the group is substantially changed, except when the scope of the group is modified solely by the creation, deletion, or amendment of one or more of its subgroups.

APPENDICES I TO III - No change

APPENDIX IV

CLASSIFICATION SYMBOLS FOR NEW CLASSIFICATION PLACES

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NUMBERING OF SUBGROUPS

4. Subgroup numbering should, as far as possible, be limited to four digits after the oblique stroke. The maximum number of digits after the oblique stroke is six.
5. Group numbers with a final 0 are not allowed, except for groups having only two digits after the oblique stroke.
6. When subdivisions are created under a new main group, e.g. 10/00, the intended number of one-dot groups is less than ten and the whole of the scheme will not reach the /99 group, the one-dot groups should be numbered 10/10, 10/20, 10/30 and so on. In this way each main subject of the technology covered by the main group will have subgroups with the same first digit.
7. When more than ten one-dot groups are created under a new main group, or when one-dot groups are otherwise added to an existing main group and the principle of paragraph 6 above cannot be applied, the group numbers should as far as possible be chosen so that the intervals between the new groups are similar. The same applies when new subdivisions are inserted in an existing scheme. In the light of that, for the addition of further subdivisions the following formula should be observed:

$$r = \frac{\text{Subgroup number of the group after the interval} - \text{Subgroup number of the group before the interval}}{\text{Number of desired subdivisions} + 1}$$

and the numbering of each subdivision should be the rounded result of

$$\text{Numbering of subdivision 'x'} = \frac{\text{Subgroup number of the group before the interval}}{r} + x \cdot r$$

For example:

- (a) When adding two-dot subgroups between 10/10 and 10/20 in a scheme arranged according to paragraph 6 above, the following numbers will result from the formula above, respectively for each total number of subgroups:

one subgroup ( $r = 5, x = 1$ )	10/15
two subgroups ( $r \approx 3.3, x = 1, 2$ )	10/13, 10/17
three subgroups ( $r = 2.5, x = 1, 2, 3$ )	10/12, 10/15, 10/18
four subgroups ( $r = 2, x = 1, 2, 3, 4$ )	10/12, 10/14, 10/16, 10/18
five subgroups ( $r \approx 1.7, x = 1, 2, 3, 4, 5$ )	10/12, 10/13, 10/15, 10/17, 10/18
six subgroups ( $r \approx 1.4, x = 1, 2, 3, 4, 5, 6$ )	10/11, 10/13, 10/14, 10/16, 10/17, 10/19
seven subgroups ( $r = 1.25, x = 1, 2, 3, 4, 5, 6, 7$ )	10/11, 10/12, 10/14, 10/15, 10/16, 10/18, 10/19

eight subgroups ( $r \approx 1.1$ , $x = 1, 2, 3, 4, 5, 6, 7, 8$ )	10/11, 10/12, 10/13, 10/14, 10/16, 10/17, 10/18, 10/19
nine subgroups ( $r = 1$ , $x = 1, 2, 3, 4, 5, 6, 7, 8, 9$ )	10/11, 10/12, 10/13, 10/14, 10/15, 10/16, 10/17, 10/18, 10/19

(b) When adding groups to an existing sequence separated by 02, for example between groups 1/02 and 1/04, the following numbers would result, respectively for each total number of subgroups:

one subgroup ( $r = 1$ , $x = 1$ )	1/03
two subgroups ( $r \approx 0.67$ , $x = 1, 2$ )	1/027, 1/033
three subgroups ( $r = 0.5$ , $x = 1, 2, 3$ )	1/025, 1/03, 1/035
four subgroups ( $r = 0.4$ , $x = 1, 2, 3, 4$ )	1/024, 1/028, 1/032, 1/036
five subgroups ( $r \approx 0.33$ , $x = 1, 2, 3, 4, 5$ )	1/023, 1/027, 1/03, 1/033, 1/037
six subgroups ( $r \approx 0.28$ , $x = 1, 2, 3, 4, 5, 6$ )	1/023, 1/026, 1/029, 1/031, 1/034, 1/037
seven subgroups ( $r = 0.25$ , $x = 1, 2, 3, 4, 5, 6, 7$ )	1/022, 1/025, 1/028, 1/03, 1/032, 1/035, 1/038
eight subgroups ( $r \approx 0.22$ , $x = 1, 2, 3, 4, 5, 6, 7, 8$ )	1/022, 1/024, 1/027, 1/029, 1/031, 1/033, 1/036, 1/038
nine subgroups ( $r = 0.2$ , $x = 1, 2, 3, 4, 5, 6, 7, 8, 9$ )	1/022, 1/024, 1/026, 1/028, 1/03, 1/032, 1/034, 1/036, 1/038

## EXCEPTIONS

- The numbering rules presented above should generally be followed. The departure is allowed when a compelling reason is provided, for example in order to take into account any foreseen future revisions by leaving empty intervals where it is likely that further groups will be added, or in order to avoid changing group symbols when groups with the same file scope from another scheme are introduced into the IPC.

## PROVISIONAL NUMBERING OF PROVISIONAL GROUPS DURING THE REVISION PROCESS

- During technical discussions and commenting in revision projects, provisional group numbers should be used. These do not have to conform to the rules mentioned above. The provisional numbers should be replaced by finalized numbers at the end of each revision project before its final adoption. Provisional numbers that have once been used within a project should never be reused within the same project for other (e.g. new) proposed groups.

## APPENDIX V – No change

[Annex V follows]

## AMENDMENTS TO THE *GUIDE TO THE IPC*

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### VIII. PRINCIPLES OF THE CLASSIFICATION

*Invention information; Additional information; Categories of subject matter; Places in the Classification for technical subjects of inventions; Function-oriented and application-oriented places; Classification of technical subjects of inventions*

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### CATEGORIES OF SUBJECT MATTER

81. Technical subject matter may represent processes, products, apparatus or materials (or the way these are used or applied). ----

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### CLASSIFICATION OF TECHNICAL SUBJECTS OF INVENTIONS

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#### General Chemical Formulae

100. Large sets of related chemical compounds are often expressed or claimed using general formulae. The general formulae are presented in the form of a chemical compound genus with at least one component of the formula being a variable selected from a specific collection of alternatives (for example, "Markush"-type compound claims). The use of general formulae causes classification problems when an enormous number of compounds are within their scope and are separately classifiable in a large number of classification places. When this situation occurs, only the individual chemical compounds most useful for searches are classified. If chemical compounds are specified using a general chemical formula, the following classifying procedure is applied:

Step 1: Classification should be given to all "fully identified" compounds that are novel and unobvious if they are:

- (i) specifically claimed as such or in a composition,
- (ii) products of a claimed process, or
- (iii) derivatives of either of these.

A compound is considered to be "fully identified" where:

- (a) the structure is given by exact chemical name or formula, or can be deduced from its preparation from specified reactants, not more than one of which is selected from a list of alternatives, and

- (b) the compound is characterised by a physical property (for example, its melting point), or its preparation is described in a worked example giving practical details.

Compounds identified only by an empirical formula are not considered to be “fully identified”.

Step 2: If no “fully identified” compounds are disclosed, e.g. in the situation of compounds derived from computer-generated models and which have not undergone actual experiments, classification should only be given to compounds with exact chemical name or developed chemical formula. Classification should be limited to a single or a very small number of groups.

Step 3: When only the general Markush formula is disclosed, classification is made in the most specific group(s) that cover(s) all or most of the potential embodiments. Classification should be limited to a single or a very small number of groups.

Step 4: In addition to the above obligatory classification, non-obligatory classification may be made when other compounds within the scope of the general formula are of interest or compounds derived directly from computer-generated models.

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## XVI. GLOSSARY

### CLASSIFICATION TERMS AND EXPRESSIONS

183. This part of the glossary presents a list of terms or expressions relating to principles and rules of the Classification, as requiring some explanation of their meaning and use.

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subcombination	---
(technical) subjects of inventions	= (technical) information that describes processes, products, apparatus or materials, which are novel and unobvious.
the state of the art	---

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[Technical Annexes follow]

List of projects contained in the Technical Annexes:

**A041; A042; A043; A044; A045; A046; A047; A049; A050; A051; A053; A054; A055; C458;  
D017; D076; D128; D142; D146; D150; D151; D152; D155; D157; D158; D159; D168; D179;  
D182; D186; D215; D219; D220; D223; D227; D235; D236; D237; D238; D239; D240; D241;  
D242; D245; D246; D249; D250; D251; D252; D259; D260; D262; D263; D264; D265; D266;  
F001; F004; F006; M010; M013; M014; M037; M707; M719; M726; M731; M733; M735; M736**

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**ANNEX 1E      A23B                      [ Project-Rapporteur : D227/IL ]      <CE44>**

adopt M Title **PRESERVING, e.g. BY CANNING, MEAT, FISH, EGGS, FRUIT, VEGETABLES,  
EDIBLE SEEDS; CHEMICAL RIPENING OF FRUIT OR VEGETABLES; THE  
PRESERVED, RIPENED, OR CANNED PRODUCTS**

adopt M 4/20 · · · Organic compounds; Micro-organisms; Enzymes

adopt M **5/00 Preservation of eggs or egg products**

adopt M 7/154 · · · Organic compounds; Micro-organisms; Enzymes

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**ANNEX 2E      A47C                      [ Project-Rapporteur : M014/IB ]      <CE44>**

adopt M 1/025 · · · by means of a rack-and-pinion or like gearing mechanism

adopt M 1/026 · · · by means of a peg-and-notch or pawl-and-ratchet mechanism

adopt M 1/034 \* \* \* the parts including a leg-rest or foot-rest ([A47C 1/037](#) takes precedence)

adopt N 1/0355 \* \* \* \* *actuated by linkages, e.g. lazy-tongs mechanisms*

adopt D 1/038 (transferred to [A47C 1/0355](#) )

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**ANNEX 3E    A47C            [ Project-Rapporteur : M735/EP ]    <CE44>**

adopt M Note    In groups [A47C 17/00-A47C 27/00](#), the following terms or expressions are used with the 17/00- meanings indicated:

- 27/00            • "bedstead" is used only for the frame of a bed;
- "bed" includes bedsteads combined with spring mattresses, stuffed mattresses, or similar means to enable the lying of persons thereon;
- "stuffed mattresses" may include metal springs.

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**ANNEX 4E    A47C            [ Project-Rapporteur : M014/IB ]    <CE44>**

adopt M 20/08 \*            with means for adjusting two or more rests simultaneously

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**ANNEX 5E    A47C            [ Project-Rapporteur : M735/EP ]    <CE44>**

adopt M **23/00** **Spring mattresses with rigid frame or forming part of the bedstead, e.g. box springs; Divan bases; Slatted bed bases**

adopt D 25/00 (transferred to [A47C 23/00](#),[A47C 27/06](#) )



adopt D 25/02 (transferred to [A47C 23/00](#),[A47C 27/06](#) )

adopt M **27/00** **Spring, stuffed or fluid mattresses specially adapted for chairs, beds or sofas**

adopt M 27/06 \* \* Spring inlays or spring units therefor

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**ANNEX 6E    A61F            [ Project-Rapporteur : A042/JP ]    <CE44>**

adopt C 2/04 \* \* *Hollow or tubular parts of organs, e.g. bladders, tracheae, bronchi or bile ducts ([A61F 2/18](#), [A61F 2/20](#) take precedence; devices, other than stent-grafts, providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents, [A61F 2/82](#); instruments specially adapted for placement or removal of stents or stent-grafts [A61F 2/95](#))*

adopt C 2/06 \* \* \* *Blood vessels*

adopt N 2/07 \* \* \* \* *Stent-grafts*

adopt C 2/82 \* *Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents (stent-grafts for tubular structures of the body other than blood vessels [A61F 2/04](#); stent-grafts for blood vessels [A61F 2/07](#); instruments specially adapted for placement or removal of stents or stent-grafts [A61F 2/95](#); for closing wounds, or holding wounds closed [A61B 17/03](#); dilators [A61M 29/00](#))*

adopt D 2/84 (transferred to [A61F 2/95](#) )

adopt N 2/844 \* \* *folded prior to deployment*

adopt N 2/848 · · *having means for fixation to the vessel wall, e.g. barbs*

adopt N 2/852 · · *Two or more distinct overlapping stents*

adopt N 2/856 · · *Single tubular stent with side portal passage*

adopt C 2/86 · · *Stents in a form characterised by wire-like elements; Stents in a form characterised by a net-like or mesh-like structure*

adopt M 2/88 · · · the wire-like elements formed as helical or spiral coils (forming a net-like or mesh-like structure [A61F 2/90](#))

adopt N 2/89 · · · *the wire-like elements comprising two or more adjacent rings flexibly connected by separate members*

adopt C 2/90 · · · *characterised by a net-like or mesh-like structure*

adopt N 2/91 · · · · *made from perforated sheets or tubes, e.g. perforated by laser cuts or etched holes*

adopt N 2/915 · · · · · *with bands having a meander structure, adjacent bands being connected to each other*

adopt C 2/92 · · *Stents in the form of a rolled-up sheet expanding after insertion into the vessel*

adopt N 2/93 · · · *circumferentially expandable by using ratcheting locks*

adopt C 2/94 · · *Stents retaining their form, i.e. not being deformable, after placement in the predetermined place*

adopt N 2/945 · · · *hardenable, e.g. stents formed in situ*

adopt N 2/95 · *Instruments specially adapted for placement or removal of stents or stent-grafts*

adopt N 2/954 · · *for placing stents or stent-grafts in a bifurcation*

adopt N 2/958 · · *Inflatable balloons for placing stents or stent-grafts*

adopt N 2/962 · · *having an outer sleeve*

adopt N 2/966 · · · *with relative longitudinal movement between outer sleeve and prosthesis, e.g. using a push rod*

adopt N 2/97 · · · *the outer sleeve being splittable*

adopt C 5/04 \* *motor-driven (A61G 5/06 takes precedence; motor-operated rests A61G 5/12; for vehicles with handlebars, equipped with three or more wheels B62K 5/003, B62K 5/023)*

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**ANNEX 8E    A61M            [ Project-Rapporteur : A042/JP ]    <CE44>**

adopt C 25/10 \* *Balloon catheters (inflatable balloons for placing stents or stent-grafts A61F 2/958)*

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**ANNEX 9E    A63C            [ Project-Rapporteur : D223/EP ]    <CE44>**

adopt M Title **SKATES; SKIS; ROLLER SKATES; DESIGN OR LAYOUT OF COURTS, RINKS OR THE LIKE** (water skis B63B 35/81)

adopt M 5/075 \* \*    Vibration-dampers

adopt M 11/08 \* \*    Apparatus for waxing or dewaxing

adopt M 19/00 **Design or layout of playing courts, rinks, bowling greens or areas for water-skiing; Covers therefor**

adopt M 19/10 \*        Ice-skating or roller-skating rinks; Slopes or trails for skiing, ski-jumping or tobogganing

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**ANNEX 10E    A63D            [ Project-Rapporteur : M719/SE ]    <CE44>**

adopt M **Title** **BOWLING GAMES, e.g. SKITTLES, BOCCE OR BOWLS; INSTALLATIONS THEREFOR; BAGATELLE OR SIMILAR GAMES; BILLIARDS** (balls [A63B 37/00](#))

adopt D Subclass < Deleted / Supprimé >  
index /  
Schéma  
général

adopt M **1/00** **Installations for bowling games, e.g. bowling-alleys or bocce courts** (bowling greens [A63C 19/00](#))

adopt M **3/00** **Table bowling games; Miniature bowling-alleys; Bowling games** (games of pins [A63D 7/00](#))

adopt M **13/00** **Bagatelle or similar games**

adopt D Note < Deleted / Supprimée >  
13/00

adopt M **15/00** **Billiards, e.g. carom billiards or pocket billiards; Billiard tables** (bagatelle [A63D 13/00](#))

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**ANNEX 11E**    **A63J**            **[ Project-Rapporteur : D245/BR ]**    **<CE44>**

adopt M **Title** **DEVICES FOR THEATRES, CIRCUSES, OR THE LIKE; CONJURING APPLIANCES OR THE LIKE**

adopt M **1/00** **Stage arrangements**

adopt M **3/00** **Equipment for, or arrangement of, circuses or arenas**

adopt M **5/00** **Auxiliaries for producing special effects on stages, or in circuses or arenas**

adopt M 5/12 • Apparatus for raising or lowering persons

adopt M **13/00** **Panoramas, dioramas, stereoramas, or the like**

adopt M **15/00** **Peep-shows, e.g. raree-shows; Kaleidoscopic or other opalescence exhibitions**

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**ANNEX 12EF B05 [ Project-Rapporteur : D076/GB ] <CE44>**

adopt D Note / < Deleted / Supprimée >  
Note  
B05

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**ANNEX 13E B05B [ Project-Rapporteur : D076/GB ] <CE44>**

adopt M Note This subclass covers particularly apparatus for the release or projection of drops or  
B05B droplets into the atmosphere or into a chamber to form a mist or the like. For this  
purpose, the materials to be projected may be suspended in a stream of gas or  
vapour. [2]

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**ANNEX 14E B05C [ Project-Rapporteur : D076/GB ] <CE44>**

- adopt M Note  
B05C
1. This subclass covers apparatus or hand tools, in general, for applying liquids or other fluent materials to a surface or a part thereof, by any mechanical or physical method, in particular apparatus for obtaining a uniform distribution of liquids or other fluent materials on a surface. [2]
  2. Hand tools or apparatus using hand-held tools are classified in group **B05C 17/00**. [2009]

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**ANNEX 15E B05D [ Project-Rapporteur : D076/GB ] <CE44>**

adopt M Note This subclass covers :

- B05D
- processes for applying liquids or other fluent materials to a surface or part of a surface, in general, by any mechanical or physical method and particularly processes producing a uniform distribution of liquids or other fluent materials on a surface;
  - pretreatment of surfaces to which liquids or other fluent materials are to be applied;
  - after-treatment of applied coatings. [2]

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**ANNEX 16E B08B [ Project-Rapporteur : D237/EP ] <CE44>**

adopt M Note This subclass covers only cleaning, which is usually classified according to one (or more) of the aspects mentioned below, if it is not fully classifiable in a subclass providing for any of the following aspects:

- B08B
- the articles cleaned, e.g. bed-pans, urinal or other sanitary devices for bed-ridden persons **A61G 9/02**, filters, semi-permeable membranes **B01D**, castings and moulds **B22D 29/00**, vehicles **B60S**, coke ovens **C10B 43/00**, building forms **E04G**, boilers **F22**, combustion apparatus **F23J**, furnaces **F27**;
  - the general nature of the cleaning, e.g. preparing for sugar manufacture **A23N**, domestic cleaning **A47L**, treatment of textiles **D06**, laundry **D06F**, air-conditioning **F24F**;
  - the particular operation performed, e.g. filtering **B01D**, separating of solids **B03**, **B07**, sand-blasting **B24C**;
  - the particular apparatus or device, e.g. brushes **A46B**, mops **A47L**, centrifuges **B04**, hand tools **B25**;
  - the substance cleaned, e.g. metals **B21C**, **C23**, water **C02**, glass **C03C**, leather **C14B**, textile fibres **D01**;
  - the substance removed (or prevented from depositing or forming), e.g. implements or apparatus for removing dry paint from surfaces **B44D 3/16**,

chemical paint-removers **C09D 9/00**, preventing rust **C23F**;

- the substance used, e.g. macromolecular compounds or compositions **C08**, anti-icing materials **C09K**, detergents **C11D**;
- the operation in connection with which cleaning is done, e.g. metal rolling **B21B**, metal boring **B23B**, soldering **B23K**, textile fabrication **D01G**, **D01H**, **D03J**, **D04B**;
- the surroundings of a surface to be cleaned or kept clean, e.g. water in a boiler **C02F**, air in a room **F24F**.

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ANNEX 17E    B21D            [ Project-Rapporteur : D220/EP ]    <CE44>

adopt M    Title    **WORKING OR PROCESSING OF SHEET METAL OR METAL TUBES, RODS OR PROFILES WITHOUT ESSENTIALLY REMOVING MATERIAL; PUNCHING** (working or processing of wire **B21F**)

adopt M    1/00    **Straightening, restoring form or removing local distortions of sheet metal or specific articles made therefrom** (**B21D 3/00** takes precedence) ; **Stretching sheet metal combined with rolling**

adopt M    3/00    **Straightening or restoring form of metal rods, metal tubes, metal profiles, or specific articles made therefrom, whether or not in combination with sheet metal parts**

adopt M    3/12    ·            by stretching with or without twisting

adopt M    5/00    **Bending sheet metal along straight lines, e.g. to form simple curves** (**B21D 11/06-B21D 11/18** take precedence)

adopt M    9/15    ·            using filling material of indefinite shape, e.g. sand, plastic material



adopt M **11/00** **Bending not restricted to forms of material mentioned in only one of groups B21D 5/00, B21D 7/00, B21D 9/00; Bending not provided for in groups B21D 5/00-B21D 9/00; Twisting**

adopt M 11/02 · Bending by stretching or pulling over a die

adopt M 11/06 · Bending into helical or spiral form; Forming a succession of return bends, e.g. serpentine form

adopt M **13/00** **Corrugating sheet metal, rods or profiles; Bending sheet metal, rods or profiles into wave form**

adopt M **15/00** **Corrugating tubes**

adopt M 17/02 · by pressing

adopt M **19/00** **Flanging or other edge treatment, e.g. of tubes**

adopt M 19/02 · by continuously-acting tools moving along the edge

adopt M 19/14 · Reinforcing edges, e.g. by armouring

adopt M 22/22 · with devices for holding the edge of the blanks (**B21D 22/24-B21D 22/30** take precedence)

- adopt M **26/00** **Shaping without cutting otherwise than by using rigid devices or tools or yieldable or resilient pads, e.g. shaping by applying fluid pressure or magnetic forces**
- adopt M 28/02 \*      Punching blanks or articles with or without obtaining scrap; Notching
- adopt M 28/14 \* \*      Dies (ejecting or stripping-off devices arranged in punching tools **B21D 45/00**)
- adopt M **31/00** **Other methods for working sheet metal, metal tubes, metal profiles** (deforming one surface of tubes helically by rolling **B21H 3/00**; upsetting **B21J 5/08**; embossing decorations or marks **B44B 5/00**)
- adopt M 31/02 \*      Stabbing or piercing, e.g. for making sieves
- adopt M 31/04 \*      Expanding other than provided for in groups **B21D 1/00-B21D 28/00**, e.g. for making expanded metal (**B21D 47/00** takes precedence)
- adopt M 31/06 \*      Deforming sheet metal, tubes or profiles by sequential impacts, e.g. hammering, beating, peen forming
- adopt M **39/00** **Application of procedures in order to connect objects or parts, e.g. coating with sheet metal otherwise than by plating** (riveting **B21J**; uniting components by forging or pressing to form integral members **B21K 25/00**) ; **Tube expanders**
- adopt M 43/20 \*      Storage arrangements; Piling or unpling
- adopt M **49/00** **Sheathing or stiffening objects**

adopt M 51/14 · · Flattening hollow objects for transport or storage; Subsequent re-forming

adopt M 51/26 · · cans or tins; Closing cans or tins in a permanent manner (making outlet arrangements **B21D 51/38**)

adopt M 51/44 · · Making closures, e.g. caps (folded of thin metal foils in the way of making paper caps **B31D 5/00**; making closures in conjunction with applying them **B67B**)

adopt M **53/00** **Making other particular articles** (making chains or chain parts **B21L**)

adopt M 53/08 · · of both metal tubes and sheet metal

adopt M **55/00** **Safety devices protecting the machine or the operator, specially adapted for apparatus or machines dealt with in this subclass**

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ANNEX 18E    B22F            [ Project-Rapporteur : M733/BR ] <CE44>

adopt M Title **WORKING METALLIC POWDER; MANUFACTURE OF ARTICLES FROM METALLIC POWDER; MAKING METALLIC POWDER** (making alloys by powder metallurgy **C22C**) ;  
**APPARATUS OR DEVICES SPECIALLY ADAPTED FOR METALLIC POWDER**

adopt M **1/00** **Special treatment of metallic powder, e.g. to facilitate working, to improve properties; Metallic powders per se , e.g. mixtures of particles of different composition**

adopt M 9/00 **Making metallic powder or suspensions thereof; Apparatus or devices specially adapted therefor**

adopt M 9/04 · · starting from solid material, e.g. by crushing, grinding or milling

