IPC REVISION PROJECTS/
PROJETS DE RÉVISION DE LA CIB

ELECTRICAL FIELD/
DOMAINE DE L'ÉLECTRICITÉ

IPC/C 379/96
ORIGINAL: English/French
DATE: November 14, 2001

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE

GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: **GB** **PROPOSITION DE :**	**REVISION OF IPC AREA:** **H 01 H** **RÉVISION DU DOMAINE DE LA CIB :**
KIND OF REVISION: **Creation of subgroups** **TYPE DE RÉVISION :** **Création de sous-groupes**	

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée	GB	25.01.96
2	Comments (re Annex 1)	/ Observations (réf. annexe 1)	GB	02.10.96
3	Comments (re Annex 1)	/ Observations (réf. annexe 1)	CA	13.09.96
4	Comments (re Annex 1)	/ Observations (réf. annexe 1)	EP	29.10.96
5	Comments (re Annex 1)	/ Observations (réf. annexe 1)	FR	-.11.96
6	Comments (re Annex 1)	/ Observations (réf. annexe 1)	DE	14.11.96
7	Rapporteur report	/ Rapport du rapporteur	GB	30.05.97
8	Comments	/ Observations	JP	30.05.97
9	Comments	/ Observations	JP	02.99
10	Proposal	/ Proposition	EP	02.99
11	Comments	/ Observations	EP	02.99
12	Comments	/ Observations	FR	02.99
13	Comments	/ Observations	RO	05.99
14	Rapporteur report	/ Rapport du rapporteur	GB	05.99

RAPPORTEUR : GB TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
15	Decision of the Working Group	/ Décision du groupe de travail	WG	07.99
16	Comments	/ Observations	DE	10.99
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25	Comments	/ Observations	GB	03.00
26	Comments	/ Observations	RO	03.00
27	Comments	/ Observations	EP	03.00
28	Comments	/ Observations	JP	03.00
29	Comments	/ Observations	CA	03.00
30	Rapporteur report	/ Rapport du rapporteur	GB	05.00
31	Decision of the Working Group	/ Décision du groupe de travail	WG	06.00
32	Proposal	/ Proposition	EP	07.00
33	Comments	/ Observations	JP	09.00
34	Comments	/ Observations	FR	09.00
35	Comments	/ Observations	RO	09.00
36	Comments	/ Observations	GB	09.00
37	Comments	/ Observations	SE	10.00
38	Rapporteur report	/ Rapport du rapporteur	GB	10.00
39	Rapporteur proposal	/ Proposition du rapporteur	GB	10.00
40	Decision of the Working Group	/ Décision du groupe de travail	WG	01.01
41	Rapporteur proposal	/ Proposition du rapporteur	GB	04.01
42	Comments	/ Observations	RO	04.01
43	Comments	/ Observations	FR	05.01

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
44	Comments	/ Observations	SE	05.01
45	Comments	/ Observations	EP	05.01
46	Comments	/ Observations	DE	05.01
47	Rapporteur report	/ Rapport du rapporteur	GB	05.01
48	Rapporteur proposal	/ Proposition du rapporteur	GB	05.01
49	Decision of the Working Group	/ Décision du groupe de travail	WG	08.01
50	Comments	/ Observations	EP	09.01
51	Comments	/ Observations	CA	10.01
52	Comments	/ Observations	RO	10.01
53	Comments	/ Observations	SE	10.01
54	Comments	/ Observations	GB	10.01
55	French version of approved amendments	/ Version française des modifications approuvées	CH	11.01
56	Rapporteur report	/ Rapport du rapporteur	GB	11.01

ANNEX 49

EXCERPT FROM DOCUMENT IPC/WG/5/3
EXTRAIT DU DOCUMENT IPC/WG/5/3

Project C 379 (electrical) – The Working Group approved the classification scheme proposed by the Rapporteur (see Annex 19, relating to subclass H 01 H, to this report).

Comments were invited on:

– whether the wording of group 13/7057 correctly reflected its intended scope and, in this context, whether the terminology used in main group 13/00 was consistent;

– the desirability of creating a common head group for approved groups 13/78, 13/79 and 13/80, covering "features of the contacts";

– whether there was any overlap between groups 13/83 and 13/84, and if that were the case, whether references between those groups were necessary;

– the desirability of the proposed group H 01 H 13/794 (see Annex 48 to the project file) and its wording, for example, whether it should be "characterised by spatial arrangement of a plurality of contacts." The EPO was invited to cite examples of patent documents illustrating this group.

Projet C 379 (électricité) – Le groupe de travail a approuvé le schéma de classement proposé par le rapporteur (voir l'annexe 19 du présent rapport relative à la sous-classe H 01 H).

Des observations ont été demandées

– sur la question de savoir si le libellé du groupe 13/7057 traduit correctement la portée envisagée du groupe et, à cet égard, si la terminologie utilisée dans le groupe principal 13/00 est cohérente;

– sur l'opportunité de créer un groupe de tête commun pour les groupes approuvés 13/78, 13/79 et 13/80, couvrant les "éléments des contacts" ("features of the contacts");

– sur la question de savoir s'il y a chevauchement entre les groupes 13/83 et 13/84 et, dans l'affirmative, si des renvois entre ces groupes sont nécessaires;

– sur l'opportunité du groupe proposé H 01 H 13/794 (voir l'annexe 48 du dossier de projet) et de son libellé, par exemple s'agissant de la question de savoir si le libellé "characterized by spatial arrangement of a plurality of contacts" est approprié. L'OEB a été invité à donner des exemples de documents de brevet pour illustrer ce groupe.

ANNEX 19 H 01 H [Project-Rapporteur : 379/GB] <SC05014E>

C	***11/00***	***– – – switches*** *(processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards, 13/88; processes or apparatus specially – – –*
	13/02	• Details (specially adapted for rectilinearly movable switches having operating members associated with different sets of contacts, e.g. keyboards, 13/70)