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**ANNEX 19E B24B [ Project-Rapporteur : D146/EP ] <CE44>**

adopt M Title **MACHINES, DEVICES, OR PROCESSES FOR GRINDING OR POLISHING** (by electro-erosion **B23H**; abrasive or related blasting **B24C**; electrolytic etching or polishing **C25F 3/00**) ; **DRESSING OR CONDITIONING OF ABRADING SURFACES; FEEDING OF GRINDING, POLISHING, OR LAPPING AGENTS**

adopt M 1/04 · · subjecting the grinding or polishing tools, the abrading or polishing medium or work to vibration, e.g. grinding with ultrasonic frequency (involving oscillating or vibrating containers **B24B 31/06**; superfinishing surfaces on work, e.g. by means of abrading blocks reciprocating with high frequency **B24B 35/00**)

adopt M 3/00 **Sharpening cutting edges, e.g. of tools; Accessories therefor, e.g. for holding the tools** (non-abrasive sharpening devices for scythes, sickles, or the like **A01D 3/00**; sharpening devices designed as components of machines with cutters, see the relevant places for the machines, e.g. **A01D 75/08**, **B26D 7/12**)

adopt M 3/48 · · of razor blades or razors (by an abrasive block without mechanisms **B24D 15/06**)

adopt M 5/18 · · involving centreless means for supporting, guiding, floating or rotating work

adopt M 5/50 · · characterised by a special design with respect to properties of the material of non-metallic articles to be ground, e.g. strings

adopt M 7/02 · involving a reciprocatingly-moved work-table

adopt M 7/10 · Single-purpose machines or devices

adopt M 7/14 · · for grinding slideways

adopt M 7/16 · · for grinding end faces, e.g. of gauges, rollers, nuts or piston rings (for combined grinding of surfaces of revolution and of adjacent plane surfaces on work [B24B 5/01](#))

adopt M 7/18 · · for grinding floorings, walls, ceilings or the like

adopt M **11/00** **Machines or devices designed for grinding spherical surfaces or parts of spherical surfaces on work; Accessories therefor**

adopt M **15/00** **Machines or devices designed for grinding seat surfaces; Accessories therefor**

adopt M **17/00** **Special adaptations of machines or devices for grinding controlled by patterns, drawings, magnetic tapes or the like; Accessories therefor**

adopt M **19/00** **Single purpose machines or devices for particular grinding operations not covered by any other main group** (grinding screw threads [B23G 1/36](#))

adopt M 19/11 · · for grinding the circumferential surface of rings, e.g. piston rings

adopt M 19/14 \* for grinding turbine blades, propeller blades or the like

adopt M 19/16 \* for grinding sharp-pointed workpieces, e.g. needles, pens, fish hooks, tweezers or record player styli (polishing of needles **B24B 29/08**)

adopt M 19/18 \* for grinding carding equipment, e.g. card-clothings

adopt M 19/20 \* for grinding dies

adopt M 19/26 \* for grinding workpieces with arcuate surfaces, e.g. parts of car bodies, bumpers or magnetic recording heads

adopt M 19/28 \* for grinding shoes or linings of drum brakes

adopt M **21/00** **Machines or devices using grinding or polishing belts** (portable belt-grinding machines **B24B 23/06**) ; **Accessories therefor**

adopt M 21/16 \* for grinding other surfaces of particular shape

adopt M **23/00** **Portable grinding machines, e.g. hand-guided; Accessories therefor** (**B24B 7/18** takes precedence; dust extraction equipment **B24B 55/10**)

adopt M **29/00** **Machines or devices for polishing surfaces on work by means of tools made of soft or flexible material with or without the application of solid or liquid polishing**

**agents** (for grinding or polishing using belts **B24B 21/00**)

adopt M **31/00** **Machines or devices designed for polishing or abrading surfaces on work by means of tumbling apparatus or other apparatus in which the work or the abrasive material is loose; Accessories therefor** (abrasive blasting machines **B24C 3/26**)

adopt M 31/12 \* Accessories; Protective equipment or safety devices; Installations for exhaustion of dust or for sound absorption specially adapted for machines covered by group **B24B 31/00**

adopt M 33/06 \* with controlling or gauging equipment

adopt M **39/00** **Burnishing machines or devices, i.e. requiring pressure members for compacting the surface zone; Accessories therefor** (**B24B 3/00** takes precedence)

adopt M **45/00** **Means for securing grinding wheels on rotary arbors**

adopt M **53/00** **Devices or means for dressing or conditioning abrasive surfaces**

adopt M 53/095 \* Cooling or lubricating during dressing operation

adopt M **55/00** **Safety devices for grinding or polishing machines; Accessories fitted to grinding or polishing machines for keeping tools or parts of the machine in good working condition**

adopt M 55/02 \* Equipment for cooling the grinding surfaces, e.g. devices for feeding coolant (incorporated in grinding wheels **B24D**)

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**ANNEX 20E    B24D            [ Project-Rapporteur : D235/EP ]    <CE44>**

adopt M **Title** **TOOLS FOR GRINDING, BUFFING OR SHARPENING** (abrading-bodies specially designed for tumbling apparatus, e.g. abrading-balls **B24B 31/14**; honing tools **B24B 33/08**; lapping tools **B24B 37/11**)

adopt M **3/00** **Physical features of abrasive bodies, or sheets, e.g. abrasive surfaces of special nature; Abrasive bodies or sheets characterised by their constituents**

adopt M 5/06 ·            with inserted abrasive blocks, e.g. segmental

adopt M 7/06 ·            with inserted abrasive blocks, e.g. segmental

adopt M 7/18 ·            Wheels of special form

adopt M **9/00** **Wheels or drums supporting in exchangeable arrangement a layer of flexible abrasive material, e.g. sandpaper**

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**ANNEX 21E    B25C            [ Project-Rapporteur : M014/IB ]    <CE44>**

adopt U **9/00** < unchanged >

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**ANNEX 22E    B25F            [ Project-Rapporteur : D150/BR ]    <CE44>**



adopt M 1/00 **Combination or multi-purpose hand tools**

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**ANNEX 23E B25H [ Project-Rapporteur : D151/BR ] <CE44>**

adopt M Title **WORKSHOP EQUIPMENT, e.g. FOR MARKING-OUT WORK; STORAGE MEANS FOR WORKSHOPS**

adopt M 3/00 **Storage means or arrangements for workshops facilitating access to, or handling of, work, tools or instruments**

adopt M 5/00 **Tool, instrument or work supports or storage means used in association with vehicles; Workers' supports, e.g. mechanics' creepers**

adopt M 7/00 **Marking-out or setting-out work** (appliances or methods for marking-out, perforating, or making buttonholes [A41H 25/00](#); cord line chalkers [B44D 3/38](#))

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**ANNEX 24E B26D [ Project-Rapporteur : D152/DE ] <CE44>**

adopt M Title **CUTTING; DETAILS COMMON TO MACHINES FOR PERFORATING, PUNCHING, CUTTING-OUT, STAMPING-OUT OR SEVERING** (disintegrating by knives or other cutting or tearing members which chop material into fragments [B02C 18/00](#); cutting by abrasive fluid jets [B24C 5/02](#); hand-held cutting tools [B26B](#))

adopt M 1/06 · · · wherein the cutting member reciprocates

adopt M 1/12 · · · having a cutting member moving about an axis ([B26D 1/547](#) takes precedence)

- adopt M 1/36 · · · · · and rotating continuously in one direction during cutting, e.g. mounted on a rotary cylinder
- adopt M 1/56 · involving a cutting member which travels with the work, i.e. flying cutter
- adopt M 3/10 · Making cuts of other than simple rectilinear form (cutting-out or stamping-out **B26F 1/38**)
- adopt M 3/14 · Forming notches in marginal portion of work by cutting
- adopt M 3/18 · to obtain cubes or the like
- adopt M 3/28 · Splitting layers from work; Mutually separating layers by cutting (**B26D 3/30** takes precedence)
- adopt M 5/42 · with interrelated action between work feed and clamp
- adopt M **7/00** **Details of apparatus for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting**
- adopt M 7/06 · Arrangements for feeding or delivering work of other than sheet, web, or filamentary form

adopt M 7/10 · · by heating (severing with heated members [B26F 3/08](#))

adopt M 7/22 · Safety devices specially adapted for cutting machines

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**ANNEX 25E B27G [ Project-Rapporteur : M707/EP ] <CE44>**

adopt M **Title** **ACCESSORY MACHINES OR APPARATUS FOR WORKING WOOD OR SIMILAR MATERIALS; TOOLS FOR WORKING WOOD OR SIMILAR MATERIALS** (tools for grinding [B24D](#); sawing tools [B27B 33/00](#); tools for slotting or mortising machines [B27F 5/00](#); tools for the manufacture of wood shavings, chips, powder or the like [B27L 11/00](#)) ; **SAFETY DEVICES FOR WOOD WORKING MACHINES OR TOOLS**

adopt M Subclass  
index DEVICES OR MACHINES FOR REMOVING KNOTS OR OTHER UNUSABLE PARTS [1/00, 3/00](#)  
DEVICES OR MACHINES FOR WORKING MITRE JOINTS OR FOR GLUING [5/00, 11/00](#)  
TOOLS [13/00, 15/00, 17/00](#)  
DEVICES FOR SAFETY, GAUGING OR PROPER OPERATION [19/00, 21/00, 23/00](#)

adopt M Guidance [Tools specially adapted for working wood or similar materials](#)  
heading  
13/00-  
17/00

adopt M **13/00** **Cutter blocks; Other rotary cutting tools specially adapted for working wood or similar materials** ([B27G 15/00](#), [B27G 17/00](#) take precedence)

adopt M **23/00** **Gauging means specially designed for adjusting of tools or guides, e.g. adjusting cutting blades in cutter blocks** (for arrangement on manually operated saws [B27B 21/08](#); for guides of sawing machines [B27B 27/00](#))

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**ANNEX 26E    B27K            [ Project-Rapporteur : D215/SE ]    <CE44>**

adopt M **3/00** **Impregnating wood, e.g. for protection** (combined impregnating and drying **B27K 5/04**)

adopt M **5/00** **Staining or dyeing wood; Bleaching wood; Treating of wood not provided for in groups **B27K 1/00** or **B27K 3/00****

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**ANNEX 27E    B29D            [ Project-Rapporteur : D246/BR ]    <CE44>**

adopt M **11/00** **Producing optical elements, e.g. lenses or prisms**

adopt M **12/02**    Spectacle frames

adopt M **17/00** **Producing carriers of records containing fine grooves or impressions, e.g. disc records for needle playback or cylinder records; Producing record discs from master stencils**

adopt M **28/00** **Producing nets or the like**

adopt M **30/00** **Producing pneumatic or solid tyres or parts thereof** (producing inner tubes **B29D 23/24**; connection of valves to inflatable elastic bodies **B60C 29/00**)

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**ANNEX 28E    B29D            [ Project-Rapporteur : M010/IB ]    <CE44>**

adopt M 30/26 \* \* \* \* \* Accessories or details, e.g. membranes or transfer rings

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**ANNEX 29E    B29D            [ Project-Rapporteur : D246/BR ]    <CE44>**

adopt M 30/38 \* \*    Textile inserts, e.g. cord or canvas layers, for tyres; Treatment of inserts prior to building the tyre (manufacture of layers comprising fibrous parallel reinforcements of substantial or continuous length [B29C 70/20](#))

adopt M 30/44 \* \* \*    Stretching or treating the layers before application on the drum

adopt M 30/48 \* \*    Bead-rings or bead-cores; Treatment thereof prior to building the tyre

adopt M 30/50 \* \* \*    Covering, e.g. by winding, the separate bead-rings or bead-cores with textile material, e.g. with flipper strips

adopt M 30/52 \* \*    Unvulcanised treads, e.g. on used tyres; Retreading

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**ANNEX 30E    B42D            [ Project-Rapporteur : D155/EP ]    <CE44>**

adopt M Title **BOOKS; BOOK COVERS; LOOSE LEAVES; PRINTED MATTER OF SPECIAL FORMAT OR STYLE NOT OTHERWISE PROVIDED FOR; DEVICES FOR USE THEREWITH AND NOT OTHERWISE PROVIDED FOR; MOVABLE-STRIP WRITING OR READING APPARATUS**

adopt M 1/00 **Books or other bound products** (indexing features [B42F 21/00](#))

adopt M **5/00** **Sheets united without binding to form pads or blocks**

adopt M 5/02 · Form sets

adopt M 5/04 · Calendar blocks

adopt M **9/00** **Bookmarkers; Spot indicators; Devices for holding books open** (indexing tabs for sheets **B42F 21/00**) ; **Leaf turners**

adopt M **13/00** **Loose leaves modified for binding; Inserts** (indexing features **B42F 21/00**)

adopt M **15/00** **Printed matter of special format or style not otherwise provided for**

adopt M 15/02 · Postcards; Greeting, menu, business or like cards; Letter cards or letter-sheets  
(**B42D 15/10** takes precedence)

adopt M 15/10 · Identity, credit, cheque or like information-bearing cards (record carriers, e.g. credit or identity cards, for use with machines and with at least a part designed to carry digital markings **G06K 19/00**)

adopt M **19/00** **Movable-strip writing or reading apparatus**

- adopt M **Title** **MACHINES, APPARATUS OR TOOLS FOR ARTISTIC WORK, e.g. FOR SCULPTURING, GUILLOCHING, CARVING, BRANDING OR INLAYING** (ornamenting leather **C14B**)
- adopt M **3/00** **Artists' machines or apparatus equipped with tools or work holders moving or able to be controlled substantially two-dimensionally for carving, engraving, or guilloching shallow ornamenting or markings** (marking or engraving metal by the action of a high concentration of electric current **B23H 9/06**; forme engraving **B41C 1/02**; engraving by photomechanical reproduction **G03F 7/20**)
- adopt M **5/00** **Machines or apparatus for embossing decorations or marks, e.g. embossing coins** (corrugating sheet metal or metal tubes, embossing combined with sheet-metal-working operations **B21D**; embossing plastics or substances in a plastic state, in general **B29C 59/02**; embossing of paper or cardboard in general **B31F 1/07**; forme embossing **B41C 1/08**; printing machines for carrying out printing operations combined with embossing **B41F 19/02**; typewriters or selective printing or marking mechanisms adapted for embossing **B41J 3/38**; intaglio stamping devices or apparatus **B41K 1/30**, **B41K 3/16**; stamping apparatus with means for deforming the copy matter **B41K 3/36**; embossing leather **C14B 1/56**)
- adopt M **7/00** **Machines, apparatus, or hand tools for branding**
- adopt M **9/00** **Machines or apparatus for inlaying with ornamental structures, e.g. tarsia or mosaic work**

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ANNEX 32E    B44F            [ Project-Rapporteur : D158/BR ]    <CE44>

adopt M **5/00** **Designs characterised by irregular areas, e.g. mottled patterns**

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

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ANNEX 33E    B60R            [ Project-Rapporteur : A055/EP ]    <CE44>

adopt C 25/00 **Fittings or systems for preventing or indicating unauthorised use or theft of vehicles** (locks for vehicles [E05B 65/12](#))

adopt N 25/01 \*            *operating on vehicle systems or fittings, e.g. on doors, seats or windscreens*

adopt C 25/02 \* \*            *operating on the steering mechanism*

adopt N 25/021 \* \* \*        *restraining movement of the steering column or steering wheel hub, e.g. restraining means controlled by ignition switch*

adopt N 25/0215 \* \* \* \*        *using electric means, e.g. electric motors or solenoids*

adopt N 25/022 \* \* \*        *operating on the steering wheel, e.g. bars locked to the steering wheel rim ([B60R 25/021](#) takes precedence)*

adopt N 25/023 \* \* \*        *Countermeasures against the physical destruction of the steering lock*

adopt C 25/04 \* \*            *operating on the propulsion system, e.g. engine or drive motor*

adopt N 25/042 \* \* \*        *operating on the fuel supply*



adopt N 25/043 \* \* \* *by blocking the exhaust*

adopt N 25/044 \* \* \* *by limiting or blocking the air supply*

adopt N 25/045 \* \* \* *by limiting or cutting the electrical supply to the propulsion unit*

adopt C 25/06 \* \* \* *operating on the vehicle transmission*

adopt C 25/08 \* \* \* *operating on brakes or brake systems*

adopt N 25/09 \* \* \* *by restraining wheel rotation, e.g. wheel clamps*

adopt C 25/10 \* \* \* *actuating a signalling device*

adopt N 25/102 \* \* \* *a signal being sent to a remote location, e.g. a radio signal being transmitted to a police station, a security company or the owner*

adopt N 25/104 \* \* \* *characterised by the type of theft warning signal, e.g. visual or audible signals with special characteristics*

adopt N 25/20 \* \* \* *Means to switch the anti-theft system on or off*

adopt N 25/21 \* \* \* *using hidden switches*

- adopt N 25/22 \* \* *using mechanical identifiers*
- adopt N 25/23 \* \* *using manual input of alphanumerical codes*
- adopt N 25/24 \* \* *using electronic identifiers containing a code not memorised by the user*
- adopt N 25/25 \* \* *using biometry*
- adopt N 25/30 \* *Detection related to theft or to other events relevant to anti-theft systems*
- adopt N 25/31 \* \* *of human presence inside or outside the vehicle*
- adopt N 25/32 \* \* *of vehicle dynamic parameters, e.g. speed or acceleration*
- adopt N 25/33 \* \* *of global position, e.g. by providing GPS coordinates*
- adopt N 25/34 \* \* *of conditions of vehicle components, e.g. of windows, door locks or gear selectors*
- adopt N 25/40 \* *Features of the power supply for the anti-theft system, e.g. anti-theft batteries, back-up power supply or means to save battery power*
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**ANNEX 34E B62J [ Project-Rapporteur : A046/EP ] <CE44>**

adopt M **35/00** **Fuel tanks specially adapted for motorcycles or engine-assisted cycles; Arrangements thereof**

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**ANNEX 35E B62K [ Project-Rapporteur : A046/EP ] <CE44>**

adopt D Note < Deleted / Supprimée >  
1/00-  
5/00

adopt C **5/00** **Cycles with handlebars, equipped with three or more main road wheels** (cycle supports or stands equipped with additional wheels for ride stabilisation **B62H 1/12**)

adopt N **5/003** \* *Cycles with four or more wheels, specially adapted for disabled riders, e.g. personal mobility type vehicles with four wheels (wheelchairs **A61G 5/00**)*

adopt N **5/007** \* \* *power-driven*

adopt N **5/01** \* *Motorcycles with four or more wheels (specially adapted for disabled riders **B62K 5/003**)*

adopt C **5/02** \* *Tricycles (children's tricycles **B62K 9/02**)*

adopt N **5/023** \* \* *specially adapted for disabled riders, e.g. personal mobility type vehicles with three wheels (wheelchairs **A61G 5/00**)*

adopt N 5/025 · · · *power-driven*

adopt N 5/027 · · *Motorcycles with three wheels (specially adapted for disabled riders [B62K 5/023](#))*

adopt D 5/04 (transferred to [B62K 5/02](#),[B62K 5/05](#) )

adopt N 5/05 · · *characterised by a single rear wheel*

adopt M 5/06 · · Frames for tricycles

adopt M 5/08 · with steering devices acting on two or more wheels

adopt N 5/10 · *with means for inwardly inclining the vehicle body on bends*

adopt C 11/00 ***Motorcycles, engine-assisted cycles or motor scooters with one or two wheels***  
*(fairings or streamlining parts not forming part of the frame [B62J](#); transmission of drive from engines to wheels [B62M](#))*

adopt M 11/14 · Handlebar constructions, or arrangements of controls thereon, specially adapted thereto (hand controls per se [B62K 23/02](#))  
***"Handlebar" should be in one word.***

adopt M 21/12 · Handlebars; Handlebar stems  
***"Handlebar" should be in one word.***

adopt M 21/18 · Connections between forks and handlebars or handlebar stems  
***"Handlebar" should be in one word.***

adopt M 21/26 · Handlebar grips (twist grips **B62K 23/04**)  
**"Handlebar" should be in one word.**

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**ANNEX 36E B62M [ Project-Rapporteur : A045/EP ] <CE44>**

adopt D 1/02 (transferred to **B62M 1/36** )

adopt D 1/04 (transferred to **B62M 1/24** )

adopt D 1/06 (transferred to **B62M 1/00** )

adopt D 1/08 (transferred to **B62M 1/32,B62M 1/38** )

adopt M 1/12 · operated by both hand and foot power

adopt M 1/14 · operated exclusively by hand power

adopt M 1/16 · · by means of a to-and-fro movable handlebar  
**"Handebar" should be in one word.**

adopt N 1/24 · *with reciprocating levers, e.g. foot levers (levers which can be immobilised as foot rests* **B62M 5/00**)

adopt N 1/26 · · *characterised by rotary cranks combined with reciprocating levers*

adopt N 1/28 · · · *characterised by the use of flexible drive members, e.g. chains*

adopt N 1/30 · · · *characterised by the use of intermediate gears*

adopt N 1/32 · · · *characterised by directly driving the wheel axle, e.g. by using a ratchet wheel*

adopt N 1/34 · · · *by walking on an endless belt*

adopt N 1/36 · · · *with rotary cranks, e.g. with pedal cranks (B62M 1/34 takes precedence; combined with reciprocating levers B62M 1/26; cranks which can be immobilised as foot rests B62M 5/00)*

adopt N 1/38 · · · *for directly driving the wheel axle*

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**ANNEX 37E B63B [ Project-Rapporteur : D159/GB ] <CE44>**

adopt M **Title SHIPS OR OTHER WATERBORNE VESSELS; EQUIPMENT FOR SHIPPING**  
(arrangements of vessel ventilation, heating, cooling, or air-conditioning **B63J 2/00**;  
floating substructures as supports of dredgers or soil-shifting machines **E02F 9/06**)

adopt M **1/00 Hydrodynamic or hydrostatic features of hulls or of hydrofoils** (hulls peculiar to  
submarines **B63B 3/13**; keels **B63B 3/38**)

adopt M 1/18 · · · of hydroplane type

adopt M **3/00** **Constructions of hulls** (non-metallic hulls **B63B 5/00**)

adopt M 7/08 \* \* inflatable (inflatable buoys **B63B 22/22**; inflatable life-rafts **B63C 9/04**)

adopt M 11/04 \* Constructional features of bunkers or ballast tanks, e.g. with elastic walls

adopt M **13/00** **Conduits for emptying or ballasting; Self-bailing equipment; Scuppers**

adopt M **15/00** **Superstructures; Arrangements or adaptations of masts**

adopt U **17/00** < unchanged >

adopt M 17/06 \* Refuse discharge, e.g. for ash

adopt M 19/04 \* Air-catching equipment related to windows or port-holes

adopt M 19/08 \* Ports or like openings in vessels' sides (ports for passing water through vessels'  
sides **B63B 13/02**)

adopt M 19/14 \* \* Hatch covers

adopt M **21/00** **Tying-up; Shifting, towing, or pushing equipment; Anchoring** (dynamic anchoring  
**B63H 25/00**)

adopt M 21/08 \* \* Clamping devices

adopt M 21/16 \* using winches

adopt M 21/20 \* Adaptations of chains, ropes, hawsers, or the like, or of parts thereof

adopt M 21/58 \* \* Adaptations of hooks for towing; Towing-hook mountings

adopt M 21/62 \* \* characterised by moving of more than one vessel

adopt M 21/64 \* \* Equipment for towing or pushing vessels by vehicles or beings moving forward on ground-based paths along water-way (boat-hooks or the like **B63B 21/54**)

adopt M 21/66 \* \* Equipment specially adapted for towing underwater objects or vessels, e.g. fairings for tow-cables

adopt M 22/16 \* specially adapted for marking a navigational route

adopt M 22/22 \* inflatable, including gas generating means (**B63B 22/12** takes precedence)

adopt M 22/26 \* \* having means to selectively release contents, e.g. swivel couplings



adopt M 23/20 \* \* \* Davits with single arms

adopt M 23/48 \* \* using winches for boat handling

adopt M **25/00** **Load-accommodating arrangements, e.g. stowing or trimming; Vessels characterised thereby** (fishing vessel fish holds **B63B 35/24**; trimming otherwise than by cargo division. e.g. by use of ballast, **B63B 43/06**, **B63B 43/08**)

adopt M 25/16 \* \* \* \* heat-insulated

adopt M **27/00** **Arrangement of ship-based loading or unloading equipment for cargo or passengers** (self-discharging barges or lighters **B63B 35/30**; floating cranes **B66C 23/52**)

adopt M 27/04 \* of derricks

adopt M 27/08 \* of winches

adopt M 27/10 \* of cranes

adopt M 27/14 \* of ramps, gangways or outboard ladders

adopt M 27/18 \* of cableways, e.g. with breeches-buoys

adopt M 27/22 \* of conveyors, e.g. of endless-belt or screw-type

adopt M 27/24 \* of pipe-lines

adopt M 27/26 \* of devices with throwing action

adopt M 27/28 \* of chutes

adopt M 27/36 \* for floating cargo

adopt M 29/04 \* Furniture specially adapted for vessels

adopt M **35/00** **Vessels or like floating structures adapted for special purposes** (vessels characterised by load- accommodating arrangements **B63B 25/00**; mine-laying or mine-sweeping vessels, submarines, aircraft carriers or other vessels characterised by their offensive or defensive arrangements **B63G**)

adopt M 35/03 \* Pipe-laying vessels

adopt M 35/14 \* Fishing vessels

adopt M 35/34 \* Pontoons

adopt M 35/50 \* Vessels or floating structures for aircraft (aircraft carriers **B63G 11/00**)

adopt M 35/54 · Ferries

adopt M 35/56 · Lightships (marking of navigational route with anchored lightships **B63B 51/02**)

adopt M 35/58 · Rafts, i.e. free floating waterborne vessels, of shallow draft, with little or no freeboard, and having a platform or floor for supporting a user (life-rafts or the like **B63C 9/02**)

adopt M 35/66 · Tugs

adopt M 35/71 · Canoes, kayaks or the like

adopt M 35/76 · · · Ring-shaped buoyant members (ring-shaped life-buoys **B63C 9/08**)

adopt M 35/78 · · · U-shaped buoyant members

adopt M **38/00** **Vessels or like floating structures not otherwise provided for**

adopt M **41/00** **Drop keels, e.g. centre boards or side boards**

adopt M **43/00** **Improving safety of vessels, e.g. damage control, not otherwise provided for**

adopt M 43/06 \* \* \* using ballast tanks

adopt M **45/00 Arrangements or adaptations of signalling or lighting devices** (life-buoys, life-belts, life-jackets, life-suits or the like, characterised by signalling means **B63C 9/20**)

adopt M **49/00 Arrangements of nautical instruments or navigational aids**

adopt M **51/00 Marking of navigational routes otherwise than with buoys**

adopt M **57/00 Tank cleaning specially adapted for vessels**

adopt M **59/00 Hull protection specially adapted for vessels; Cleaning devices specially adapted for vessels**

adopt M 59/02 \* Fenders integral with waterborne vessels or specially adapted therefor; Rubbing-strakes (skid fenders for lifeboats **B63B 23/36**)

adopt M 59/04 \* Preventing hull fouling

adopt N **69/00 Equipment for shipping not otherwise provided for**

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**ANNEX 38E B63C [ Project-Rapporteur : M014/IB ] <CE44>**

adopt M 11/16 \* \* \* with air supply by suction from diver, e.g. snorkels

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**ANNEX 39E    B65G                    [ Project-Rapporteur : M014/IB ]    <CE44>**

adopt M    **Title**    **TRANSPORT OR STORAGE DEVICES, e.g. CONVEYORS FOR LOADING OR TIPPING, SHOP CONVEYOR SYSTEMS OR PNEUMATIC TUBE CONVEYORS**  
(transport or storage devices used in a particular handling or treatment of articles or materials, see the relevant subclass, e.g. in metal-working **B21D 43/00**, **B23Q 7/00**, **B23Q 41/02**; vehicle, railway, sea or aircraft aspects **B60-B64**; transportation, conveyor or haulage systems specially adapted for motor vehicle or trailer assembly lines **B62D 65/18**; in packaging **B65B**; handling thin or filamentary materials **B65H**; hoisting, lifting, hauling, e.g. truck loaders **B66**; handling liquids **B67**; specially adapted to underground conditions **E21F 13/00**; storing or distributing gases or liquids **F17**; in handling radioactive materials **G21C 19/00**)

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**ANNEX 40E    B66B                    [ Project-Rapporteur : D017/US ]    <CE44>**

adopt M    **Title**    **ELEVATORS; ESCALATORS OR MOVING WALKWAYS** (life-saving devices used as an alternative to normal egress means, e.g. stairs, during rescue to lower persons in cages, bags, or similar supports from buildings or other structures **A62B 1/02**; equipment for handling freight or for facilitating passenger embarkation or the like to aircraft **B64D 9/00**; braking or detent devices characterised by their application to lifting or hoisting gear **B66D 5/00**)

adopt M    **1/00**    **Control systems of elevators in general** (safety devices **B66B 5/00**; controlling door or gate operation **B66B 13/00**)

adopt M    1/46    · ·    Adaptations of switches or switchgear

adopt M    1/48    · · ·    Adaptations of mechanically-operated limit switches

adopt M    7/02    ·        Guideways; Guides

adopt M **9/00** **Kinds or types of lifts in, or associated with, buildings or other structures**  
(characterised by control systems **B66B 1/00**)

adopt M 9/10 · paternoster type

adopt M 9/16 · Mobile or transportable lifts specially adapted to be shifted from one part of a building or other structure to another part or to another building or structure

adopt M **13/00** **Doors, gates, or other apparatus controlling access to, or exit from, cages or lift-well landings**

adopt M 13/02 · Door or gate operation

adopt M 13/30 · Constructional features of doors or gates

adopt M 17/02 · mounted in head-frames

adopt M 17/14 · Applications of loading or unloading equipment

adopt M 17/16 · · for loading or unloading mining-hoist cars or cages

adopt M 17/28 · · electrically controlled

adopt M 19/06 · Applications of signalling devices (depth indicators **B66B 3/02**)

adopt M **25/00** **Control of escalators or moving walkways** (walkways of variable speed type **B66B 21/12**; handrails of variable speed type **B66B 23/26**)

adopt M **27/00** **Indicating operating conditions of escalators or moving walkways**

adopt M **29/00** **Safety devices of escalators or moving walkways**

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**ANNEX 41E C02F [ Project-Rapporteur : M726/SE ] <CE44>**

- adopt M Note  
C02F
1. When classifying in this subclass, classification is also made in group **B01D 15/08** insofar as subject matter of general interest relating to chromatography is concerned. **[8]**
  2. In this subclass, it is desirable to add the indexing codes of groups **C02F 101/00** or **C02F 103/00**. **[7]**

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**ANNEX 42E C03B [ Project-Rapporteur : D236/EP ] <CE44>**

adopt M 9/41 · · · Electric or electronic systems

adopt M **35/00** **Transporting of glass products during their manufacture**

adopt M 37/07 · Controlling or regulating

adopt M 37/08 · Bushings; Spinnerettes; Nozzles; Nozzle plates

adopt M 37/10 · Non-chemical treatment ([C03C 25/00](#) takes precedence)

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**ANNEX 43E C03C [ Project-Rapporteur : D237/EP ] <CE44>**

adopt M **15/00 Surface treatment of glass, not in the form of fibres or filaments, by etching**

adopt M **17/00 Surface treatment of glass, e.g. of devitrified glass, not in the form of fibres or filaments, by coating**

adopt M 27/06 · Joining glass to glass by processes other than fusing

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**ANNEX 44E C05B [ Project-Rapporteur : D266/GB ] <CE44>**

adopt M **19/00 Granulation or pelletisation of phosphatic fertilisers other than slag**

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**ANNEX 45E C11C [ Project-Rapporteur : D262/RU ] <CE44>**

adopt M **3/00 Fats, oils, or fatty acids by chemical modification of fats, oils, or fatty acids obtained therefrom** (sulfonated fats or oils [C07C 309/62](#); vulcanised oils, e.g. factice [C08H 3/00](#))



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**ANNEX 46E C12 [ Project-Rapporteur : M726/SE ] <CE44>**

- adopt M Note  
C12
1. Between subclasses **C12M-C12Q**, and within each of these subclasses, in the absence of an indication to the contrary, classification is made in the last appropriate place. For example, a fermentation or enzyme-using process involving condition-responsive control is classified in subclass **C12Q**. [3]
  2. In this class, viruses, undifferentiated human, animal or plant cells, protozoa, tissues and unicellular algae are considered as micro-organisms. [3,5]
  3. In this class, unless specifically provided for, undifferentiated human, animal or plant cells, protozoa, tissues and unicellular algae are classified together with micro-organisms. Sub-cellular parts, unless specifically provided for, are classified with the whole cell. [5]
  4. The codes of subclass **C12R** are only for use as indexing codes associated with subclasses **C12C-C12Q**, so as to provide information concerning the micro-organisms used in the processes classified in these subclasses. [3]

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**ANNEX 47E C12R [ Project-Rapporteur : M726/SE ] <CE44>**

adopt M Title **INDEXING SCHEME ASSOCIATED WITH SUBCLASSES C12C-C12Q, RELATING TO MICRO-ORGANISMS**

- adopt M Note  
C12R
1. This subclass constitutes an indexing scheme associated with the other subclasses of class **C12**, relating to micro-organisms used in the processes classified in subclasses **C12C-C12Q**. [3]
  2. The bacteria terminology is based on "Bergey's Manual of Determinative Bacteriology", Eighth Edition, 1975. [3]

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**ANNEX 48EF C12S [ Project-Rapporteur : M726/SE ] <CE44>**

adopt D C12S- <deleted without transferred to / covered by>  
C12S 99/00

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**ANNEX 49E C13 [ Project-Rapporteur : M726/SE ] <CE44>**

adopt M Note In class **C13**, the following terms or expressions are used with the meanings indicated:  
C13 • "sugars" are a class of edible, water-soluble crystalline carbohydrates, having a characteristic sweet taste, including mono-, di- and oligosaccharides, e.g. sucrose, lactose and fructose. A more specific meaning of the term "sugar" is defined in the note of subclass **C13B**. [2011]

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**ANNEX 50E C14C [ Project-Rapporteur : M726/SE ] <CE44>**

adopt M Title **TREATING SKINS, HIDES OR LEATHER WITH CHEMICALS, ENZYMES OR MICRO-ORGANISMS, e.g. TANNING, IMPREGNATING OR FINISHING; APPARATUS THEREFOR; COMPOSITIONS FOR TANNING** (bleaching of leather or furs **D06L**; dyeing of leather or furs **D06P**)

adopt D Note / < Deleted / Supprimée >  
Note  
C14C

adopt M 1/00 **Treating skins or hides with chemicals, enzymes or micro-organisms prior to tanning**

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**ANNEX 51E C25B [ Project-Rapporteur : D238/EP ] <CE44>**

adopt M Title **ELECTROLYTIC OR ELECTROPHORETIC PROCESSES FOR THE PRODUCTION OF COMPOUNDS OR NON- METALS; APPARATUS THEREFOR** (anodic or cathodic protection **C23F 13/00**; single-crystal growth **C30B**)

adopt M 9/04 • Devices for current supply; Electrode connections; Electric inter-cell connections

adopt M 11/06 \* \* by the catalytic materials used

adopt M 11/12 \* \* Electrodes based on carbon

adopt M 15/02 \* Process control or regulation

adopt M 15/04 \* Regulation of the inter-electrode distance

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**ANNEX 52E C25C [ Project-Rapporteur : D259/EP ] <CE44>**

adopt M **Title** **PROCESSES FOR THE ELECTROLYTIC PRODUCTION, RECOVERY OR REFINING OF METALS; APPARATUS THEREFOR** (anodic or cathodic protection [C23F 13/00](#); single-crystal growth [C30B](#))

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**ANNEX 53E C25D [ Project-Rapporteur : D239/EP ] <CE44>**

adopt M **Title** **PROCESSES FOR THE ELECTROLYTIC OR ELECTROPHORETIC PRODUCTION OF COATINGS; ELECTROFORMING** (manufacturing printed circuits by metal deposition [H05K 3/18](#)) ; **JOINING WORKPIECES BY ELECTROLYSIS; APPARATUS THEREFOR** (anodic or cathodic protection [C23F 13/00](#); single-crystal growth [C30B](#))

adopt M 11/18 \* \* \* After-treatment, e.g. pore-sealing

adopt M **13/00** **Electrophoretic coating** ([C25D 15/00](#) takes precedence; compositions for electrophoretic coating [C09D 5/44](#))

adopt M 17/00 **Constructional parts, or assemblies thereof, of cells for electrolytic coating**

adopt M 21/12 \* Process control or regulation

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**ANNEX 54E C25F [ Project-Rapporteur : D240/EP ] <CE44>**

adopt M Title **PROCESSES FOR THE ELECTROLYTIC REMOVAL OF MATERIALS FROM OBJECTS; APPARATUS THEREFOR** (treatment of water, waste water or sewage by electrochemical methods **C02F 1/46**; anodic or cathodic protection **C23F 13/00**)

adopt M 7/00 **Constructional parts, or assemblies thereof, of cells for electrolytic removal of material from objects** (for both electrolytic coating and removal **C25D 17/00**) ; **Servicing or operating**

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**ANNEX 55E D01C [ Project-Rapporteur : M726/SE ] <CE44>**

adopt M Title **CHEMICAL OR BIOLOGICAL TREATMENT OF NATURAL FILAMENTARY OR FIBROUS MATERIAL TO OBTAIN FILAMENTS OR FIBRES FOR SPINNING; CARBONISING RAGS TO RECOVER ANIMAL FIBRES**

adopt M Note Attention is drawn to the Note following the title of class **D01**.  
D01C

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**ANNEX 56E D06J [ Project-Rapporteur : D263/RU ] <CE44>**

adopt M Title **PLEATING, KILTING, OR GOFFERING TEXTILE FABRICS OR WEARING APPAREL**

(by weaving **D03D**; by sewing **D05B**; apparatus for pressing or setting formed pleats **D06C**)

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**ANNEX 57EF D06L [ Project-Rapporteur : M726/SE ] <CE44>**

adopt D Note / < Deleted / Supprimée >  
Note  
D06L

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**ANNEX 58E D06M [ Project-Rapporteur : M726/SE ] <CE44>**

- adopt 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. 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. **[2010]**

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**ANNEX 59EF D06P [ Project-Rapporteur : M726/SE ] <CE44>**

adopt D Note / < Deleted / Supprimée >  
Note  
D06P

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**ANNEX 60E D21B [ Project-Rapporteur : D260/BR ] <CE44>**

adopt M 1/08 · · · the raw material being waste paper; the raw material being rags

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**ANNEX 61EF D21C [ Project-Rapporteur : M726/SE ] <CE44>**

adopt D Note / < Deleted / Supprimée >  
Note  
D21C

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**ANNEX 62E D21C [ Project-Rapporteur : D260/BR ] <CE44>**

adopt M **3/00** **Pulping cellulose-containing materials**

adopt M **5/00** **Other processes for obtaining cellulose, e.g. cooking cotton linters**

adopt M 5/02 · Working-up waste paper (mechanical processes for working-up waste paper **D21B**  
**1/08, D21B 1/32**)

adopt M 9/18 · De-watering

adopt M 11/10 · Concentrating spent liquor by evaporation

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**ANNEX 63E    D21H            [ Project-Rapporteur : M726/SE ]    <CE44>**

- adopt M Note  
D21H
1. This subclass covers also pulp compositions for the preparation of fibreboard or other fibrous articles by wet processes. **[5]**
  2. In this subclass, the following terms are used with the meaning indicated:
    - "pulp" means a dispersion comprising paper-making fibres and optional additives, which is to be processed, and covers the term "stock"; it also means dry paper-making fibres which are to be made into paper by either wet or dry processes; **[5]**
    - "paper" means paper, cardboard or wet-laid non-woven fabrics.
  3. If a pulp composition or a paper, or a constituent thereof, is characterised by more than one feature provided for in this subclass, for example, by both the fibrous material and a coating or by both a colorant and a water-repelling agent, classification is made in all places providing for these features. **[8]**

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**ANNEX 64E    E21B            [ Project-Rapporteur : M014/IB ]    <CE44>**

adopt M 47/20 \* \* \* \*            by modulation of mud waves, e.g. by continuous modulation

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**ANNEX 65E    F16H            [ Project-Rapporteur : M014/IB ]    <CE44>**

adopt M 57/01 \*            Monitoring wear or stress of gearing elements, e.g. for triggering maintenance

adopt M 57/022 \* \* \*            Adjustment of gear shafts or bearings (for compensating misalignment of axes of toothed gearings without orbital motion **F16H 1/26**; for compensating misalignment of axes of planetary gears **F16H 1/48**)

adopt U 57/023 < unchanged >

adopt M 57/035 \* \* Gearboxes for gearing with endless flexible members

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**ANNEX 66E F23 [ Project-Rapporteur : M731/SE ] <CE44>**

adopt M Note In this class, the following terms or expressions are used with the meanings indicated:

F23

- "combustion" means the direct combination of oxygen gas, e.g. in air, and a burnable substance. Any other heat-producing combination of chemical substances, e.g. hydrogen peroxide and methane, iron oxide and aluminium, is covered by section C or by subclass **F24J**;
- "combustion chamber" means a chamber in which fuel is burned to establish a self-supporting fire or flame and which surrounds that fire or flame;
- "burner" means a device by which fluid fuel, or solid fuel suspended in air, is passed to a combustion space where it burns to produce a self-supporting flame;
- "air" means a mixture of gases containing free oxygen and able to promote or support combustion.

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**ANNEX 67E F23B [ Project-Rapporteur : M731/SE ] <CE44>**

adopt M Title **METHODS OR APPARATUS FOR COMBUSTION USING ONLY SOLID FUEL** (for combustion of fuels that are solid at room temperatures, but burned in melted form, e.g. candle wax, **C11C 5/00, F23C, F23D**; using solid fuel suspended in air **F23C, F23D 1/00**; using solid fuel suspended in liquids **F23C, F23D 11/00**; using solid fuel together with fluid fuel or with solid fuel suspended in air, simultaneously or alternately, **F23C, F23D 17/00**)

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**ANNEX 68E F23C [ Project-Rapporteur : M731/SE ] <CE44>**

adopt M Title **METHODS OR APPARATUS FOR COMBUSTION USING FLUID FUEL OR SOLID FUEL SUSPENDED IN AIR** (burners **F23D**)

adopt M 1/00 **Combustion apparatus specially adapted for combustion of two or more kinds of fuel simultaneously or alternately, at least one kind of fuel being either a fluid fuel or a solid fuel suspended in air** (combustion apparatus characterised by the



combination of two or more combustion chambers [F23C 6/00](#); pilot flame igniters [F23Q 9/00](#))

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ANNEX 69E    F23D            [ Project-Rapporteur : D241/SE ]    <CE44>

adopt M    Title **BURNERS**

adopt M    [1/00](#) **Burners for combustion of pulverulent fuel**

adopt M    [3/16](#)    · ·    using candles

adopt M    [11/00](#) **Burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space**

adopt M    [11/38](#)    · ·    Nozzles; Cleaning devices therefor

adopt M    [14/20](#)    ·        Non-premix gas burners, i.e. in which gaseous fuel is mixed with combustion air on arrival at the combustion zone ([F23D 14/38](#) takes precedence)

adopt M    [14/34](#)    ·        Burners specially adapted for use with means for pressurising the gaseous fuel or the combustion air

adopt M    [14/38](#)    ·        Torches, e.g. for brazing or heating (nozzles [F23D 14/48](#))

adopt M 14/48 \* \* Nozzles

adopt M 14/56 \* \* \* for spreading the flame over an area, e.g. for desurfacing of solid material, for surface hardening or for heating workpieces

adopt M 14/60 \* \* Devices for simultaneous control of gas and combustion air

adopt M 14/68 \* \* Treating the combustion air or gas, e.g. by filtering or moistening

adopt M 14/72 \* \* Safety devices, e.g. operative in case of failure of gas supply

adopt M 14/74 \* \* \* Preventing flame lift-off

adopt M 14/82 \* \* \* Preventing flashback or blowback

adopt M **23/00** **Assemblies of two or more burners** (gas burners with provision for a retention flame **F23D 14/26**)

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**ANNEX 70E F23G [ Project-Rapporteur : M731/SE ] <CE44>**

adopt 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 fluid fuel **F23B, F23C**)

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**ANNEX 71E F23L [ Project-Rapporteur : D242/SE ] <CE44>**

adopt M Title **SUPPLYING AIR OR NON-COMBUSTIBLE LIQUIDS OR GASES TO COMBUSTION APPARATUS IN GENERAL; VALVES OR DAMPERS SPECIALLY ADAPTED FOR CONTROLLING AIR SUPPLY OR DRAUGHT IN COMBUSTION APPARATUS; INDUCING DRAUGHT IN COMBUSTION APPARATUS; TOPS FOR CHIMNEYS OR VENTILATING SHAFTS; TERMINALS FOR FLUES**

adopt M 5/02 · Arrangements of fans or blowers

adopt M 13/00 **Construction of valves or dampers for controlling air supply or draught**

adopt M 17/00 **Inducing draught; Tops for chimneys or ventilating shafts; Terminals for flues**

adopt U 17/02 < unchanged >

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**ANNEX 72E F24F [ Project-Rapporteur : D219/SE ] <CE44>**

adopt M Title **AIR-CONDITIONING; AIR-HUMIDIFICATION; VENTILATION; USE OF AIR CURRENTS FOR SCREENING** (removing dirt or fumes from areas where they are produced **B08B 15/00**; vertical ducts for carrying away waste gases from buildings **E04F 17/02**; tops for chimneys or ventilating shafts, terminals for flues **F23L 17/02**)

adopt M 1/01 · in which secondary air is induced by injector action of the primary air

adopt M 3/00 **Air-conditioning systems in which conditioned primary air is supplied from one or more central stations to distributing units in the rooms or spaces where it may receive secondary treatment; Apparatus specially designed for such systems** (room units **F24F 1/00**)

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ANNEX 73E F41B [ Project-Rapporteur : A053/EP ] <CE44>

adopt M Subclass	BLOW GUNS	1/00
index	SLING WEAPONS	3/00
	FRICTION-WHEEL OPERATED LAUNCHERS	4/00
	BOWS, CROSSBOWS	5/00
	ELECTROMAGNETIC LAUNCHERS	6/00
	SPRING GUNS	7/00
	LIQUID PRESSURE GUNS, e.g. WATER PISTOLS	9/00
	COMPRESSED-GAS GUNS, STEAM GUNS	11/00
	THRUSTING WEAPONS, CUTTING WEAPONS	
	CARRIED AS SIDE-ARMS	13/00
	OTHER WEAPONS	15/00

adopt C 11/00 *Compressed-gas guns, e.g. air guns; Steam guns*

adopt D 11/02 (transferred to [F41B 11/50](#) )

adopt D 11/04 (transferred to [F41B 11/81](#) )

adopt D 11/06 (transferred to [F41B 11/62](#) )

adopt D 11/08 (transferred to [F41B 11/83](#) )

adopt D 11/12 (transferred to [F41B 11/64](#) )

adopt D 11/14 (transferred to [F41B 11/642](#) )

adopt D 11/16 (transferred to **F41B 11/644** )

adopt D 11/18 (transferred to **F41B 11/646** )

adopt D 11/20 (transferred to **F41B 11/647** )

adopt D 11/22 (transferred to **F41B 11/648** )

adopt D 11/24 (transferred to **F41B 11/66** )

adopt D 11/26 (transferred to **F41B 11/68** )

adopt D 11/28 (transferred to **F41B 11/681** )

adopt D 11/30 (transferred to **F41B 11/683** )

adopt D 11/32 (transferred to **F41B 11/72** )

adopt D 11/34 (transferred to **F41B 11/73** )

adopt N 11/50 \* *Magazines for compressed-gas guns; Arrangements for feeding or loading projectiles from magazines*

adopt N 11/51 \* \* *the magazine being an integral, internal part of the gun housing*

adopt N 11/52 \* \* *the projectiles being loosely held in a magazine above the gun housing, e.g. in a*

*hopper*

adopt N 11/53 \* \* \* *the magazine having motorised feed-assisting means*

adopt N 11/54 \* \* \* *the projectiles being stored in a rotating drum magazine*

adopt N 11/55 \* \* \* *the projectiles being stored in stacked order in a removable box magazine, rack or tubular magazine*

adopt N 11/56 \* \* \* *the magazine also housing a gas cartridge*

adopt N 11/57 \* \* \* *Electronic or electric systems for feeding or loading (**F41B 11/53** takes precedence)*

adopt N 11/60 \* \* \* *characterised by the supply of compressed gas*

adopt N 11/62 \* \* \* *with pressure supplied by a gas cartridge*

adopt N 11/64 \* \* \* *having a piston effecting a compressor stroke during the firing of each shot*

adopt N 11/641 \* \* \* *the piston being hand operated*

adopt N 11/642 \* \* \* *the piston being spring operated*

adopt N 11/643 \* \* \* \* *the piston being arranged concentrically with the barrel*

adopt N 11/644 \* \* \* \* *having an additional slidable mass moving in the opposite direction to the piston, e.g. for recoil reduction*

adopt N 11/645 \* \* \* \* *the slidable mass being a compressor piston*

adopt N 11/646 \* \* \* \* *Arrangements for putting the spring under tension*

adopt N 11/647 \* \* \* \* *by a rocker lever*

adopt N 11/648 \* \* \* \* *in breakdown air guns*

adopt N 11/66 \* \* *having deformable bellows or chambers pressed during firing, e.g. by deformation of the body of the gun*

adopt N 11/68 \* \* *the gas being pre-compressed before firing (**F41B 11/62** takes precedence)*

adopt N 11/681 \* \* \* *Pumping or compressor arrangements therefor*

adopt N 11/682 \* \* \* \* *Pressure accumulation tanks*

adopt N 11/683 \* \* \* \* *operated by a rocker-lever system*

adopt N 11/684 \* \* \* \* *in breakdown air guns*

adopt N 11/70 \* *Details not provided for in **F41B 11/50** or **F41B 11/60***

adopt N 11/71 \* \* *Electric or electronic control systems, e.g. for safety purposes (**F41B 11/57** takes precedence)*

adopt N 11/72 \* \* *Valves; Arrangement of valves*

adopt N 11/721 \* \* \* *for regulating gas pressure for both firing the projectile and for loading or feeding*

adopt N 11/722 \* \* \* *for regulating gas pressure for loading or feeding only*

adopt N 11/723 \* \* \* *for regulating gas pressure for firing the projectile only*

adopt N 11/724 \* \* \* *for gas pressure reduction*

adopt N 11/73 \* \* *Sealing arrangements; Pistons*

adopt N 11/80 \* *specially adapted for particular purposes*



adopt N 11/81 · · *for ejecting powder, e.g. pepper*

adopt N 11/83 · · *for launching harpoons*

adopt N 11/85 · · *for launching hypodermic projectiles*

adopt N 11/87 · · *for industrial purposes, e.g. for surface treatment*

adopt N 11/89 · · *for toys*

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**ANNEX 74E F41C [ Project-Rapporteur : D264/RU ] <CE44>**

adopt M **Title** **SMALLARMS, e.g. PISTOLS OR RIFLES** (projecting missiles without use of explosive or combustible propellant charge **F41B**) ; **ACCESSORIES THEREFOR**

adopt M **3/00** **Pistols** (for shooting bolts into concrete constructions, metal walls or the like **B25C**)

adopt M 3/14 · · Revolvers (**F41C 3/10** takes precedence)

adopt M **7/00** **Shoulder-fired smallarms, e.g. rifles, carbines or shotguns**

adopt M 7/11 · · Breakdown shotguns or rifles

adopt M 23/04 \* Folding or telescopic stocks or stock parts

adopt M 23/16 \* Forestocks; Handgrips; Hand guards

adopt M 27/04 \* Arrangements for mounting spades or shields

adopt M 27/06 \* Adaptations of smallarms for firing grenades, e.g. rifle grenades, or for firing riot-control ammunition; Barrel attachments therefor

adopt M 27/16 \* Smallarms combined with thrusting or cutting weapons; Bayonets; Bayonet mounts

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**ANNEX 75E F42C [ Project-Rapporteur : M014/IB ] <CE44>**

adopt M 19/00 **Details of fuzes** (arming means, safety means for preventing premature detonation  
**F42C 15/00**)

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**ANNEX 76E G01C [ Project-Rapporteur : C458/EP ] <CE44>**

adopt C 19/00 ***Gyroscopes; Turn-sensitive devices using vibrating masses; Turn-sensitive devices without moving masses; Measuring angular rate using gyroscopic effects***

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**ANNEX 77E G01F [ Project-Rapporteur : M013/IB ] <CE44>**

adopt M 1/84 · · · · Coriolis or gyroscopic mass flowmeters

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**ANNEX 78E G01M [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M **1/00** **Testing static or dynamic balance of machines or structures**

adopt M 1/08 · · Instruments for indicating directly the magnitude and phase of the unbalance

adopt M 1/22 · · · and converting vibrations due to unbalance into electric variables

adopt M 1/30 · Compensating unbalance (**G01M 1/38** takes precedence)

adopt M 1/32 · · by adding material to the body to be tested, e.g. by correcting-weights

adopt M **3/00** **Investigating fluid tightness of structures**

adopt M **5/00** **Investigating the elasticity of structures, e.g. deflection of bridges or aircraft wings**  
(**G01M 9/00** takes precedence)

adopt M **9/00** **Aerodynamic testing; Arrangements in or on wind tunnels**

adopt M **10/00** **Hydrodynamic testing; Arrangements in or on ship-testing tanks or water tunnels**

adopt M **13/00** **Testing of machine parts**

adopt M 13/02 · Testing of gearing or of transmission mechanisms

adopt M 17/06 · · of steering behaviour; of rolling behaviour

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**ANNEX 79E**    **G01N**            [ Project-Rapporteur : M037/IB ]    <CE44>

adopt M **Title** **INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES** (measuring or testing processes other than immunoassay, involving enzymes or micro-organisms **C12M**, **C12Q**)

adopt M 1/02 · Devices for withdrawing samples

adopt M 1/12 · · · Dippers; Dredgers

adopt M **3/00** **Investigating strength properties of solid materials by application of mechanical stress**

adopt M 3/12 · · · Pressure-testing

adopt M 3/32 · by applying repeated or pulsating forces

adopt M **9/00** **Investigating density or specific gravity of materials; Analysing materials by determining density or specific gravity**

adopt M 9/36 · Analysing materials by measuring the density or specific gravity, e.g. determining quantity of moisture (methods of measurement **G01N 9/02-G01N 9/32**)

adopt M 15/02 · Investigating particle size or size distribution (**G01N 15/04, G01N 15/10** take precedence; by measuring osmotic pressure **G01N 7/10**)

adopt M 19/08 · Detecting presence of flaws or irregularities

adopt M **21/00** **Investigating or analysing materials by the use of optical means, i.e. using infra-red, visible, or ultra-violet light** (**G01N 3/00-G01N 19/00** take precedence)

adopt M 21/05 · · · Flow-through cuvettes (**G01N 21/09** takes precedence)

adopt M 21/07 · · · Centrifugal type cuvettes (**G01N 21/09** takes precedence)

adopt M 21/51 · · · · inside a container, e.g. in an ampoule (**G01N 21/53** takes precedence)

adopt M 21/53 · · · · within a flowing fluid, e.g. smoke

adopt M 21/67 · · · using electric arcs or discharges

adopt M 21/956 \* \* \* \* Inspecting patterns on the surface of objects

adopt M **23/00** **Investigating or analysing materials by the use of wave or particle radiation not covered by group G01N 21/00 or G01N 22/00, e.g. X-rays, neutrons (G01N 3/00-G01N 17/00 take precedence)**

adopt M 23/04 \* \* and forming a picture

adopt M 23/207 \* \* by means of diffractometry using detectors, e.g. using an analysing crystal or a crystal to be analysed in a central position and one or more displaceable detectors in circumferential positions (**G01N 23/201** takes precedence)

adopt M 23/225 \* \* using electron or ion microprobe

adopt M **24/00** **Investigating or analysing materials by the use of nuclear magnetic resonance, electron paramagnetic resonance or other spin effects**

adopt M 25/72 \* Investigating presence of flaws

adopt M 27/06 \* \* \* of a liquid (involving electrolysis **G01N 27/26**)

adopt M 27/10 \* \* \* \* Investigation or analysis specially adapted for controlling or monitoring operations or for signalling

adopt M 27/26 \* by investigating electrochemical variables; by using electrolysis or electrophoresis

adopt M 27/60 • by investigating electrostatic variables

adopt M 27/62 • by investigating the ionisation of gases; by investigating electric discharges, e.g. emission of cathode

adopt M 27/92 • by investigating breakdown voltage (**G01N 27/60**, **G01N 27/62** take precedence)

adopt M **29/00** **Investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves; Visualisation of the interior of objects by transmitting ultrasonic or sonic waves through the object** (**G01N 3/00-G01N 27/00** take precedence)

adopt M **30/00** **Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography** (**G01N 3/00-G01N 29/00** take precedence)

adopt M 30/88 • • Integrated analysis systems specially adapted therefor, not covered by a single one of groups **G01N 30/04-G01N 30/86**

adopt M **31/00** **Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroups; Apparatus specially adapted for such methods**

adopt M 31/18 • • Burettes specially adapted for titration

adopt M 33/48 • Biological material, e.g. blood, urine (**G01N 33/02**, **G01N 33/26**, **G01N 33/44**, **G01N 33/46** take precedence) ; Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface **G06M 11/02**)

adopt M 33/53 · · · Immunoassay; Biospecific binding assay; Materials therefor

adopt M 33/58 · · · involving labelled substances (**G01N 33/53** takes precedence)

adopt M 33/60 · · · · involving radioactive labelled substances

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**ANNEX 80E G01P [ Project-Rapporteur : C458/EP ] <CE44>**

adopt M **Title** **MEASURING LINEAR OR ANGULAR SPEED, ACCELERATION, DECELERATION OR SHOCK; INDICATING PRESENCE OR ABSENCE OF MOVEMENT; INDICATING DIRECTION OF MOVEMENT** (measuring angular rate using gyroscopic effects **G01C 19/00**; combined measuring devices for measuring two or more variables of movement **G01C 23/00**; measuring velocity of sound **G01H 5/00**; measuring velocity of light **G01J 7/00**; determining direction or velocity of solid objects by reflection or reradiation of radio or other waves and based on propagation effects, e.g. Doppler effect, propagation time or direction of propagation, **G01S**; measuring speed of nuclear radiation **G01T**)

adopt M **3/00** **Measuring linear or angular speed; Measuring differences of linear or angular speeds** (**G01P 5/00-G01P 11/00** take precedence; measuring angular rate using gyroscopic effects **G01C 19/00**)

adopt D 9/00 (transferred to **G01C 19/00** )

adopt D 9/02 (transferred to **G01C 19/02** )

adopt M **13/00** **Indicating or recording presence or absence of movement; Indicating or recording of direction of movement**



adopt C 15/02 · *by making use of inertia forces (G01P 15/14 takes precedence)*

adopt C 15/14 · *by making use of gyroscopes*

adopt C 15/16 · *by evaluating the time-derivative of a measured speed signal*

adopt C 15/18 · *in two or more dimensions*

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**ANNEX 81E    G01R            [ Project-Rapporteur : D179/EP ]    <CE44>**

adopt M Title **MEASURING ELECTRIC VARIABLES; MEASURING MAGNETIC VARIABLES**  
(indicating correct tuning of resonant circuits [H03J 3/12](#))

adopt M 1/00 **Details of instruments or arrangements of the types covered by groups [G01R 5/00-](#)  
[G01R 13/00](#) or [G01R 31/00](#)** (constructional details particular to electromechanical  
arrangements for measuring the electric consumption [G01R 11/02](#))

adopt M 1/02 ·        General constructional details

adopt M 1/06 · ·        Measuring leads; Measuring probes ([G01R 19/145](#), [G01R 19/165](#) take precedence)

adopt M 1/22 · ·        Tong testers acting as secondary windings of current transformers

adopt M 1/38 · Arrangements for altering the indicating characteristic, e.g. by modifying the air gap

adopt M **5/00** **Instruments for converting a single current or a single voltage into a mechanical displacement**

adopt M 5/22 · Thermoelectric instruments

adopt M 5/28 · Electrostatic instruments

adopt M 11/02 · Constructional details

adopt M 11/36 · Induction meters, e.g. Ferraris meters

adopt M **13/00** **Arrangements for displaying electric variables or waveforms**

adopt M 13/02 · for displaying measured electric variables in digital form

adopt M 13/20 · Cathode-ray oscilloscopes

adopt M 13/22 · · Circuits therefor

adopt M 13/26 · · · Circuits for controlling the intensity of the electron beam

adopt M 13/28 \* \* \* Circuits for simultaneous or sequential presentation of more than one variable

adopt M 13/34 \* \* \* Circuits for representing a single waveform by sampling, e.g. for very high frequencies

adopt M 13/36 \* using length of glow discharge, e.g. glowlight oscilloscopes

adopt M 13/38 \* using the steady or oscillatory displacement of a light beam by an electromechanical measuring system

adopt M 15/00 **Details of measuring arrangements of the types provided for in groups G01R 17/00-G01R 29/00, G01R 33/00-G01R 33/26 or G01R 35/00**

adopt M 15/14 \* Adaptations providing voltage or current isolation, e.g. for high-voltage or high-current networks

adopt M 17/10 \* ac or dc measuring bridges

adopt M 17/20 \* ac or dc potentiometric measuring arrangements

adopt M 19/165 \* Indicating that current or voltage is either above or below a predetermined value or within or outside a predetermined range of values

adopt M 19/25 \* using digital measurement techniques

adopt M 19/30 · Measuring the maximum or the minimum value of current or voltage reached in a time interval (**G01R 19/04** takes precedence)

adopt M 19/32 · Compensating for temperature change

adopt M 21/08 · by using galvanomagnetic-effect devices, e.g. Hall-effect devices

adopt M **22/00** **Arrangements for measuring time integral of electric power or current, e.g. electricity meters**

adopt M **23/00** **Arrangements for measuring frequencies; Arrangements for analysing frequency spectra**

adopt M 23/02 · Arrangements for measuring frequency, e.g. pulse repetition rate; Arrangements for measuring period of current or voltage

adopt M 23/09 · · · using analogue integrators, e.g. capacitors establishing a mean value by balance of input signals and defined discharge signals or leakage

adopt M 23/14 · · by heterodyning; by beat-frequency comparison

adopt M 23/173 · · Wobblating devices similar to swept panoramic receivers

adopt M **25/00** **Arrangements for measuring phase angle between a voltage and a current or between voltages or currents**

adopt M 25/08 · by counting of standard pulses

adopt M 27/22 · · Measuring resistance of fluids

adopt M 29/02 · Measuring characteristics of individual pulses, e.g. deviation from pulse flatness, rise time or duration

adopt M 29/20 · Measuring number of turns; Measuring transformation ratio or coupling factor of windings

adopt M 29/24 · Arrangements for measuring quantities of charge

adopt M **31/00** **Arrangements for testing electric properties; Arrangements for locating electric faults; Arrangements for electrical testing characterised by what is being tested not provided for elsewhere** (testing or measuring semiconductors or solid state devices during manufacture [H01L 21/66](#); testing line transmission systems [H04B 3/46](#))

adopt M 31/06 · · Testing of electric windings, e.g. for polarity

adopt M 31/07 · · Testing of fuses

adopt M 31/08 · Locating faults in cables, transmission lines, or networks

- adopt M 31/26 \*      Testing of individual semiconductor devices
- adopt M 31/28 \*      Testing of electronic circuits, e.g. by signal tracer (testing computers during standby operation or idle time **G06F 11/22**)
- adopt M 31/30 \* \*      Marginal testing, e.g. by varying supply voltage (testing computers during standby operation or idle time **G06F 11/22**)
- adopt M 31/302 \* \*      Contactless testing
- adopt M 31/327 \*      Testing of circuit interrupters, switches or circuit-breakers
- adopt M 31/333 \* \*      Testing of the switching capacity of high-voltage circuit-breakers
- adopt M 31/34 \*      Testing dynamo-electric machines
- adopt M 31/36 \*      Apparatus for testing electrical condition of accumulators or electric batteries, e.g. capacity or charge condition (accumulators combined with arrangements for measuring, testing or indicating condition **H01M 10/48**)
- adopt M 31/44 \*      Testing lamps
- adopt M 33/02 \*      Measuring direction or magnitude of magnetic fields or magnetic flux (**G01R 33/20** takes precedence)

adopt M 33/381 \* \* \* \* using electromagnets

adopt M 33/3815 \* \* \* \* with superconducting coils, e.g. power supply therefor

adopt M 33/383 \* \* \* \* using permanent magnets

adopt M 33/387 \* \* \* \* Compensation of inhomogeneities

adopt M 33/42 \* \* \* Screening

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**ANNEX 82E G01S [ Project-Rapporteur : M010/IB ] <CE44>**

adopt M 3/58 \* \* \* Rotating or oscillating beam systems using continuous analysis of received signal for determining direction in the plane of rotation or oscillation or for determining deviation from a predetermined direction in such a plane (**G01S 3/16** takes precedence)

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**ANNEX 83E G03C [ Project-Rapporteur : D249/CA ] <CE44>**

adopt M Title **PHOTOSENSITIVE MATERIALS FOR PHOTOGRAPHIC PURPOSES; PHOTOGRAPHIC PROCESSES, e.g. CINE, X-RAY, COLOUR OR STEREO-PHOTOGRAPHIC PROCESSES; AUXILIARY PROCESSES IN PHOTOGRAPHY**  
(photographic processes characterised by the use or manipulation of apparatus classifiable per se in subclass **G03B**, see **G03B**)

adopt M 1/00 **Photosensitive materials** (photosensitive materials for multicolour processes **G03C 7/00**; for diffusion transfer processes **G03C 8/00**)

adopt M 1/675 · Compositions containing polyhalogenated compounds as photosensitive substances

adopt M 1/695 · Compositions containing azides as photosensitive substances

adopt M 1/705 · Compositions containing chalcogenides, metals or alloys thereof, as photosensitive substances, e.g. photodope systems

adopt M **3/00** **Packages of films for inserting into cameras, e.g. roll-films or film-packs; Wrapping materials for light-sensitive plates, films, or papers, e.g. materials characterised by the use of special dyes, printing inks or adhesives**

adopt M **5/00** **Photographic processes or agents therefor; Regeneration of such processing agents** (multicolour processes **G03C 7/00**; diffusion transfer processes **G03C 8/00**; stereo-photographic processes **G03C 9/00**)

adopt M 5/14 · · combined with sound-recording

adopt M 5/17 · · using screens to intensify X-ray images

adopt M 5/58 · Processes for obtaining metallic images by vapour deposition or physical development

adopt M 7/24 · · combined with sound-recording



adopt M 11/24 · Removing emulsion from waste photographic material; Recovery of photosensitive substances

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**ANNEX 84E    G03D            [ Project-Rapporteur : D250/CA ]    <CE44>**

adopt M Title **APPARATUS FOR PROCESSING EXPOSED PHOTOGRAPHIC MATERIALS; ACCESSORIES THEREFOR**

adopt M 3/04 · · Liquid agitators

adopt M 5/00 **Liquid processing apparatus in which no immersion is effected; Washing apparatus in which no immersion is effected** (G03D 9/00, G03D 11/00 take precedence)

adopt M 15/02 · Drying; Glazing (combined with processing apparatus G03D 3/00-G03D 13/00)

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**ANNEX 85E    G04C            [ Project-Rapporteur : A041/EP ]    <CE44>**

adopt M 9/00 **Electrically-actuated devices for setting the time-indicating means** (of slave clocks G04C 13/03; radio-controlled time-pieces G04R)

adopt D 9/02 (transferred to G04R 20/00-G04R 60/00 )

adopt M 11/00 **Synchronisation of independently-driven clocks** (radio-controlled time-pieces G04R)

adopt D 11/02 (transferred to [G04R 20/00-G04R 60/00](#) )

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ANNEX 86E    G04G            [ Project-Rapporteur : A041/EP ]    <CE44>

adopt C 5/00 **Setting, i.e. correcting or changing, the time-indication** (radio-controlled time-pieces [G04R](#))

adopt M 7/00 **Synchronisation** (radio-controlled time-pieces [G04R](#))

adopt D 7/02 (transferred to [G04R 20/00-G04R 60/14](#) )

adopt C 17/00 **Structural details; Housings** (constructional details of radio-controlled time-pieces, e.g. antennas [G04R 60/00](#))

adopt C 21/04 \*            *using radio waves* (radio-controlled time-pieces [G04R](#))

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ANNEX 87E    G04R            [ Project-Rapporteur : A041/EP ]    <CE44>

adopt N *Title* **RADIO-CONTROLLED TIME-PIECES**

adopt N 20/00 **Setting the time according to the time information carried or implied by the radio signal**

adopt N 20/02 \*            *the radio signal being sent by a satellite, e.g. GPS*

adopt N 20/04 \* \* *Tuning or receiving; Circuits therefor*

adopt N 20/06 \* \* *Decoding time data; Circuits therefor*

adopt N 20/08 \* \* *the radio signal being broadcast from a long-wave call sign, e.g. DCF77, JJY40, JJY60, MSF60 or WWVB*

adopt N 20/10 \* \* *Tuning or receiving; Circuits therefor*

adopt N 20/12 \* \* *Decoding time data; Circuits therefor*

adopt N 20/14 \* \* *the radio signal being a telecommunication standard signal, e.g. GSM, UMTS or 3G*

adopt N 20/16 \* \* *Tuning or receiving; Circuits therefor*

adopt N 20/18 \* \* *Decoding time data; Circuits therefor*

adopt N 20/20 \* \* *the radio signal being an AM/FM standard signal, e.g. RDS*

adopt N 20/22 \* \* *Tuning or receiving; Circuits therefor*

adopt N 20/24 \* \* *Decoding time data; Circuits therefor*

adopt N 20/26 \* *the radio signal being a near-field communication signal*

adopt N 20/28 \* \* *Tuning or receiving; Circuits therefor*

adopt N 20/30 \* \* *Decoding time data; Circuits therefor*

adopt N **40/00** ***Correcting the clock frequency***

adopt N 40/02 \* *by phase locking*

adopt N 40/04 \* *by detecting the radio signal frequency*

adopt N 40/06 \* *by computing the time value implied by the radio signal*

adopt N **60/00** ***Constructional details***

adopt N 60/02 \* *Antennas also serving as components of clocks or watches, e.g. motor coils*

adopt N 60/04 \* *Antennas attached to or integrated in watch bracelets*

adopt N 60/06 \* *Antennas attached to or integrated in clock or watch bodies*

adopt N 60/08 \* \* *inside bezels*

adopt N 60/10 \* \* *inside cases*

adopt N 60/12 \* \* \* *inside metal cases*

adopt N 60/14 \* *specific to electromechanical timepieces, e.g. moving parts thereof*

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**ANNEX 88E G06E [ Project-Rapporteur : D265/RU ] <CE44>**

adopt M Title **OPTICAL COMPUTING DEVICES** (digital storage using optical elements **G11C 13/04**)

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**ANNEX 89E G06F [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M Title **ELECTRIC DIGITAL DATA PROCESSING** (computers in which a part of the computation is effected hydraulically or pneumatically **G06D**, optically **G06E**; computer systems based on specific computational models **G06N**)

adopt M 1/16 \* *Constructional details or arrangements*

adopt M 1/24 \* *Resetting means (restoration from data faults **G06F 11/00**)*

adopt M 3/00 **Input arrangements for transferring data to be processed into a form capable of being handled by the computer; Output arrangements for transferring data from processing unit to output unit, e.g. interface arrangements**

adopt M 3/02 \* \* Input arrangements using manually operated switches, e.g. using keyboards or dials

adopt M 3/023 \* \* \* Arrangements for converting discrete items of information into a coded form, e.g. arrangements for interpreting keyboard generated codes as alphanumeric codes, operand codes or instruction codes

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**ANNEX 90E G06F [ Project-Rapporteur : F006/EP ] <CE44>**

adopt M Note In this group, at each hierarchical level, in the absence of an indication to the contrary, 3/03 classification is made in the first appropriate place." **[8]**

adopt C 3/033 \* \* \* *Pointing devices displaced or positioned by the user; Accessories therefor (digitisers characterised by the transducing means **G06F 3/041**)*

adopt N 3/0338 \* \* \* *with detection of limited linear or angular displacement of an operating part of the device from a neutral position, e.g. isotonic or isometric joysticks*

adopt N 3/0346 \* \* \* *with detection of the device orientation or free movement in a 3D space, e.g. 3D mice, 6-DOF [six degrees of freedom] pointers using gyroscopes, accelerometers or tilt-sensors*

adopt N 3/0354 \* \* \* *with detection of 2D relative movements between the device, or an operating part thereof, and a plane or surface, e.g. 2D mice, trackballs, pens or pucks*

adopt N 3/0362 \* \* \* \* with detection of 1D translations or rotations of an operating part of the device, e.g. scroll wheels, sliders, knobs, rollers or belts

adopt C 3/037 \* \* \* \* using the raster scan of a cathode-ray tube (CRT) for detecting the position of the member, e.g. light pens cooperating with CRT monitors

adopt C 3/038 \* \* \* \* Control and interface arrangements therefor, e.g. drivers or device-embedded control circuitry

adopt C 3/039 \* \* \* \* Accessories therefor, e.g. mouse pads

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ANNEX 91E G06F [ Project-Rapporteur : A051/EP ] <CE44>

adopt C 3/048 \* \* Interaction techniques based on graphical user interfaces [GUIs]

- adopt N Note 3/048
1. This group covers subject matter where the focus is placed on the way the user can interact with the displayed data. The mere presence of a standard GUI in the context of the disclosure of a specific software application or a specific device capable of processing data related to its specific function, should in general be classified in the appropriate subclasses related to those software applications or specific devices. **[new]**
  2. In this group, multi-aspect classification is applied, so that subject matter characterised by aspects covered by more than one of its subgroups, which is considered to represent information of interest for search, should be classified in each of those subgroups. **[new]**

adopt N 3/0481 \* \* \* \* based on specific properties of the displayed interaction object or a metaphor-based environment, e.g. interaction with desktop elements like windows or icons, or assisted by a cursor's changing behaviour or appearance

adopt N 3/0482 \* \* \* \* *interaction with lists of selectable items, e.g. menus*

adopt N 3/0483 \* \* \* \* *interaction with page-structured environments, e.g. book metaphor*

adopt N 3/0484 \* \* \* \* *for the control of specific functions or operations, e.g. selecting or manipulating an object or an image, setting a parameter value or selecting a range*

adopt N 3/0485 \* \* \* \* *Scrolling or panning*

adopt N 3/0486 \* \* \* \* *Drag-and-drop*

adopt N 3/0487 \* \* \* \* *using specific features provided by the input device, e.g. functions controlled by the rotation of a mouse with dual sensing arrangements, or of the nature of the input device, e.g. tap gestures based on pressure sensed by a digitiser*

adopt N 3/0488 \* \* \* \* *using a touch-screen or digitiser, e.g. input of commands through traced gestures*

adopt N 3/0489 \* \* \* \* *using dedicated keyboard keys or combinations thereof*

adopt M 3/05 \* Digital input using the sampling of an analogue quantity at regular intervals of time



(sample-and-hold arrangements [G11C 27/02](#))

adopt M 3/12 · Digital output to print unit (arrangements for producing a permanent visual presentation of the output data using printers [G06K 15/02](#))

adopt M 3/14 · Digital output to display device

adopt M 3/18 · Digital input from automatic curve follower

adopt M **5/00** **Methods or arrangements for data conversion without changing the order or content of the data handled**

adopt M 7/02 · Comparing digital values ([G06F 7/06](#), [G06F 7/38](#) take precedence)

adopt M 7/06 · Arrangements for sorting, selecting, merging, or comparing data on individual record carriers

adopt M 7/483 · · · Computations with numbers represented by a non-linear combination of denominational numbers, e.g. rational numbers, logarithmic number system or floating-point numbers

adopt M 7/501 · · · · Half or full adders, i.e. basic adder cells for one denomination

adopt M 7/505 · · · · in bit-parallel fashion, i.e. having a different digit-handling circuit for each denomination

adopt M 7/57 · · · Arithmetic logic units [ALU], i.e. arrangements or devices for performing two or more of the operations covered by groups **G06F 7/483-G06F 7/556** or for performing logical operations

adopt M 7/76 · Arrangements for rearranging, permuting or selecting data according to predetermined rules, independently of the content of the data

adopt M 9/34 · · · Addressing or accessing the instruction operand or the result

adopt M **11/00** **Error detection; Error correction; Monitoring** (methods or arrangements for verifying the correctness of marking on a record carrier **G06K 5/00**; in information storage based on relative movement between record carrier and transducer **G11B**, e.g. **G11B 20/18**; in static stores **G11C 29/00**)

adopt M 11/28 · by checking the correct order of processing (**G06F 11/07**, **G06F 11/22** take precedence)

adopt M **13/00** **Interconnection of, or transfer of information or other signals between, memories, input/output devices or central processing units** (interface circuits for specific input/output devices **G06F 3/00**; multi-processor systems **G06F 15/16**)

adopt M 13/42 · · Bus transfer protocol, e.g. handshake; Synchronisation

adopt M **15/00** **Digital computers in general** (details **G06F 1/00-G06F 13/00**) ; **Data processing equipment in general**

adopt M 15/16 · Combinations of two or more digital computers each having at least an arithmetic unit, a programme unit and a register, e.g. for a simultaneous processing of several programmes

adopt M 15/167 \* \* \* using a common memory, e.g. mailbox

adopt M 15/173 \* \* \* using an interconnection network, e.g. matrix, shuffle, pyramid, star or snowflake

adopt M 17/17 \* \* \* Function evaluation by approximation methods, e.g. interpolation or extrapolation, smoothing or least mean square method

adopt M 17/21 \* \* \* Text processing ([G06F 17/27](#), [G06F 17/28](#) take precedence)

adopt U 19/10 < unchanged >

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ANNEX 93E    G06F            [ Project-Rapporteur : A044/EP ]    <CE44>

adopt C 21/00 ***Security arrangements for protecting computers, components thereof, programs or data against unauthorised activity***

adopt D 21/02 (transferred to [G06F 21/70](#) )

adopt D 21/04 (transferred to [G06F 21/82](#) )

adopt D 21/06 (transferred to [G06F 21/86](#), [G06F 21/88](#) )

adopt N 21/10 \*            *Protecting distributed programs or content, e.g. vending or licensing of copyrighted material (protection in video systems or pay television [H04N 7/16](#))*

adopt N *Note* *In this group, the following terms or expressions are used with the meaning indicated:*

- 21/10 • "content" means any intellectually created work whose copyright is to be safeguarded. **[new]**

adopt N 21/12 • • *Protecting executable software*

adopt N 21/14 • • • *against software analysis or reverse engineering, e.g. by obfuscation*

adopt N 21/16 • • • *Program or content traceability, e.g. by watermarking (digital watermarking on images **H04N 1/32**)*

adopt D 21/20 (transferred to **G06F 21/30** )

adopt D 21/22 (transferred to **G06F 21/10** )

adopt D 21/24 (transferred to **G06F 21/60** )

adopt N 21/30 • *Authentication, i.e. establishing the identity or authorisation of security principals*

adopt N 21/31 • • *User authentication*

adopt N 21/32 • • • *using biometric data, e.g. fingerprints, iris scans or voiceprints*

adopt N 21/33 \* \* \* *using certificates*

adopt N 21/34 \* \* \* *involving the use of external additional devices, e.g. dongles or smart cards*

adopt N 21/35 \* \* \* *communicating wirelessly*

adopt N 21/36 \* \* \* *by graphic or iconic representation*

adopt N 21/40 \* \* \* *by quorum, i.e. whereby two or more security principals are required*

adopt N 21/41 \* \* \* *where a single sign-on provides access to a plurality of computers*

adopt N 21/42 \* \* \* *using separate channels for security data*

adopt N 21/43 \* \* \* *wireless channels*

adopt N 21/44 \* \* \* *Program or device authentication*

adopt N 21/45 \* \* \* *Structures or tools for the administration of authentication*

adopt N 21/46 \* \* \* *by designing passwords or checking the strength of passwords*

adopt N 21/50 \* *Monitoring users, programs or devices to maintain the integrity of platforms, e.g. of processors, firmware or operating systems*

adopt N 21/51 \* \* *at application loading time, e.g. accepting, rejecting, starting or inhibiting executable software based on integrity or source reliability*

adopt N 21/52 \* \* *during program execution, e.g. stack integrity, buffer overflow or preventing unwanted data erasure*

adopt N 21/53 \* \* \* *by executing in a restricted environment, e.g. sandbox or secure virtual machine*

adopt N 21/54 \* \* \* *by adding security routines or objects to programs*

adopt N 21/55 \* \* *Detecting local intrusion or implementing counter-measures*

adopt N 21/56 \* \* \* *Computer malware detection or handling, e.g. anti-virus arrangements*

adopt N 21/57 \* \* *Certifying or maintaining trusted computer platforms, e.g. secure boots or power-downs, version controls, system software checks, secure updates or assessing vulnerabilities*

adopt N 21/60 \* *Protecting data*

adopt N 21/62 \* \* *Protecting access to data via a platform, e.g. using keys or access control rules*

adopt N 21/64 \* \* *Protecting data integrity, e.g. using checksums, certificates or signatures*

adopt N 21/70 \* *Protecting specific internal or peripheral components, in which the protection of a component leads to protection of the entire computer*

adopt N 21/71 \* \* *to assure secure computing or processing of information*

adopt N 21/72 \* \* \* *in cryptographic circuits*

adopt N 21/73 \* \* \* *by creating or determining hardware identification, e.g. serial numbers*

adopt N 21/74 \* \* \* *operating in dual or compartmented mode, i.e. at least one secure mode*

adopt N 21/75 \* \* \* *by inhibiting the analysis of circuitry or operation, e.g. to counteract reverse engineering*

adopt N 21/76 \* \* \* *in application-specific integrated circuits [ASICs] or field-programmable devices, e.g. field-programmable gate arrays [FPGAs] or programmable logic devices [PLDs]*

adopt N 21/77 \* \* \* *in smart cards*

adopt N 21/78 \* \* *to assure secure storage of data (address-based protection against unauthorised use of memory [G06F 12/14](#); record carriers for use with machines and with at least a part designed to carry digital markings [G06K 19/00](#))*

adopt N 21/79 \* \* \* *in semiconductor storage media, e.g. directly-addressable memories*

adopt N 21/80 \* \* \* *in storage media based on magnetic or optical technology, e.g. disks with sectors (preventing unauthorised reproduction or copying of disk-type recordable media **G11B 20/00**)*

adopt N 21/81 \* \* \* *by operating on the power supply, e.g. enabling or disabling power-on, sleep or resume operations*

adopt N 21/82 \* \* \* *Protecting input, output or interconnection devices*

adopt N 21/83 \* \* \* *input devices, e.g. keyboards, mice or controllers thereof*

adopt N 21/84 \* \* \* *output devices, e.g. displays or monitors*

adopt N 21/85 \* \* \* *interconnection devices, e.g. bus-connected or in-line devices*

adopt N 21/86 \* \* \* *Secure or tamper-resistant housings*

adopt N 21/87 \* \* \* *by means of encapsulation, e.g. for integrated circuits*

adopt N 21/88 \* \* \* *Detecting or preventing theft or loss*



adopt M 1/00 **Machines for printing and issuing tickets**

adopt M 9/00 **Ticket punches** (punching or perforating pliers **B26F 1/36**)

adopt M 11/09 . . . combined with receptacle for separated part of ticket

adopt M 13/00 **Taximeters**

adopt M 15/04 . . . comprising devices to free a barrier, turnstile, or the like (turnstiles with registering means **G07C 9/02**)

adopt M 17/00 **Franking apparatus**

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**ANNEX 95E G09B [ Project-Rapporteur : D182/EP ] <CE44>**

adopt M **Title EDUCATIONAL OR DEMONSTRATION APPLIANCES; APPLIANCES FOR TEACHING, OR COMMUNICATING WITH, THE BLIND, DEAF OR MUTE; MODELS; PLANETARIA; GLOBES; MAPS; DIAGRAMS**

adopt M 1/00 **Manually- or mechanically-operated educational appliances using elements forming or bearing symbols, signs, pictures, or the like which are arranged or adapted to be arranged in one or more particular ways**

adopt M 1/12 . . . . by means of ring-like securing elements

adopt M 1/30 · · wherein the elements are adapted to be arranged in co-operation with the support to form symbols

adopt M **3/00** **Manually- or mechanically-operated teaching appliances working with questions and answers**

adopt M 3/04 · · of chart form

adopt M 3/08 · · of chart form

adopt M **5/00** **Electrically-operated educational appliances**

adopt M 5/04 · · with audible presentation of the material to be studied

adopt M **7/00** **Electrically-operated teaching apparatus or devices working with questions and answers**

adopt M **9/00** **Simulators for teaching or training purposes**

adopt M 9/052 · · characterised by provision for recording or measuring trainee's performance

adopt M 11/04 · Guide sheets or plates; Tracing charts

adopt M 13/02 \* Dummy practice keyboard apparatus

adopt M **15/00 Teaching music**

adopt M 15/06 \* Devices for exercising or strengthening fingers or arms; Devices for holding fingers or arms in a proper position for playing

adopt M 15/08 \* Practice keyboards

adopt M **17/00 Teaching reading**

adopt M 19/02 \* Counting; Calculating

adopt M 19/16 \* Control of vehicles or other craft

adopt M **21/00 Teaching, or communicating with, the blind, deaf or mute** (audible presentation of material to be studied [G09B 5/04](#))

adopt M 21/02 \* Devices for Braille writing

adopt M 23/02 \* for mathematics

adopt M 27/04 \* Celestial maps

adopt M **29/00** **Maps** (celestial maps **G09B 27/04**) ; **Plans; Charts; Diagrams, e.g. route diagrams**

adopt M 29/10 \* Map spot or co-ordinate position indicators; Map-reading aids

adopt M 29/12 \* Relief maps

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**ANNEX 96E G09G [ Project-Rapporteur : D186/EP ] <CE44>**

adopt M **Title** **ARRANGEMENTS OR CIRCUITS FOR CONTROL OF INDICATING DEVICES USING STATIC MEANS TO PRESENT VARIABLE INFORMATION** (arrangements for transferring data between digital computers and displays **G06F 3/14**; static indicating arrangements comprising an association of a number of separate sources or light control cells **G09F 9/00**; static indicating arrangements comprising integral associations of a number of light sources **H01J, H01K, H01L, H05B 33/12**; scanning, transmission or reproduction of documents or the like, e.g. facsimile transmission, details thereof **H04N 1/00**)

adopt M **1/00** **Control arrangements or circuits, of interest only in connection with cathode-ray tube indicators**

adopt M **3/00** **Control arrangements or circuits, of interest only in connection with visual indicators other than cathode-ray tubes**

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**ANNEX 97E G09G [ Project-Rapporteur : A054/JP ] <CE44>**

adopt U 3/06 < unchanged >

adopt U 3/08 < unchanged >

adopt U 3/10 < unchanged >

adopt M 3/12 . . . using electroluminescent elements

adopt U 3/18 < unchanged >

adopt U 3/22 < unchanged >

adopt U 3/24 < unchanged >

adopt C 3/28 . . . *using luminous gas-discharge panels, e.g. plasma panels*

adopt N 3/2807 . . . *with discharge activated by high-frequency signals specially adapted therefor*

adopt N 3/2813 . . . *using alternating current [AC] - direct current [DC] hybrid-type panels*

adopt M 3/282 . . . using DC panels

adopt U 3/285 < unchanged >

adopt C 3/288 . . . *using AC panels*

adopt N 3/291 \* \* \* \* \* *controlling the gas discharge to control a cell condition, e.g. by means of specific pulse shapes*

adopt N 3/292 \* \* \* \* \* *for reset discharge, priming discharge or erase discharge occurring in a phase other than addressing*

adopt N 3/293 \* \* \* \* \* *for address discharge*

adopt N 3/294 \* \* \* \* \* *for lighting or sustain discharge*

adopt N 3/296 \* \* \* \* \* *Driving circuits for producing the waveforms applied to the driving electrodes*

adopt N 3/297 \* \* \* \* \* *using opposed discharge type panels*

adopt N 3/298 \* \* \* \* \* *using surface discharge panels*

adopt N 3/299 \* \* \* \* \* *using alternate lighting of surface-type panels*

adopt U 3/30 < unchanged >

adopt U 3/36 < unchanged >

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**ANNEX 98E G09G [ Project-Rapporteur : D186/EP ] <CE44>**

adopt M **5/00 Control arrangements or circuits for visual indicators common to cathode-ray tube indicators and other visual indicators**

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**ANNEX 99E G10B [ Project-Rapporteur : M736/GB ] <CE44>**

adopt M **Title** **ORGANS, HARMONIUMS OR LIKE WIND-ACTUATED MUSICAL INSTRUMENTS**  
(non-musical aspects of musical toy instruments **A63H 5/00**; mouth organs **G10D 7/12**;  
accordions, concertinas or the like or keyboards therefor **G10D 11/00**; automatic wind-  
actuated instruments **G10F 1/12**)

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**ANNEX 100E G10C [ Project-Rapporteur : M736/GB ] <CE44>**

adopt M **Title** **PIANOS, HARPSICHORDS, SPINETS OR SIMILAR STRINGED MUSICAL INSTRUMENTS WITH ONE OR MORE KEYBOARDS** (non-musical aspects of toy pianos **A63H 5/00**; automatic pianos with or without keyboards **G10F 1/02**, **G10F 1/04**;  
combination instruments incorporating an automatic piano **G10F 1/22**; details or accessories of automatic pianos **G10F 5/00**)

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**ANNEX 101E G10D [ Project-Rapporteur : M736/GB ] <CE44>**

adopt M **Title** **STRINGED MUSICAL INSTRUMENTS; WIND-ACTUATED MUSICAL INSTRUMENTS; ACCORDIONS OR CONCERTINAS; PERCUSSION MUSICAL INSTRUMENTS; MUSICAL INSTRUMENTS NOT OTHERWISE PROVIDED FOR** (non-musical aspects of musical toy instruments **A63H 5/00**; organs, harmoniums or like wind-actuated instruments **G10B**; pianos, harpsichords, spinets or similar stringed musical instruments with one or more keyboards **G10C**; automatic musical instruments **G10F**; electrophonic musical instruments **G10H**; instruments in which the tones are generated by electromechanical means or electronic generators, or in which the tones are synthesised from a data store **G10H**)

adopt M **1/00** **General design of stringed musical instruments** (instruments with one or more keyboards **G10C**)

adopt M **7/00** **General design of wind-actuated musical instruments** (accordions or concertinas **G10D 11/00**; whistles **G10K 5/00**)

adopt M **13/00** **Percussion musical instruments; Details or accessories**

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**ANNEX 102E G10D [ Project-Rapporteur : D128/GB ] <CE44>**

adopt M 13/06 \* Castanets, cymbals, triangles or other single-toned percussion musical instruments

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**ANNEX 103E G10F [ Project-Rapporteur : M736/GB ] <CE44>**

adopt M Title **AUTOMATIC MUSICAL INSTRUMENTS** (non-musical aspects of musical toy instruments **A63H 5/00**; arrangements for the associated working of recording or reproducing apparatus with automatic musical instruments **G11B 31/02**)

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**ANNEX 104E G10G [ Project-Rapporteur : M736/GB ] <CE44>**

adopt M Title **AIDS FOR MUSIC; SUPPORTS FOR MUSICAL INSTRUMENTS; OTHER AUXILIARY DEVICES OR ACCESSORIES FOR MUSIC OR MUSICAL INSTRUMENTS** (music stands **A47B**; non-musical aspects of musical toy instruments **A63H 5/00**; metronomes **G04F 5/02**; teaching music **G09B 15/00**)

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**ANNEX 105E G10L [ Project-Rapporteur : F004/US ] <CE44>**



adopt M Title **SPEECH ANALYSIS OR SYNTHESIS; SPEECH RECOGNITION; SPEECH OR VOICE PROCESSING; SPEECH OR AUDIO CODING OR DECODING**

adopt D 11/00- (transferred to **G10L 25/00** )  
11/06

adopt C 13/02 \* *Methods for producing synthetic speech; Speech synthesisers*

adopt N 13/027 \* \* *Concept to speech synthesisers; Generation of natural phrases from machine-based concepts (generation of parameters for speech synthesis out of text **G10L 13/08**)*

adopt N 13/033 \* \* *Voice editing, e.g. manipulating the voice of the synthesiser*

adopt C 13/04 \* \* *Details of speech synthesis systems, e.g. synthesiser structure or memory management*

adopt N 13/047 \* \* \* *Architecture of speech synthesisers*

adopt C 13/06 \* *Elementary speech units used in speech synthesisers; Concatenation rules*

adopt N 13/07 \* \* *Concatenation rules*

adopt C 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*

adopt N 13/10 \* \* *Prosody rules derived from text; Stress or intonation*

adopt C 15/00 **Speech recognition** (**G10L 17/00** takes precedence)

adopt N 15/01 \* *Assessment or evaluation of speech recognition systems*

adopt C 15/04 \* *Segmentation; Word boundary detection*

adopt N 15/05 \* \* *Word boundary detection*

adopt C 15/06 \* *Creation of reference templates; Training of speech recognition systems, e.g. adaptation to the characteristics of the speaker's voice* (**G10L 15/14** takes precedence)

adopt N 15/065 \* \* *Adaptation*

adopt N 15/07 \* \* \* *to the speaker*

adopt M 15/12 \* \* *using dynamic programming techniques, e.g. dynamic time warping [DTW]*

adopt C 15/18 \* \* *using natural language modelling*

adopt N 15/183 \* \* \* *using context dependencies, e.g. language models*

adopt N 15/187 \* \* \* *Phonemic context, e.g. pronunciation rules, phonotactical constraints  
or phoneme n-grams*

adopt N 15/19 \* \* \* *Grammatical context, e.g. disambiguation of recognition hypotheses based  
on word sequence rules*

adopt N 15/193 \* \* \* *Formal grammars, e.g. finite state automata, context free grammars or  
word networks*

adopt N 15/197 \* \* \* *Probabilistic grammars, e.g. word n-grams*

adopt C 15/24 \* *Speech recognition using non-acoustical features*

adopt N 15/25 \* \* *using position of the lips, movement of the lips or face analysis*

adopt C 15/28 \* *Constructional details of speech recognition systems*

adopt N 15/30 \* \* *Distributed recognition, e.g. in client-server systems, for mobile phones or network  
applications*

adopt N 15/32 \* \* *Multiple recognisers used in sequence or in parallel; Score combination systems  
therefor, e.g. voting systems*

adopt N 15/34 \* \* *Adaptation of a single recogniser for parallel processing, e.g. by use of multiple processors or cloud computing*

adopt C 17/00 ***Speaker identification or verification***

adopt N 17/02 \* *Preprocessing operations, e.g. segment selection; Pattern representation or modelling, e.g. based on linear discriminant analysis [LDA] or principal components; Feature selection or extraction*

adopt N 17/04 \* *Training, enrolment or model building*

adopt N 17/06 \* *Decision making techniques; Pattern matching strategies*

adopt N 17/08 \* \* *Use of distortion metrics or a particular distance between probe pattern and reference templates*

adopt N 17/10 \* \* *Multimodal systems, i.e. based on the integration of multiple recognition engines or fusion of expert systems*

adopt N 17/12 \* \* *Score normalisation*

adopt N 17/14 \* \* *Use of phonemic categorisation or speech recognition prior to speaker recognition or verification*

adopt N 17/16 \* *Hidden Markov models [HMMs]*

adopt N 17/18 \* *Artificial neural networks; Connectionist approaches*

adopt N 17/20 \* *Pattern transformations or operations aimed at increasing system robustness, e.g. against channel noise or different working conditions*

adopt N 17/22 \* *Interactive procedures; Man-machine interfaces*

adopt N 17/24 \* *the user being prompted to utter a password or a predefined phrase*

adopt N 17/26 \* *Recognition of special voice characteristics, e.g. for use in lie detectors;  
Recognition of animal voices*

adopt C 19/00 ***Speech or audio signal analysis-synthesis techniques for redundancy reduction, e.g. in vocoders; Coding or decoding of speech or audio signals, using source filter models or psychoacoustic analysis (in musical instruments [G10H](#))***

adopt N 19/002 \* *Dynamic bit allocation (for perceptual audio coders [G10L 19/032](#))*

adopt N 19/005 \* *Correction of errors induced by the transmission channel, if related to the coding algorithm*

adopt N 19/008 \* *Multichannel audio signal coding or decoding, i.e. using interchannel correlation to reduce redundancies, e.g. joint-stereo, intensity-coding or matrixing (arrangements for reproducing spatial sound [H04R 5/00](#); stereophonic systems, e.g. spatial sound capture or matrixing of audio signals in the decoded state, [H04S](#))*

- adopt N 19/012 \*      *Comfort noise or silence coding*
  
- adopt N 19/018 \*      *Audio watermarking, i.e. embedding inaudible data in the audio signal*
  
- adopt C 19/02 \*      *using spectral analysis, e.g. transform vocoders or subband vocoders*
  
- adopt N 19/022 \* \*      *Blocking, i.e. grouping of samples in time; Choice of analysis windows; Overlap factoring*
  
- adopt N 19/025 \* \* \*      *Detection of transients or attacks for time/frequency resolution switching*
  
- adopt N 19/028 \* \*      *Noise substitution, e.g. substituting non-tonal spectral components by noisy source (comfort noise for discontinuous speech transmission [G10L 19/012](#))*
  
- adopt N 19/03 \* \*      *Spectral prediction for preventing pre-echo; Temporary noise shaping [TNS], e.g. in MPEG2 or MPEG4*
  
- adopt N 19/032 \* \*      *Quantisation or dequantisation of spectral components*
  
- adopt N 19/035 \* \* \*      *Scalar quantisation*
  
- adopt N 19/038 \* \* \*      *Vector quantisation, e.g. TwinVQ audio*
  
- adopt C 19/04 \*      *using predictive techniques*

adopt C 19/06 \* \* \* *Determination or coding of the spectral characteristics, e.g. of the short-term prediction coefficients*

adopt N 19/07 \* \* \* *Line spectrum pair [LSP] vocoders*

adopt C 19/08 \* \* \* *Determination or coding of the excitation function; Determination or coding of the long-term prediction parameters*

adopt N 19/083 \* \* \* *the excitation function being an excitation gain ([G10L 25/90](#) takes precedence)*

adopt N 19/087 \* \* \* *using mixed excitation models, e.g. MELP, MBE, split band LPC or HVXC*

adopt N 19/09 \* \* \* *Long term prediction, i.e. removing periodical redundancies, e.g. by using adaptive codebook or pitch predictor*

adopt N 19/093 \* \* \* *using sinusoidal excitation models*

adopt N 19/097 \* \* \* *using prototype waveform decomposition or prototype waveform interpolative [PWI] coders*

adopt C 19/10 \* \* \* *the excitation function being a multipulse excitation*

adopt N 19/107 \* \* \* *Sparse pulse excitation, e.g. by using algebraic codebook*

adopt N 19/113 \* \* \* \* *Regular pulse excitation*

adopt C 19/12 \* \* \* *the excitation function being a code excitation, e.g. in code excited linear prediction [CELP] vocoders*

adopt N 19/125 \* \* \* \* *Pitch excitation, e.g. pitch synchronous innovation CELP [PSI-CELP]*

adopt N 19/13 \* \* \* \* *Residual excited linear prediction [RELP]*

adopt N 19/135 \* \* \* \* *Vector sum excited linear prediction [VSELP]*

adopt D 19/14 (transferred to [G10L 19/04](#), [G10L 19/16](#)-[G10L 19/26](#) )

adopt N 19/16 \* \* *Vocoder architecture*

adopt N 19/18 \* \* \* *Vocoders using multiple modes*

adopt N 19/20 \* \* \* \* *using sound class specific coding, hybrid encoders or object based coding*

adopt N 19/22 \* \* \* \* *Mode decision, i.e. based on audio signal content versus external parameters*



- adopt N 19/24 \* \* \* \* Variable rate codecs, e.g. for generating different qualities using a scalable representation such as hierarchical encoding or layered encoding
- adopt N 19/26 \* \* Pre-filtering or post-filtering
- adopt C 21/00 **Processing of the speech or voice 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)**
- adopt N 21/003 \* Changing voice quality, e.g. pitch or formants
- adopt N 21/007 \* \* characterised by the process used
- adopt N 21/01 \* \* \* Correction of time axis
- adopt N 21/013 \* \* \* Adapting to target pitch
- adopt C 21/02 \* Speech enhancement, e.g. noise reduction or echo cancellation (reducing echo effects in line transmission systems **H04B 3/20**; echo suppression in hands-free telephones **H04M 9/08**)
- adopt N 21/0208 \* \* Noise filtering
- adopt N 21/0216 \* \* \* characterised by the method used for estimating noise

adopt N 21/0224 \* \* \* \* *Processing in the time domain*

adopt N 21/0232 \* \* \* \* *Processing in the frequency domain*

adopt N 21/0264 \* \* \* *characterised by the type of parameter measurement, e.g. correlation techniques, zero crossing techniques or predictive techniques*

adopt N 21/0272 \* \* *Voice signal separating*

adopt N 21/028 \* \* \* *using properties of sound source*

adopt N 21/0308 \* \* \* *characterised by the type of parameter measurement, e.g. correlation techniques, zero crossing techniques or predictive techniques*

adopt N 21/0316 \* \* *by changing the amplitude*

adopt N 21/0324 \* \* \* *Details of processing therefor*

adopt N 21/0332 \* \* \* \* *involving modification of waveforms*

adopt N 21/034 \* \* \* \* *Automatic adjustment*

adopt N 21/0356 \* \* \* *for synchronising with other signals, e.g. video signals*

adopt N 21/0364 \* \* \* *for improving intelligibility*

adopt N 21/038 \* \* *using band spreading techniques*

adopt N 21/0388 \* \* \* *Details of processing therefor*

adopt C 21/04 \* *Time compression or expansion*

adopt N 21/043 \* \* *by changing speed*

adopt N 21/045 \* \* \* *using thinning out or insertion of a waveform*

adopt N 21/047 \* \* \* *characterised by the type of waveform to be thinned out or inserted*

adopt N 21/049 \* \* \* *characterised by the interconnection of waveforms*

adopt N 21/055 \* \* *for synchronising with other signals, e.g. video signals*

adopt N 21/057 \* \* *for improving intelligibility*

adopt C 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)*

adopt N 21/10 \* \* *Transforming into visible information*

adopt N 21/12 \* \* \* *by displaying time domain information*

adopt N 21/14 \* \* \* *by displaying frequency domain information*

adopt N 21/16 \* \* *Transforming into a non-visible representation (devices or methods enabling ear patients to replace direct auditory perception by another kind of perception A61F 11/04)*

adopt N 21/18 \* \* *Details of the transformation process*

adopt D 23/00 (transferred to G10L 99/00 )

adopt N 25/00 ***Speech or voice analysis techniques not restricted to a single one of groups G10L 15/00-G10L 21/00***

adopt N 25/03 \* *characterised by the type of extracted parameters*

adopt N 25/06 \* \* *the extracted parameters being correlation coefficients*

adopt N 25/09 \* \* *the extracted parameters being zero crossing rates*

adopt N 25/12 \* \* *the extracted parameters being prediction coefficients*

adopt N 25/15 \* \* *the extracted parameters being formant information*

adopt N 25/18 \* \* *the extracted parameters being spectral information of each sub-band*

adopt N 25/21 \* \* *the extracted parameters being power information*

adopt N 25/24 \* \* *the extracted parameters being the cepstrum*

adopt N 25/27 \* *characterised by the analysis technique*

adopt N 25/30 \* \* *using neural networks*

adopt N 25/33 \* \* *using fuzzy logic*

adopt N 25/36 \* \* *using chaos theory*

adopt N 25/39 \* \* *using genetic algorithms*

adopt N 25/45 \* *characterised by the type of analysis window*

adopt N 25/48 \* *pecially adapted for particular use*

adopt N 25/51 \* \* *for comparison or discrimination*

adopt N 25/54 \* \* \* *for retrieval*

adopt N 25/57 \* \* \* *for processing of video signals*

adopt N 25/60 \* \* \* *for measuring the quality of voice signals*

adopt N 25/63 \* \* \* *for estimating an emotional state*

adopt N 25/66 \* \* \* *for extracting parameters related to health condition (detecting or measuring for diagnostic purposes **A61B 5/00**)*

adopt N 25/69 \* \* *for evaluating synthetic or decoded voice signals*

adopt N 25/72 \* \* *for transmitting results of analysis*

adopt N 25/75 \* *for modelling vocal tract parameters*

adopt N 25/78 \* *Detection of presence or absence of voice signals (switching of direction of transmission by voice frequency in two-way loud-speaking telephone systems **H04M**)*

9/10)

adopt N 25/81 \* \* \* *for discriminating voice from music*

adopt N 25/84 \* \* \* *for discriminating voice from noise*

adopt N 25/87 \* \* \* *Detection of discrete points within a voice signal*

adopt N 25/90 \* \* \* *Pitch determination of speech signals*

adopt N 25/93 \* \* \* *Discriminating between voiced and unvoiced parts of speech signals (G10L 25/90 takes precedence)*

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

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**ANNEX 106E G11B [ Project-Rapporteur : F001/EP ] <CE44>**

adopt C 7/24 \* \* \* *Record carriers characterised by shape, structure or physical properties, or by the selection of the material (characterised by the arrangement of information on the carrier G11B 7/007)*

adopt N 7/24003 \* \* \* *Shapes of record carriers other than disk shape*

adopt N 7/24006 \* \* \* *Cylindrical or shaft-shaped*

adopt N 7/24009 \* \* \* *Tapes, long films or long sheets*

adopt N 7/24012 \* \* \* *Optical cards*

adopt N 7/24015 \* \* \* *Air-sandwiched disks*

adopt N Note *When classifying in this group, classification is also made in group **G11B 7/2403** if the 7/24015 subject matter disclosed in the context of an air-sandwiched disk is of more general application. **[new]***

adopt N 7/24018 \* \* \* *Laminated disks (**G11B 7/24015** takes precedence)*

adopt N Note *When classifying in this group, classification is also made in group **G11B 7/2403** if the 7/24018 subject matter disclosed in the context of a laminated disk is of more general application. **[new]***

adopt N 7/24021 \* \* \* *provided with a special shape or structure for centering or eccentricity prevention, e.g. alignment*

adopt N 7/24024 \* \* \* *Adhesion or bonding, e.g. specific adhesive layers*

adopt N 7/24027 \* \* \* *Layers; Shape, structure or physical properties thereof (**G11B 7/24021**, **G11B 7/24024** take precedence)*

adopt N 7/2403 \* \* \* *Layers; Shape, structure or physical properties thereof*



adopt N 7/24033 · · · *Electrode layers*

adopt N 7/24035 · · · *Recording layers (substrates also used as recording layers [G11B 7/24047](#))*

adopt N 7/24038 · · · · *Multiple laminated recording layers*

adopt N 7/24041 · · · · · *with different recording characteristics*

adopt N 7/24044 · · · · *for storing optical interference patterns, e.g. holograms; for storing data in three dimensions, e.g. volume storage ([G11B 7/24038](#) takes precedence)*

adopt N 7/24047 · · · *Substrates*

adopt N 7/2405 · · · · *being also used as track layers of pre-formatted layers (tracks or pits [G11B 7/2407](#))*

adopt N 7/24053 · · · *Protective topcoat layers lying opposite to the light entrance side, e.g. layers for preventing electrostatic charging*

adopt N 7/24056 · · · *Light transmission layers lying on the light entrance side and being thinner than the substrate, e.g. specially adapted for Blu-ray® disks*

adopt N 7/24059 · · · · *specially adapted for near-field recording or reproduction*

adopt N 7/24062 · · · *Reflective layers*

adopt N 7/24065 · · · *Layers assisting in recording or reproduction below the optical diffraction limit, e.g. non-linear optical layers or structures (cover layers for near-field media **G11B 7/24059**)*

adopt N 7/24067 · · · *Combinations of two or more layers with specific interrelation*

adopt N 7/2407 · · *Tracks or pits; Shape, structure or physical properties thereof (layout of tracks or pits used as the identification information **G11B 7/007**)*

adopt N 7/24073 · · · *Tracks*

adopt N 7/24076 · · · *Cross sectional shape in the radial direction of a disk, e.g. asymmetrical cross sectional shape*

adopt N 7/24079 · · · *Width or depth (**G11B 7/24076** takes precedence)*

adopt N 7/24082 · · · *Meandering*

adopt N 7/24085 · · · *Pits*

adopt N 7/24088 · · · *for storing more than two values, i.e. multi-valued recording for data or prepits*

adopt N 7/24091 \* \* \* \* *Combinations of pits and tracks with specific interrelation*

adopt N 7/24094 \* \* \* \* *Indication parts or information parts for identification*

adopt N 7/24097 \* \* \* \* *Structures for detection, control, recording operation or replay operation; Special shapes or structures for centering or eccentricity prevention (within laminated disks **G11B 7/24021**) ; Arrangements for testing, inspecting or evaluating; Containers, cartridges or cassettes*

adopt N Note *When classifying in this group, classification is also made in group **G11B 23/00** if the 7/24097 subject matter disclosed in the context of an optical record carrier is of more general application. **[new]***

adopt M 7/241 \* \* \* \* *Record carriers characterised by the selection of the material*

adopt C 7/243 \* \* \* \* *comprising inorganic materials only, e.g. ablative layers*

adopt N 7/2433 \* \* \* \* *Metals or elements of groups IIIA, IVA, VA or VIA of the Periodic System, e.g. B, Si, Ge, As, Sb, Bi, Se or Te*

adopt N 7/2437 \* \* \* \* *Non-metallic elements*

adopt M 7/244 \* \* \* \* *comprising organic materials only*

adopt C 7/246 \* \* \* \* \* *containing dyes*

adopt N 7/2463 \* \* \* \* \* *azulene*

adopt N 7/2467 \* \* \* \* \* *azo-dyes*

adopt C 7/247 \* \* \* \* \* *methine or polymethine dyes*

adopt N 7/2472 \* \* \* \* \* *cyanine*

adopt N 7/2475 \* \* \* \* \* *merocyanine*

adopt N 7/2478 \* \* \* \* \* *oxonol*

adopt M 7/248 \* \* \* \* \* *porphines; azaporphines, e.g. phthalocyanines*

adopt C 7/249 \* \* \* \* \* *containing organometallic compounds (G11B 7/246 takes precedence)*

adopt N 7/2492 \* \* \* \* \* *neutral compounds*

adopt N 7/2495 \* \* \* \* \* *as anions*

adopt N 7/2498 \* \* \* \* \* *as cations*

adopt M 7/251 \* \* \* \* \* comprising inorganic materials dispersed in an organic matrix

adopt C 7/253 \* \* \* \* \* *of substrates*

adopt N 7/2531 \* \* \* \* \* *comprising glass*

adopt N 7/2532 \* \* \* \* \* *comprising metals*

adopt N 7/2533 \* \* \* \* \* *comprising resins*

adopt N 7/2534 \* \* \* \* \* *polycarbonates [PC]*

adopt N 7/2535 \* \* \* \* \* *polyesters, e.g. PET, PETG or PEN*

adopt N 7/2536 \* \* \* \* \* *polystyrene [PS]*

adopt N 7/2537 \* \* \* \* \* *epoxy resins*

adopt N 7/2538 \* \* \* \* \* *polycycloolefins [PCO]*

adopt N 7/2539 \* \* \* \* \* *biodegradable polymers, e.g. cellulose*

adopt C 7/254 \* \* \* \* \* *of protective topcoat layers*

adopt N 7/2542 \* \* \* \* \* *consisting essentially of organic resins*

adopt N 7/2545 \* \* \* \* \* *containing inorganic fillers, e.g. particles or fibres*

adopt N 7/2548 \* \* \* \* \* *consisting essentially of inorganic materials*

adopt M 7/256 \* \* \* \* \* *of layers improving adhesion between layers*

adopt C 7/257 \* \* \* \* \* *of layers having properties involved in recording or reproduction, e.g. optical interference layers, sensitising layers or dielectric layers which are protecting the recording layers*

adopt N 7/2572 \* \* \* \* \* *consisting essentially of organic materials*

adopt N 7/2575 \* \* \* \* \* *resins*

adopt N 7/2578 \* \* \* \* \* *consisting essentially of inorganic materials*

adopt C 7/258 \* \* \* \* \* *of reflective layers*

adopt N 7/2585 \* \* \* \* \* *based on aluminium*

adopt N 7/259 \* \* \* \* \* *based on silver*

adopt N 7/2595 \* \* \* \* \* *based on gold*

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**ANNEX 107E G11B [ Project-Rapporteur : M013/IB ] <CE44>**

adopt M 23/40 \* \* Identifying or analogous means applied to, or incorporated in, the record carrier and not intended for visual display simultaneously with the playing-back of the record carrier, e.g. label, leader or photograph

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**ANNEX 108E G12B [ Project-Rapporteur : D142/EP ] <CE44>**

adopt M **Title CONSTRUCTIONAL DETAILS OF INSTRUMENTS, OR COMPARABLE DETAILS OF OTHER APPARATUS, NOT OTHERWISE PROVIDED FOR**

adopt M 1/02 \* Compound strips or plates, e.g. bimetallic

adopt M 1/04 \* Hollow bodies having parts which are deformable or displaceable under pressure, e.g. Bourdon tubes or bellows

adopt M **3/00 Details of movements not otherwise provided for**

adopt M 3/04 · Suspensions

adopt M 3/06 · Reducing effects of friction, e.g. by vibration

adopt M **5/00** **Adjusting position or attitude, e.g. level, of instruments or other apparatus, or of parts thereof; Compensating for the effects of tilting or acceleration, e.g. for optical apparatus**

adopt M 9/02 · Casings; Housings; Cabinets

adopt M **13/00** **Calibrating of instruments or apparatus**

adopt M **15/00** **Cooling**

adopt M **17/00** **Screening**

adopt M 17/04 · from ultra-violet, visible, or infra-red light

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**ANNEX 109E H01B** [ Project-Rapporteur : M037/IB ] <CE44>

adopt M Title **CABLES; CONDUCTORS; INSULATORS; SELECTION OF MATERIALS FOR THEIR CONDUCTIVE, INSULATING OR DIELECTRIC PROPERTIES** (selection for magnetic properties **H01F 1/00**; waveguides **H01P**)



adopt M **1/00** **Conductors or conductive bodies characterised by the conductive materials; Selection of materials as conductors** (superconductive or hyperconductive conductors, cables or transmission lines characterised by the materials **H01B 12/00**)

adopt M **3/00** **Insulators or insulating bodies characterised by the insulating materials; Selection of materials for their insulating or dielectric properties**

adopt M 5/02 · Single bars, rods, wires or strips; Bus-bars

adopt M 5/14 · comprising conductive layers or films on insulating-supports

adopt M 7/02 · Disposition of insulation

adopt M 7/06 · Extensible conductors or cables, e.g. self-coiling cords

adopt M 7/12 · Floating cables

adopt M 7/16 · Rigid-tube cables

adopt M 7/17 · Protection against damage caused by external factors, e.g. sheaths or armouring

adopt M 7/282 · · · Preventing penetration of fluid into conductor or cable

adopt M 7/32 · with arrangements for indicating defects, e.g. breaks or leaks

adopt M 7/42 · with arrangements for heat dissipation or conduction

adopt M **11/00** **Communication cables or conductors**

adopt M 11/02 · Cables with twisted pairs or quads

adopt M 11/04 · · with pairs or quads mutually positioned to reduce cross-talk

adopt M 11/06 · · with means for reducing effects of electromagnetic or electrostatic disturbances,  
e.g. screens

adopt M 11/12 · · Arrangements for exhibiting specific transmission characteristics

adopt M 11/16 · · · Cables, e.g. submarine cables, with coils or other devices incorporated during  
cable manufacture

adopt M 11/18 · Coaxial cables; Analogous cables having more than one inner conductor within a  
common outer conductor

adopt M **12/00** **Superconductive or hyperconductive conductors, cables or transmission lines**  
(superconductors characterised by the ceramic-forming technique or the ceramic  
composition **C04B 35/00**)

adopt M 13/02 \* Stranding-up

adopt M 13/26 \* \* by winding, braiding or longitudinal lapping

adopt M 13/30 \* Drying; Impregnating (**H01B 13/32** takes precedence)

adopt M 13/32 \* Filling or coating with impervious material

adopt M **17/00** **Insulators or insulating bodies characterised by their form**

adopt M 17/12 \* \* Special features of strain insulators

adopt M 17/28 \* \* Capacitor type

adopt M 17/30 \* \* Sealing

adopt M 17/44 \* \* Structural association of insulators with corona rings

adopt M 17/46 \* \* Means for providing an external arc-discharge path

adopt M 17/58 \* \* Tubes, sleeves, beads or bobbins through which the conductor passes

adopt M 17/60 \* \* Composite insulating bodies

adopt M 17/62 \* \* Insulating-layers or insulating-films on metal bodies

adopt M 17/64 \* \* with conductive admixtures inserts or layers

adopt M 19/02 \* Drying; Impregnating

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**ANNEX 110E H01C [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 1/14 \* Terminals or tapping points specially adapted for resistors; Arrangements of terminals or tapping points on resistors

adopt M 7/00 **Non-adjustable resistors formed as one or more layers or coatings; Non-adjustable resistors made from powdered conducting material or powdered semi-conducting material with or without insulating material** (consisting of loose powdered or granular material **H01C 8/00**; resistors with a potential-jump barrier or surface barrier, e.g. field effect resistors, **H01L 29/00**; semiconductor devices sensitive to electromagnetic or corpuscular radiation, e.g. photoresistors, **H01L 31/00**; magnetic field controlled resistors **H01L 43/08**; bulk negative resistance effect devices **H01L 47/00**)

adopt M 13/02 \* Structural combinations of resistors

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**ANNEX 111E H01F [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M Title **MAGNETS; INDUCTANCES; TRANSFORMERS; SELECTION OF MATERIALS FOR**

## THEIR MAGNETIC PROPERTIES

adopt M **1/00** **Magnets or magnetic bodies characterised by the magnetic materials therefor;  
Selection of materials for their magnetic properties**

adopt M 1/40 · · · of magnetic semiconductor materials, e.g.  $\text{CdCr}_2\text{S}_4$

adopt M 1/44 · · · of magnetic liquids, e.g. ferrofluids

adopt M **3/00** **Cores, yokes or armatures**

adopt M 3/08 · · · made from powder

adopt M **7/00** **Magnets** (superconducting magnets **H01F 6/00**)

adopt M 7/20 · · · without armatures

adopt M **10/00** **Thin magnetic films, e.g. of one-domain structure**

adopt M 10/12 · · · being metals or alloys

adopt M **13/00** **Apparatus or processes for magnetising or demagnetising**

adopt M **17/00** **Fixed inductances of the signal type**

adopt M 19/04 \*      Transformers or mutual inductances suitable for handling frequencies considerably beyond the audio range

adopt M 27/08 \*      Cooling; Ventilating

adopt M 27/26 \* \*      Fastening parts of the core together; Fastening or mounting the core on casing or support

adopt M 27/42 \*      Circuits specially adapted for the purpose of modifying, or compensating for, electric characteristics of transformers, reactors or choke coils

adopt M 29/14 \*      with variable magnetic bias

adopt M **36/00** **Transformers with superconductive windings or with windings operating at cryogenic temperatures**

adopt M 41/02 \*      for manufacturing cores, coils or magnets (**H01F 41/14** takes precedence)

adopt M 41/08 \* \* \*      Winding conductors on to or threading conductors through cores or formers which are closed in themselves, e.g. toroids

adopt M 41/10 \* \* \*      Connecting leads to windings

adopt M 41/12 · · · Insulating of windings

adopt M 41/14 · for applying magnetic films to substrates

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**ANNEX 112E H01G [ Project-Rapporteur : A049/EP ] <CE44>**

adopt N *Note* In this subclass, group **H01G 11/00** takes precedence over groups **H01G 4/00** and **H01G H01G 9/00**. **[new]**

adopt M **2/00** Details of capacitors not covered by a single one of groups **H01G 4/00-H01G 11/00**

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**ANNEX 113E H01G [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 4/33 · Thin- or thick-film capacitors

adopt M 4/40 · Structural combinations of fixed capacitors with other electric elements not covered by this subclass, the structure mainly consisting of a capacitor, e.g. RC combinations

adopt M 5/40 · Structural combinations of variable capacitors with other electric elements not covered by this subclass, the structure mainly consisting of a capacitor, e.g. RC combinations

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**ANNEX 114EF H01G [ Project-Rapporteur : A049/EP ] <CE44>**

adopt D 9/016 (transferred to [H01G 11/66-H01G 11/74](#) )

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**ANNEX 115E H01G [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 9/022 · · Electrolytes; Absorbents

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**ANNEX 116E H01G [ Project-Rapporteur : A049/EP ] <CE44>**

adopt M 9/025 · · · Solid electrolytes ([H01G 11/54](#) takes precedence)

adopt M 9/035 · · · Liquid electrolytes, e.g. impregnating materials ([H01G 11/54](#) takes precedence)

adopt D 9/038 (transferred to [H01G 11/54](#) )

adopt M 9/042 · · · characterised by the material ([H01G 11/22](#) takes precedence)

adopt M 9/048 · · · characterised by their structure ([H01G 11/22](#) takes precedence)

adopt D 9/058 (transferred to [H01G 11/22](#) )

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**ANNEX 117E H01G [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 9/14 · · Structural combinations for modifying, or compensating for, electric characteristics of electrolytic capacitors



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ANNEX 118E H01G [ Project-Rapporteur : A049/EP ] <CE44>

adopt M 9/145 \* Liquid electrolytic capacitors (**H01G 11/00** takes precedence)

adopt M 9/15 \* Solid electrolytic capacitors (**H01G 11/00** takes precedence)

adopt D 9/155 (transferred to **H01G 11/00** )

adopt C 9/22 \* *Devices using combined reduction and oxidation, e.g. redox arrangement or solion*

adopt N 11/00 **Hybrid capacitors, i.e. capacitors having different positive and negative electrodes; Electric double-layer [EDL] capacitors; Processes for the manufacture thereof or of parts thereof**

adopt N Note Group **H01G 11/02** takes precedence over groups **H01G 11/04-H01G 11/14**. [new]  
11/00

adopt N 11/02 \* *using combined reduction-oxidation reactions, e.g. redox arrangement or solion*

adopt N 11/04 \* *Hybrid capacitors*

adopt N 11/06 \* \* *with one of the electrodes allowing ions to be reversibly doped thereinto, e.g. lithium-ion capacitors [LICs]*

- adopt N 11/08 \*      *Structural combinations, e.g. assembly or connection, of hybrid or EDL capacitors with other electric components, at least one hybrid or EDL capacitor being the main component*
- adopt N 11/10 \*      *Multiple hybrid or EDL capacitors, e.g. arrays or modules ( housings, cases, encapsulations or mountings thereof **H01G 11/78**)*
- adopt N 11/12 \*      *Stacked hybrid or EDL capacitors*
- adopt N 11/14 \*      *Arrangements or processes for adjusting or protecting hybrid or EDL capacitors (emergency protective circuit arrangements specially adapted for capacitors, and effecting automatic switching in the event of an undesired change from normal working conditions **H02H 7/16**; emergency protective circuit arrangements for limiting excess current or voltages without disconnection **H02H 9/00**)*
- adopt N 11/16 \*      *against electric overloads, e.g. including fuses*
- adopt N 11/18 \*      *against thermal overloads, e.g. heating, cooling or ventilating*
- adopt N 11/20 \*      *Reformation or processes for removal of impurities, e.g. scavenging*
- adopt N 11/22 \*      *Electrodes*
- adopt N 11/24 \*      *characterised by structural features of the materials making up or comprised in the electrodes, e.g. form, surface area or porosity; characterised by the structural features of powders or particles used therefor*

adopt N 11/26 \* \* \* *characterised by their structure, e.g. multi-layered, porosity or surface features*

adopt N 11/28 \* \* \* *arranged or disposed on a current collector; Layers or phases between electrodes and current collectors, e.g. adhesives*

adopt N 11/30 \* \* \* *characterised by their material*

adopt N 11/32 \* \* \* *Carbon-based*

adopt N 11/34 \* \* \* \* *characterised by carbonisation or activation of carbon*

adopt N 11/36 \* \* \* \* *Nanostructures, e.g. nanofibres, nanotubes or fullerenes*

adopt N 11/38 \* \* \* \* *Carbon pastes or blends; Binders or additives therein*

adopt N 11/40 \* \* \* \* *Fibres*

adopt N 11/42 \* \* \* \* *Powders or particles, e.g. composition thereof*

adopt N 11/44 \* \* \* \* *Raw materials therefor, e.g. resins or coal*

adopt N 11/46 \* \* \* \* *Metal oxides*

adopt N 11/48 \* \* \* *Conductive polymers*

adopt N 11/50 \* \* \* *specially adapted for lithium-ion capacitors, e.g. for lithium-doping or for intercalation*

adopt N 11/52 \* *Separators*

adopt N 11/54 \* *Electrolytes*

adopt N 11/56 \* \* *Solid electrolytes, e.g. gels; Additives therein*

adopt N 11/58 \* \* *Liquid electrolytes*

adopt N 11/60 \* \* \* *characterised by the solvent*

adopt N 11/62 \* \* \* *characterised by the solute, e.g. salts, anions or cations therein*

adopt N 11/64 \* \* \* *characterised by additives*

adopt N 11/66 \* *Current collectors*

adopt N 11/68 \* \* *characterised by their material*

- adopt N 11/70 \* \* *characterised by their structure*
- adopt N 11/72 \* \* *specially adapted for integration in multiple or stacked hybrid or EDL capacitors*
- adopt N 11/74 \* *Terminals, e.g. extensions of current collectors*
- adopt N 11/76 \* \* *specially adapted for integration in multiple or stacked hybrid or EDL capacitors*
- adopt N 11/78 \* *Cases; Housings; Encapsulations; Mountings*
- adopt N 11/80 \* \* *Gaskets; Sealings*
- adopt N 11/82 \* \* *Fixing or assembling a capacitive element in a housing, e.g. mounting electrodes, current collectors or terminals in containers or encapsulations*
- adopt N 11/84 \* *Processes for the manufacture of hybrid or EDL capacitors, or components thereof*
- adopt N 11/86 \* \* *specially adapted for electrodes (carbonisation or activation of carbon for the manufacture of electrodes [H01G 11/34](#))*
- adopt C 13/00 ***Apparatus specially adapted for manufacturing capacitors; Processes specially adapted for manufacturing capacitors not provided for in groups [H01G 4/00-H01G 11/00](#)***

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**ANNEX 119E H01G [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 13/04 \*      Drying; Impregnating

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**ANNEX 120E H01G [ Project-Rapporteur : A049/EP ] <CE44>**

adopt C 15/00 **Structural combinations of capacitors or other devices covered by at least two different main groups of this subclass with each other** (involving at least one hybrid or electric double-layer [EDL] capacitor as the main component [H01G 11/08](#))

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**ANNEX 121E H01G [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 17/00 **Structural combinations of capacitors or other devices covered by at least two different main groups of this subclass with other electric elements, not covered by this subclass, e.g. RC combinations**

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**ANNEX 122E H01J [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 1/22 \* \* \* \*      Heaters

adopt M 1/32 \* \*      Secondary-electron emitting electrodes ([H01J 1/35](#) takes precedence)

adopt M 1/34 \* \*      Photo-emissive cathodes ([H01J 1/35](#) takes precedence)

- adopt M 1/42 · · · Cooling of anodes (**H01J 1/44** takes precedence) ; Heating of anodes
  
- adopt M 1/52 · Screens for shielding; Guides for influencing the discharge; Masks interposed in the electron stream
  
- adopt M 1/63 · · · characterised by the luminescent material
  
- adopt M 1/66 · · · Supports for luminescent material
  
- adopt M 1/90 · · · Insulation between electrodes or supports within the vacuum space
  
- adopt M 1/94 · · · Mountings for individual electrodes
  
- adopt M 3/26 · Arrangements for deflecting ray or beam
  
- adopt M 5/04 · · · Vessels or containers characterised by the material thereof
  
- adopt M 5/16 · · · Optical or photographic arrangements structurally combined with the vessel
  
- adopt M 5/48 · Means forming part of the tube or lamp for the purpose of supporting it

- adopt M 5/50 • Means forming part of the tube or lamp for the purpose of providing electrical connection to it
- adopt M 7/02 • Selection of substances for gas fillings; Specified operating pressure or temperature
- adopt M 7/24 • Cooling arrangements; Heating arrangements; Means for circulating gas or vapour within the discharge space
- adopt M 7/30 • Igniting arrangements
- adopt M 9/00 **Apparatus or processes specially adapted for the manufacture of electric discharge tubes, discharge lamps, or parts thereof; Recovery of material from discharge tubes or lamps**
- adopt M 9/236 • Manufacture of magnetic deflecting devices for cathode-ray tubes
- adopt M 11/00 **Gas-filled discharge tubes with alternating current induction of the discharge, e.g. AC-PDPs [Alternating Current Plasma Display Panels] (circuits or methods for driving PDPs [G09G 3/28](#)) ; Gas-filled discharge tubes without any main electrode inside the vessel; Gas-filled discharge tubes with at least one main electrode outside the vessel**
- adopt M 13/00 **Discharge tubes with liquid-pool cathodes, e.g. metal-vapour rectifying tubes**
- adopt M 13/16 • • • Anodes; Auxiliary anodes for maintaining the discharge



adopt M 13/34 \* \* Igniting arrangements

adopt M 13/44 \* \* Devices for preventing or eliminating arcing-back

adopt M **15/00** **Gas-filled discharge tubes with gaseous cathodes, e.g. plasma cathodes**

adopt M **17/00** **Gas-filled discharge tubes with solid cathodes (H01J 25/00, H01J 27/00, H01J 31/00-H01J 41/00 take precedence; gas filled spark gaps H01T; Marx converters H02M 7/26)**

adopt M 17/20 \* \* Selection of substances for gas fillings; Specified operating pressures or temperatures

adopt M 17/38 \* Cold-cathode tubes

adopt M 17/40 \* \* with one cathode and one anode, e.g. glow tubes, tuning-indicator glow tubes, voltage-stabiliser tubes or voltage-indicator tubes

adopt M 17/49 \* \* \* Display panels, e.g. with crossed electrodes

adopt M 17/50 \* Thermionic-cathode tubes

adopt M 19/16 \* \* \* \* Heaters

- adopt M 19/40 \* \* Screens for shielding
- adopt M 19/44 \* \* Insulation between electrodes or supports within the vacuum space
- adopt M 19/48 \* \* Mountings for individual electrodes
- adopt M 19/64 \* Means forming part of the tube for the purpose of supporting it
- adopt M 19/66 \* Means forming part of the tube for the purpose of providing electrical connection  
to it
- adopt M 21/00 **Vacuum tubes (H01J 25/00, H01J 31/00-H01J 40/00, H01J 43/00, H01J 47/00, H01J 49/00** take precedence; details of vacuum tubes **H01J 19/00)**
- adopt M 21/20 \* Tubes with more than one discharge path; Multiple tubes, e.g. double diode or triode-hexode
- adopt M 23/16 \* Circuit elements, having distributed capacitance and inductance, structurally associated with the tube and interacting with the discharge
- adopt M 25/02 \* Tubes with electron stream modulated in velocity or density in a modulator zone and thereafter giving-up energy in an inducing zone, the zones being associated with one or more resonators
- adopt M 25/54 \* \* \* having only one cavity or other resonator, e.g. neutrode tubes

- adopt M 25/74 \* Tubes specially designed to act as transit-time diode oscillators, e.g. monotrons
  
- adopt M 27/02 \* Ion sources; Ion guns
  
- adopt M 27/10 \* \* \* Duoplasmatrons
  
- adopt M 29/04 \* \* Cathodes
  
- adopt M 29/08 \* \* Electrodes intimately associated with a screen on or from which an image or pattern is formed, picked-up, converted or stored, e.g. backing-plates for storage tubes or electrodes for collecting secondary electrons
  
- adopt M 29/70 \* \* Arrangements for deflecting ray or beam
  
- adopt M 29/81 \* \* \* using shadow masks
  
- adopt M 29/84 \* Traps for removing or diverting unwanted particles, e.g. negative ions or fringing electrons; Arrangements for velocity or mass selection
  
- adopt M 29/88 \* \* provided with coatings on the walls thereof; Selection of materials for the coatings
  
- adopt M 29/92 \* Means forming part of the tube for the purpose of providing electrical connection to  
it

adopt M **31/00** **Cathode-ray tubes; Electron-beam tubes** (**H01J 25/00**, **H01J 33/00**, **H01J 35/00**, **H01J 37/00** take precedence; details of cathode-ray tubes or of electron-beam tubes **H01J 29/00**)

adopt M **35/00** **X-ray tubes**

adopt 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)

adopt M 37/20 \* \* Means for supporting or positioning the object or the material; Means for adjusting diaphragms or lenses associated with the support

adopt M 37/248 \* \* Components associated with high voltage supply

adopt M 37/252 \* Tubes for spot-analysing by electron or ion beams; Microanalysers

adopt M 37/28 \* \* with scanning beams

adopt M **40/00** **Photoelectric discharge tubes not involving the ionisation of a gas** (**H01J 49/00** takes precedence)

adopt M 40/18 \* \* with luminescent coatings for influencing the sensitivity of the tube, e.g. by converting the input wavelength

adopt M **41/00** **Discharge tubes and means integral therewith for measuring gas pressure;**

## Discharge tubes for evacuation by diffusion of ions

adopt M **43/00** **Secondary-emission tubes; Electron-multiplier tubes** (dynamic electron-multiplier tubes [H01J 25/76](#))

adopt M 43/10 · · · Dynodes ([H01J 43/24](#), [H01J 43/26](#) take precedence)

adopt M 47/04 · · · Capacitive ionisation chambers, e.g. the electrodes of which are used as electrometers

adopt M **49/00** **Particle spectrometers or separator tubes**

adopt M 49/26 · Mass spectrometers or separator tubes

adopt M **61/00** **Gas-discharge or vapour-discharge lamps** (arc lamps with consumable electrodes [H05B](#); electroluminescent lamps [H05B](#))

adopt M 61/44 · · · · Devices characterised by the luminescent material

adopt M 61/54 · · Igniting arrangements, e.g. promoting ionisation for starting

adopt M 61/64 · Cathode glow lamps

adopt M 61/96 · Lamps with light-emitting discharge path and separately-heated incandescent body

within a common envelope, e.g. for simulating daylight

adopt M **63/00** **Cathode-ray or electron-stream lamps**

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**ANNEX 123E H01K [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M **Title** **ELECTRIC INCANDESCENT LAMPS** (details or apparatus or processes for manufacture applicable to both discharge devices and incandescent lamps **H01J**; light sources using a combination of incandescent and other types of light generation **H01J 61/96**, **H05B 35/00**)

adopt M 1/22 · · Lamp stems

adopt M 1/42 · Means forming part of the lamp for the purpose of providing electrical connection to, or support for, the lamp

adopt M **3/00** **Apparatus or processes adapted to the manufacture, installing, removal or maintenance of incandescent lamps or parts thereof**

adopt M **9/00** **Lamps having two or more incandescent bodies separately heated** (**H01K 11/00**, **H01K 13/00** take precedence)

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**ANNEX 124E H01L [ Project-Rapporteur : A043/US ] <CE44>**

adopt C **41/00** ***Piezo-electric devices in general; Electrostrictive devices in general; Magnetostrictive devices in general; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof; Details thereof*** (devices consisting of a plurality of solid-state components formed in or on a common substrate)

**H01L 27/00)**

adopt C 41/22 \* *Processes or apparatus specially adapted for the assembly, manufacture or treatment of piezo-electric or electrostrictive devices or of parts thereof*

adopt N 41/23 \* *Forming enclosures or casings*

adopt D 41/24 (transferred to **H01L 41/39,H01L 41/47** )

adopt N 41/25 \* *Assembling devices that include piezo-electric or electrostrictive parts*

adopt N 41/253 \* *Treating devices or parts thereof to modify a piezo-electric or electrostrictive property, e.g. polarisation characteristics, vibration characteristics or mode tuning*

adopt N 41/257 \* *by polarising*

adopt D 41/26 (transferred to **H01L 41/45** )

adopt N 41/27 \* *Manufacturing multilayered piezo-electric or electrostrictive devices or parts thereof, e.g. by stacking piezo-electric bodies and electrodes*

adopt N 41/273 \* *by integrally sintering piezo-electric or electrostrictive bodies and electrodes*

adopt N 41/277 \* *by stacking bulk piezo-electric or electrostrictive bodies and electrodes*

adopt N 41/29 \* \* \* *Forming electrodes, leads or terminal arrangements*

adopt N Note *The integral arrangement of individual layer electrodes and connection electrodes is 41/293- classified in both groups **H01L 41/293** and **H01L 41/297**. [new]*  
41/297

adopt N 41/293 \* \* \* *Connection electrodes of multilayered piezo-electric or electrostrictive parts*

adopt N 41/297 \* \* \* *Individual layer electrodes of multilayered piezo-electric or electrostrictive parts*

adopt N 41/31 \* \* \* *Applying piezo-electric or electrostrictive parts or bodies onto an electrical element or another base*

adopt N 41/311 \* \* \* *Mounting of piezo-electric or electrostrictive parts together with semiconductor elements, or other circuit elements, on a common substrate*

adopt N 41/312 \* \* \* *by laminating or bonding of piezo-electric or electrostrictive bodies*

adopt N 41/313 \* \* \* \* *by metal fusing or with adhesives*

adopt N 41/314 \* \* \* *by depositing piezo-electric or electrostrictive layers, e.g. aerosol or screen printing*

adopt N 41/316 \* \* \* \* *by vapour phase deposition*



adopt N 41/317 \* \* \* \* *by liquid phase deposition*

adopt N 41/318 \* \* \* \* *by sol-gel deposition*

adopt N 41/319 \* \* \* \* *using intermediate layers, e.g. for growth control*

adopt N 41/33 \* \* *Shaping or machining of piezo-electric or electrostrictive bodies*

adopt N 41/331 \* \* \* *by coating or depositing using masks, e.g. lift-off*

adopt N 41/332 \* \* \* *by etching, e.g. lithography*

adopt N 41/333 \* \* \* *by moulding or extrusion*

adopt N 41/335 \* \* \* *by machining*

adopt N 41/337 \* \* \* \* *by polishing or grinding*

adopt N 41/338 \* \* \* \* *by cutting or dicing*

adopt N 41/339 \* \* \* \* *by punching*

adopt N 41/35 · · · *Forming piezo-electric or electrostrictive materials*

adopt N 41/37 · · · *Composite materials*

adopt N 41/39 · · · *Inorganic materials*

adopt N 41/41 · · · · *by melting*

adopt N 41/43 · · · · *by sintering*

adopt N 41/45 · · · *Organic materials*

adopt N 41/47 · *Processes or apparatus specially adapted for the assembly, manufacture or treatment of magnetostrictive devices or of parts thereof*

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**ANNEX 125E H01S [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 3/036 · · · Means for obtaining or maintaining the desired gas pressure within the tube, e.g. by gettering or replenishing; Means for circulating the gas, e.g. for equalising the pressure within the tube

adopt M 3/083 · · · · Ring lasers

adopt M 3/10 · Controlling the intensity, frequency, phase, polarisation or direction of the emitted

radiation, e.g. switching, gating, modulating or demodulating (mode locking [H01S 3/098](#))

adopt M 3/101 · · Lasers provided with means to change the location from which, or the direction in which, laser radiation is emitted

adopt M 5/026 · · Monolithically integrated components, e.g. waveguides, monitoring photo-detectors or drivers (stabilisation of output [H01S 5/06](#))

adopt M 5/06 · Arrangements for controlling the laser output parameters, e.g. by operating on the active medium

adopt M 5/36 · · comprising organic materials

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**ANNEX 126E H01S [ Project-Rapporteur : A047/EP ] <CE44>**

adopt M 5/50 · Amplifier structures not provided in groups [H01S 5/02-H01S 5/30](#)

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**ANNEX 127E H02K [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M **Title DYNAMO-ELECTRIC MACHINES** (dynamo-electric relays [H01H 53/00](#); conversion of dc or ac input power into surge output power [H02M 9/00](#))

adopt M **1/00 Details of the magnetic circuit** (magnetic circuits for relays [H01H 50/16](#))

adopt M 1/04 · characterised by the material used for insulating the magnetic circuit or parts thereof

adopt M **3/00** **Details of windings**

adopt M 3/02 · Windings characterised by the conductor material

adopt M 3/30 · Windings characterised by the insulating material

adopt M **5/00** **Casings; Enclosures; Supports**

adopt M 5/132 · · Submersible electric motor (**H02K 5/128** takes precedence)

adopt M 7/065 · Electromechanical oscillators; Vibrating magnetic drives

adopt M 7/08 · Structural association with bearings

adopt M 7/14 · Structural association with mechanical load, e.g. with hand-held machine tools or fans (with fan or impeller for cooling the machine **H02K 9/06**)

adopt M 7/18 · Structural association of electric generators with mechanical driving motors, e.g. with turbines

adopt M 7/20 · Structural association with auxiliary dynamo-electric machines, e.g. with electric

starter motors or exciters

adopt M 9/24 · Protection against failure of cooling arrangements, e.g. due to loss of cooling medium or due to interruption of the circulation of cooling medium

adopt M 9/28 · Cooling of commutators, slip-rings or brushes, e.g. by ventilating

adopt M **15/00** **Methods or apparatus specially adapted for manufacturing, assembling, maintaining or repairing dynamo-electric machines**

adopt M 15/04 · of windings, prior to mounting into the machine (insulating windings [H02K 15/10](#), [H02K 15/12](#))

adopt M 15/16 · Centering the rotor within the stator; Balancing the rotor

adopt M 17/30 · · Structural association with auxiliary electric devices influencing the characteristic of, or controlling, the motor, e.g. with impedances or switches

adopt M 17/32 · · Structural association with auxiliary mechanical devices, e.g. with clutches or brakes

adopt M 17/34 · · Cascade arrangement of an asynchronous motor with another dynamo-electric motor or converter

adopt M 17/40 · · · with a rotary ac/dc converter

adopt M 19/36 \* \* Structural association with auxiliary electric devices influencing the characteristic of, or controlling, the generator, e.g. with impedances or switches

adopt M **21/00 Synchronous motors having permanent magnet; Synchronous generators having permanent magnet**

adopt M 23/66 \* Structural association with auxiliary electric devices influencing the characteristic of, or controlling, the machine, e.g. with impedances or switches

adopt M 23/68 \* Structural association with auxiliary mechanical devices, e.g. with clutches or brakes

adopt M **27/00 AC commutator motors or generators having mechanical commutator**

adopt M 27/28 \* Structural association with auxiliary electric devices influencing the characteristic of, or controlling, the machine

adopt M 27/30 \* Structural association with auxiliary mechanical devices, e.g. with clutches or brakes

adopt M **49/00 Dynamo-electric clutches; Dynamo-electric brakes**

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ANNEX 128E H02P [ Project-Rapporteur : M037/IB ] <CE44>

adopt M Title **CONTROL OR REGULATION OF ELECTRIC MOTORS, GENERATORS, OR DYNAMO-ELECTRIC CONVERTERS; CONTROLLING TRANSFORMERS OR**

## REACTORS OR CHOKE COILS

- adopt M 1/10 · · · Manually-operated on/off switch controlling relays or contactors operating sequentially for starting a motor
- adopt M 3/04 · · Means for stopping or slowing by a separate brake, e.g. friction brake or eddy-current brake
- adopt M 4/00 **Arrangements specially adapted for regulating or controlling the speed or torque of electric motors that can be connected to two or more different voltage or current supplies** (vector control [H02P 21/00](#))
- adopt M 5/00 **Arrangements specially adapted for regulating or controlling the speed or torque of two or more electric motors**
- adopt M 6/00 **Arrangements for controlling synchronous motors or other dynamo-electric motors with electronic commutators in dependence on the rotor position; Electronic commutators therefor** (vector control [H02P 21/00](#))
- adopt M 6/16 · · Circuit arrangements for detecting position
- adopt M 7/00 **Arrangements for regulating or controlling the speed or torque of electric dc-motors**
- adopt M 8/00 **Arrangements for controlling dynamo-electric motors rotating step by step**
- adopt M 8/36 · Protection against faults, e.g. against overheating or step-out; Indicating faults

adopt M **9/00** **Arrangements for controlling electric generators for the purpose of obtaining a desired output**

adopt M **11/00** **Arrangements for controlling dynamo-electric converters**

adopt M **13/00** **Arrangements for controlling transformers, reactors or choke coils, for the purpose of obtaining a desired output**

adopt M **15/00** **Arrangements for controlling dynamo-electric brakes or clutches** (vector control [H02P 21/00](#))

adopt M **23/00** **Arrangements or methods for the control of ac-motors characterised by a control method other than vector control**

adopt M **23/10** \* Controlling by adding a dc current

adopt M **25/00** **Arrangements or methods for the control of ac-motors characterised by the kind of ac-motor or by structural details**

adopt M **27/00** **Arrangements or methods for the control of ac-motors characterised by the kind of supply voltage** (of two or more motors [H02P 5/00](#); of synchronous motors with electronic commutators [H02P 6/00](#); of dc-motors [H02P 7/00](#); of stepping motors [H02P 8/00](#))

adopt M **29/00** **Arrangements for regulating or controlling electric motors, appropriate for both ac- and dc-motors** (control of motors that can be connected to two or more different voltage



or current supplies [H02P 4/00](#); vector control [H02P 21/00](#))

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ANNEX 129E H03D [ Project-Rapporteur : D252/GB ] <CE44>

adopt M Title **DEMODULATION OR TRANSFERENCE OF MODULATION FROM ONE CARRIER TO ANOTHER** (masers, lasers [H01S](#); circuits capable of acting both as modulator and demodulator [H03C](#), e.g. balanced modulators [H03C 1/54](#); details applicable to both modulators and frequency-changers [H03C](#); demodulating pulses which have been modulated with a continuously-variable signal [H03K 9/00](#); transforming types of pulse modulation [H03K 11/00](#); relay systems, e.g. repeater stations [H04B 7/14](#); demodulators adapted for digitally modulated-carrier systems [H04L 27/00](#); synchronous demodulators adapted for colour television [H04N 9/66](#))

adopt M 1/00 **Demodulation of amplitude-modulated oscillations** ([H03D 5/00](#), [H03D 9/00](#), [H03D 11/00](#) take precedence; amplitude demodulators adapted for digitally modulated carrier systems, e.g. using on-off keying, single sideband or vestigial sideband modulation [H04L 27/06](#))

adopt M 3/00 **Demodulation of angle-modulated oscillations** ([H03D 5/00](#), [H03D 9/00](#), [H03D 11/00](#) take precedence; frequency demodulators adapted for digitally modulated carrier systems, i.e. using frequency shift keying [H04L 27/14](#); phase demodulators adapted for digitally modulated carrier systems, i.e. using phase shift keying [H04L 27/22](#))

adopt M 3/02 • by detecting phase difference between two signals obtained from input signal ([H03D 3/28](#)-[H03D 3/32](#) take precedence)

adopt M 3/28 • Modifications of demodulators to reduce effect of temperature variations

adopt M 5/00 **Circuits for demodulating amplitude-modulated or angle-modulated oscillations at will** ([H03D 9/00](#), [H03D 11/00](#) take precedence; demodulators adapted for digitally modulated carrier systems characterised by combinations of amplitude and angle modulation, e.g. quadrature amplitude modulation [H04L 27/38](#))

- adopt M 7/16 · Multiple frequency-changing (superheterodyne receivers **H04B 1/26**)
- adopt M 9/00 **Demodulation or transference of modulation of modulated electromagnetic waves**  
(devices or arrangements for demodulating light, transferring the modulation of modulated light or for changing the frequency of light **G02F 2/00**)
- adopt M 13/00 **Circuits for comparing the phase or frequency of two mutually-independent oscillations** (arrangements for measuring phase angle between a voltage and a current or between voltages or currents **G01R 25/00**)

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**ANNEX 130E H03K [ Project-Rapporteur : D168/GB ] <CE44>**

- adopt M Title **PULSE TECHNIQUE** (measuring pulse characteristics **G01R**; modulating sinusoidal oscillations with pulses **H03C**; transmission of digital information **H04L**; discriminator circuits detecting phase difference between two signals by counting or integrating cycles of oscillation **H03D 3/04**; automatic control, starting, synchronisation or stabilisation of generators of electronic oscillations or pulses where the type of generator is irrelevant or unspecified **H03L**; coding, decoding or code conversion, in general **H03M**)
- adopt M 3/00 **Circuits for generating electric pulses; Monostable, bistable or multistable circuits**  
(**H03K 4/00** takes precedence; for digital function generators in computers **G06F 1/02**)
- adopt M 3/80 · Generating trains of sinusoidal oscillations (by keying or interruption of sinusoidal oscillations **H03C**; for transmission of digital information **H04L**)
- adopt M 4/00 **Generating pulses having essentially a finite slope or stepped portions**

adopt M 4/90 · · · Linearisation of ramp (modifying slopes of pulses **H03K 6/04**; scanning distortion correction for television receivers **H04N 3/23**) ; Synchronisation of pulses

adopt M 5/003 · Changing the DC level (reinsertion of dc component of a television signal **H04N 5/16**)

adopt M 5/02 · · by amplifying (**H03K 5/04** takes precedence)

adopt M 5/125 · Discriminating pulses (measuring characteristics of individual pulses **G01R 29/02**; separation of synchronising signals in television systems **H04N 5/08**)

adopt M **12/00** **Producing pulses by distorting or combining sinusoidal waveforms** (shaping pulses **H03K 5/01**; combining sinewaves using elements operating in a non-switching manner **H03B 21/00**)

adopt M **17/00** **Electronic switching or gating, i.e. not by contact-making and -breaking** (gated amplifiers **H03F 3/72**; switching arrangements for exchange systems using static devices **H04Q 3/52**)

adopt M 17/76 · · · Switching arrangements with several input- or output-terminals, e.g. multiplexers, distributors (logic circuits **H03K 19/00**; code converters **H03M 5/00**, **H03M 7/00**)

adopt M 17/94 · characterised by the way in which the control signals are generated

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

adopt M Title **TRANSMISSION**

adopt M **1/00** **Details of transmission systems, not covered by a single one of groups H04B 3/00-H04B 13/00; Details of transmission systems not characterised by the medium used for transmission**

adopt M 1/02 · Transmitters

adopt M 1/036 · · · Cooling arrangements

adopt M 1/04 · · Circuits

adopt M 1/06 · Receivers

adopt M 1/18 · · · Input circuits, e.g. for coupling to an aerial or a transmission line (coupling networks between aerials or lines and receivers independent of the nature of the receiver **H03H**)

adopt M 1/44 · · · Transmit/receive switching

adopt M 1/59 · Responders; Transponders

adopt M 1/66 · for reducing bandwidth of signals; for improving efficiency of transmission (**H04B 1/68** takes precedence)

adopt M 1/72 · Circuits or components for simulating aerials, e.g. dummy aerials

adopt M **3/00** **Line transmission systems** (combined with near-field transmission systems **H04B 5/00**)

adopt M 3/03 · · Hybrid circuits (for transceivers **H04B 1/52**, **H04B 1/58**)

adopt M 3/04 · · Control of transmission; Equalising

adopt M 3/26 · · Improving frequency characteristic by the use of loading coils

adopt M 3/36 · · Repeater circuits (**H04B 3/58** takes precedence)

adopt M 3/54 · Systems for transmission via power distribution lines (in alarm signalling systems **G08B 25/06**)

adopt M 3/58 · · Repeater circuits

adopt M 7/02 · Diversity systems

adopt M 7/14 · Relay systems

adopt M 7/216 \* \* \* \* Code-division or spread-spectrum multiple access

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**ANNEX 132E H04B [ Project-Rapporteur : A047/EP ] <CE44>**

adopt C 10/00 ***Transmission systems employing electromagnetic waves other than radio-waves, e.g. infrared, visible or ultraviolet light, or employing corpuscular radiation, e.g. quantum communication***

adopt N *Note In this group, non-optical transmission systems are classified in group **H04B 10/00 10/90**. [new]*

adopt D 10/02 (transferred to **H04B 10/00** )

adopt N 10/03 \* *Arrangements for fault recovery*

adopt N 10/032 \* \* *using working and protection systems*

adopt N 10/035 \* \* *using loopbacks*

adopt N 10/038 \* \* *using bypasses*

adopt D 10/04 (transferred to **H04B 10/50** )

adopt D 10/06 (transferred to **H04B 10/60** )

adopt N 10/07\* *Arrangements for monitoring or testing transmission systems; Arrangements for fault measurement of transmission systems*

adopt N 10/071\* · using a reflected signal, e.g. using optical time-domain reflectometers [OTDRs]

adopt N 10/073\* · using an out-of-service signal (**H04B 10/071** takes precedence)

adopt N 10/075\* · using an in-service signal (**H04B 10/071** takes precedence)

adopt N 10/077\* · · using a supervisory or additional signal

adopt N 10/079\* · · using measurements of the data signal

adopt D 10/08 (transferred to **H04B 10/07** )

adopt D 10/10 (transferred to **H04B 10/11** )

adopt D 10/105 (transferred to **H04B 10/118** )

adopt N 10/11\* *Arrangements specific to free-space transmission, i.e. transmission through air or vacuum*

adopt N 10/112\* · *Line-of-sight transmission over an extended range*

adopt N 10/114 \* \* *Indoor or close-range type systems*

adopt N 10/116 \* \* \* *Visible light communication*

adopt N 10/118 \* \* *specially adapted for satellite communication*

adopt D 10/12 (transferred to **H04B 10/25** )

adopt D 10/13 (transferred to **H04B 10/2581** )

adopt D 10/135 (transferred to **H04B 10/25,H04B 10/2587** )

adopt D 10/14 (transferred to **H04B 10/40,H04B 10/50,H04B 10/60** )

adopt D 10/142 (transferred to **H04B 10/40,H04B 10/50,H04B 10/61** )

adopt D 10/145 (transferred to **H04B 10/50** )

adopt D 10/148 (transferred to **H04B 10/61** )

adopt D 10/152 (transferred to **H04B 10/40,H04B 10/50,H04B 10/66** )

adopt D 10/155 (transferred to **H04B 10/50** )

adopt D 10/158 (transferred to **H04B 10/66** )



adopt D 10/16 (transferred to [H04B 10/29](#) )

adopt D 10/17 (transferred to [H04B 10/291](#) )

adopt D 10/18 (transferred to [H04B 10/2507](#) )

adopt D 10/20 (transferred to [H04B 10/27](#) )

adopt D 10/207 (transferred to [H04B 10/272](#) )

adopt D 10/213 (transferred to [H04B 10/275](#),[H04B 10/278](#) )

adopt D 10/22 (transferred to [H04B 10/25](#),[H04B 10/80](#) )

adopt D 10/24 (transferred to [H04B 10/11](#),[H04B 10/25](#) )

adopt N 10/25\* *Arrangements specific to fibre transmission*

adopt N 10/2507\* · *for the reduction or elimination of distortion or dispersion*

adopt N 10/2513\* · · *due to chromatic dispersion*

adopt N 10/2519\* · · · *using Bragg gratings*

adopt N 10/2525 \* \* \* \* using dispersion-compensating fibres

adopt N 10/2531 \* \* \* \* using spectral inversion

adopt N 10/2537 \* \* \* due to scattering processes, e.g. Raman or Brillouin scattering

adopt N 10/2543 \* \* \* due to fibre non-linearities, e.g. Kerr effect

adopt N 10/255 \* \* \* \* Self-phase modulation [SPM]

adopt N 10/2557 \* \* \* \* Cross-phase modulation [XPM]

adopt N 10/2563 \* \* \* \* Four-wave mixing [FWM]

adopt N 10/2569 \* \* \* due to polarisation mode dispersion [PMD]

adopt N 10/2575 \* \* Radio-over-fibre, e.g. radio frequency signal modulated onto an optical carrier

adopt N 10/2581 \* \* Multimode transmission

adopt N 10/2587 \* \* using a single light source for multiple stations

adopt D 10/26 (transferred to [H04B 10/11](#),[H04B 10/2587](#) )

adopt N 10/27 \*      *Arrangements for networking*

adopt N 10/272 \* \*      *Star-type networks*

adopt N 10/275 \* \*      *Ring-type networks*

adopt N 10/278 \* \*      *Bus-type networks*

adopt D 10/28 (transferred to [H04B 10/43](#) )

adopt N 10/29 \*      *Repeaters*

adopt N 10/291 \* \*      *in which processing or amplification is carried out without conversion of the main signal from optical form*

adopt N 10/293 \* \* \*      *Signal power control*

adopt N 10/294 \* \* \* \*      *in a multiwavelength system, e.g. gain equalisation*

adopt N 10/296 \* \* \* \*      *Transient power control, e.g. due to channel add/drop or rapid fluctuations in the input power*

adopt N 10/297 \* \* \* *Bidirectional amplification*

adopt N 10/299 \* \* \* *Signal waveform processing, e.g. reshaping or retiming*

adopt D 10/30 (transferred to **H04B 10/80**,**H04B 10/90** )

adopt N 10/40 \* *Transceivers*

adopt N 10/43 \* \* *using a single component as both light source and receiver, e.g. using a photoemitter as a photoreceiver*

adopt N 10/50 \* *Transmitters*

adopt N 10/508 \* \* *Pulse generation, e.g. generation of solitons*

adopt N 10/516 \* \* *Details of coding or modulation*

adopt N 10/524 \* \* \* *Pulse modulation*

adopt N 10/532 \* \* \* *Polarisation modulation*

adopt N 10/54 \* \* \* *Intensity modulation*

adopt N 10/548 \* \* \* *Phase or frequency modulation*

adopt N 10/556 \* \* \* *Digital modulation, e.g. differential phase shift keying [DPSK] or frequency shift keying [FSK]*

adopt N 10/564 \* \* *Power control*

adopt N 10/572 \* \* *Wavelength control*

adopt N 10/58 \* \* *Compensation for non-linear transmitter output*

adopt N 10/588 \* \* \* *in external modulation systems*

adopt N 10/60 \* *Receivers*

adopt N 10/61 \* \* *Coherent receivers*

adopt N 10/63 \* \* \* *Homodyne*

adopt N 10/64 \* \* \* *Heterodyne*

adopt N 10/66 \* \* *Non-coherent receivers, e.g. using direct detection*

adopt N 10/67 \* \* \* *Optical arrangements in the receiver*

adopt N 10/69 \* \* \* *Electrical arrangements in the receiver*

adopt N 10/70 \* *Photonic quantum communication*

adopt N 10/80 \* *Optical aspects relating to the use of optical transmission for specific applications, not provided for in groups [H04B 10/03-H04B 10/70](#), e.g. optical power feeding or optical transmission through water*

adopt N 10/85 \* \* *Protection from unauthorised access, e.g. eavesdrop protection*

adopt N 10/90 \* *Non-optical transmission systems, e.g. transmission systems employing non-photonic corpuscular radiation*

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**ANNEX 133E H04B [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 13/02 \* *Transmission systems in which the medium consists of the earth or a large mass of water thereon, e.g. earth telegraphy*

adopt M 14/04 \* \* *using pulse code modulation*

adopt M 14/06 \* \* *using differential modulation, e.g. delta modulation*

adopt M 15/02 · Reducing interference from electric apparatus by means located at or near the interfering apparatus

adopt M 15/04 · · the interference being caused by substantially sinusoidal oscillations, e.g. in a receiver or in a tape-recorder

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**ANNEX 134E H04L [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M **Title** **TRANSMISSION OF DIGITAL INFORMATION, e.g. TELEGRAPHIC COMMUNICATION**  
(arrangements common to telegraphic and telephonic communication **H04M**)

adopt M **1/00** **Arrangements for detecting or preventing errors in the information received**

adopt M 1/02 · by diversity reception

adopt M **5/00** **Arrangements affording multiple use of the transmission path**

adopt M 5/14 · Two-way operation using the same type of signal, i.e. duplex

adopt M **9/00** **Arrangements for secret or secure communication**

adopt M 9/32 · including means for verifying the identity or authority of a user of the system

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**ANNEX 135E H04L [ Project-Rapporteur : A050/EP ] <CE44>**

adopt C 12/54 \* *Store-and-forward switching systems (packet switching systems [H04L 12/70](#))*

adopt D 12/56 (transferred to [H04L 12/70](#) )

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**ANNEX 136E H04L [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 12/58 \* \* Message switching systems

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**ANNEX 137E H04L [ Project-Rapporteur : A050/EP ] <CE44>**

adopt N 12/70 \* *Packet switching systems*

adopt N 12/701 \* \* *Routing or path finding*

adopt N 12/703 \* \* \* *Route fault prevention or recovery, e.g. rerouting, route redundancy, virtual router redundancy protocol [VRRP] or hot standby router protocol [HSRP]*

adopt N 12/705 \* \* \* \* *Loop or livelock prevention, e.g. time to live [TTL] or spanning tree*

adopt N 12/707 \* \* \* \* *using path redundancy*



adopt N 12/709 · · · · · *using M+N parallel active paths*

adopt N 12/711 · · · · · *using M:N active or standby paths*

adopt N 12/713 · · · · · *using node redundancy, e.g. VRRP*

adopt N 12/715 · · · *Hierarchical routing, e.g. clustered networks or inter-domain routing*

adopt N 12/717 · · · *Centralised routing*

adopt N 12/721 · · · *Routing procedures, e.g. shortest path routing, source routing, link state routing or distance vector routing*

adopt N 12/723 · · · · · *Label or tag based routing, e.g. multi-protocol label switching [MPLS] or generalised multi-protocol label switching [GMPLS]*

adopt N 12/725 · · · · · *Selecting a path with suitable quality of service [QoS]*

adopt N 12/727 · · · · · *Selecting a path with minimum delay*

adopt N 12/729 · · · · · *Selecting a path with suitable bandwidth or throughput*

adopt N 12/733 · · · · · *Selecting a path with minimum length or minimum hop count*

adopt N 12/735 \* \* \* \* *Disjoint routing, e.g. path disjoint or node disjoint*

adopt N 12/741 \* \* \* *Header address processing for routing, e.g. table lookup*

adopt N 12/743 \* \* \* \* *using hashing techniques*

adopt N 12/745 \* \* \* \* *using longest matching prefix*

adopt N 12/747 \* \* \* \* *Address caching*

adopt N 12/749 \* \* \* \* *Address processing over inter-domain or inter-network, e.g. mapping different addresses between IPv6 and IPv4 networks for routing*

adopt N 12/751 \* \* \* *Topology update or discovery*

adopt N 12/753 \* \* \* \* *Routing tree discovery, e.g. converting from mesh topology to tree topology*

adopt N 12/755 \* \* \* \* *Topology update consistency, e.g. link state advertisement [LSA], time stamping or sequence numbers in the updates*

adopt N 12/757 \* \* \* \* *Synchronised activation of routing updates, e.g. delaying or holding routing table updates*

adopt N 12/759 \* \* \* \* *Dynamic adaptation of update interval, e.g. event-driven updates*

adopt N 12/761 \* \* \* \* *Broadcast or multicast routing*

adopt N 12/763 \* \* \* \* *Shortcut routing, e.g. next hop resolution protocol [NHRP]*

adopt N 12/771 \* \* \* \* *Router architecture*

adopt N 12/773 \* \* \* \* *for supporting layer 3 switching, e.g. IP switching, cell switch relay [CSR] or tag switching*

adopt N 12/775 \* \* \* \* *multiple routing entities, e.g. multiple software or hardware instances*

adopt N 12/781 \* \* \* \* *Multiprotocol routing, e.g. for protocol adaptation between IPv4 and IPv6 or dual stack*

adopt N 12/801 \* \* \* \* *Flow control or congestion control*

adopt N 12/803 \* \* \* \* *Load balancing, e.g. traffic distribution over multiple links*

adopt N 12/805 \* \* \* \* *Determination of the optimum packet size, e.g. maximum transmission unit [MTU]*

adopt N 12/807 \* \* \* \* *Calculation or update of the congestion window*

adopt N 12/811 · · · *Bitrate adaptation in active flows*

adopt N 12/813 · · · · *Policy-based control, e.g. policing*

adopt N 12/815 · · · · *Shaping*

adopt N 12/819 · · · · *Leaky bucket*

adopt N 12/823 · · · · *Packet dropping*

adopt N 12/825 · · · · *Adaptive control, at the source or intermediate nodes, upon congestion feedback, e.g. X-on X-off*

adopt N 12/827 · · · · · *sent by intermediate network nodes*

adopt N 12/829 · · · · · *sent by the destination endpoint*

adopt N 12/833 · · · · *Marking packets or altering packet priority upon congestion or for congestion prevention*

adopt N 12/835 · · · · *using buffer capacity information at the endpoints or transit nodes*

adopt N 12/841 · · · *Flow control actions using time consideration, e.g. round trip time [RTT]*

adopt N 12/851 · · · *Traffic type related actions, e.g. QoS or priority*

adopt N 12/853 · · · · *for real time traffic*

adopt N 12/855 · · · · *for signalling traffic, e.g. operations, administration and maintenance [OAM]  
or acknowledge [ACK] packets*

adopt N 12/857 · · · · *Mapping QoS constraints between layers or between different networks*

adopt N 12/859 · · · · *Flow control actions based on the nature of the application, e.g. controlling  
web browsing or e-mail traffic*

adopt N 12/861 · · · *Packet buffering or queuing arrangements; Queue scheduling*

adopt N 12/863 · · · · *Queue scheduling, e.g. Round Robin*

adopt N 12/865 · · · · · *Priority-based scheduling*

adopt N 12/867 · · · · · *Fair share scheduling*

adopt N 12/869 · · · · · *Multilevel scheduling; Hierarchical scheduling*

adopt N 12/873 · · · · · *Bandwidth-aware scheduling*

adopt N 12/875 · · · · · *Delay-aware scheduling*

adopt N 12/877 · · · · · *Distribution of residual bandwidth, e.g. distribution of unused bandwidth to best effort traffic [BET]*

adopt N 12/879 · · · · · *Single buffer operations, e.g. buffer pointers or buffer descriptors*

adopt N 12/883 · · · · · *Packet storage using a linked list of buffers*

adopt N 12/885 · · · · · *Jitter compensation buffering*

adopt N 12/891 · · · · *Flow control of aggregated links or flows*

adopt N 12/893 · · · · *Connection splitting, e.g. IP splitting*

adopt N 12/901 · · · · *Ingress point selection by the source endpoint, e.g. Internet service provider [ISP] or point of presence [POP] selection*

adopt N 12/903 · · · · *Selection among a plurality of different networks*

adopt N 12/905 \* \* \* \* *Dynamic network selection or re-selection, e.g. after degradation of quality*

adopt N 12/911 \* \* \* *Network admission control and resource allocation, e.g. bandwidth allocation or in-call renegotiation*

adopt N 12/913 \* \* \* *Reservation actions involving intermediate nodes, e.g. resource reservation protocol [RSVP]*

adopt N 12/915 \* \* \* *Reservation actions involving several network domains, e.g. multilateral agreements or mapping of resources*

adopt N 12/917 \* \* \* *Dynamic resource allocation, e.g. in-call renegotiation requested by the user or upon changing network conditions requested by the network*

adopt N 12/919 \* \* \* \* *initiated by the source endpoint*

adopt N 12/923 \* \* \* \* *initiated by the network*

adopt N 12/925 \* \* \* *Reservation of resources at the destination endpoint*

adopt N 12/927 \* \* \* *Allocation of resources based on type of traffic, QoS or priority*

adopt N 12/931 \* \* \* *Switch fabric architecture*

adopt N 12/933 · · · *Switch core, e.g. crossbar, shared memory or shared medium*

adopt N 12/935 · · · *Switch interfaces, e.g. port details*

adopt N 12/937 · · · *Switch control, e.g. arbitration*

adopt N 12/939 · · · *Provisions for redundant switching, e.g. using parallel switching planes*

adopt N 12/943 · · · · *Transferring a complete packet or cell from each plane*

adopt N 12/945 · · · · *Transferring a part of the packet or cell from each plane, e.g. bit slice*

adopt N 12/947 · · · *Address processing within a device, e.g. using internal ID or tags for routing within a switch*

adopt N 12/951 · · *Assembling and disassembling of packets, e.g. segmentation and reassembly [SAR] in asynchronous transfer mode [ATM]*

adopt N 12/953 · · · *Packet sequencing arrangements for supporting message reassembly, e.g. packet sequence number*

adopt N 12/955 · · · *Padding or de-padding, e.g. inserting or removing dummy data in or from unused packet segments*



**ANNEX 138E H04L [ Project-Rapporteur : M037/IB ] <CE44>**

adopt M 13/04 · · Driving mechanisms; Clutches

adopt M 13/14 · · · · Electronic distributors

adopt M **15/00 Apparatus or local circuits for transmitting or receiving dot-and-dash codes, e.g. Morse code** (teaching apparatus therefor [G09B](#); telegraph tapping keys [H01H 21/86](#))

adopt M **17/00 Apparatus or local circuits for transmitting or receiving codes wherein each character is represented by the same number of equal-length code elements, e.g. Baudot code**

adopt M 25/02 · Details

adopt M 25/03 · · Shaping networks in transmitter or receiver, e.g. adaptive shaping networks

adopt M 25/18 · · Arrangements for inductively generating telegraphic signals

adopt M 25/22 · · · Repeater for converting two wires to four wires; Repeater for converting single current to double current

adopt M 25/40 · · Transmitting circuits; Receiving circuits

adopt M 25/45 \* \* \* using electronic distributors

adopt M 27/04 \* \* Modulator circuits; Transmitter circuits

adopt M 27/06 \* \* Demodulator circuits; Receiver circuits

adopt M 27/12 \* \* Modulator circuits; Transmitter circuits

adopt M 27/14 \* \* Demodulator circuits; Receiver circuits

adopt M 27/20 \* \* Modulator circuits; Transmitter circuits

adopt M 27/22 \* \* Demodulator circuits; Receiver circuits

adopt M **29/00** Arrangements, apparatus, circuits or systems, not covered by a single one of groups **H04L 1/00-H04L 27/00**

[End of Technical Annexes and of document]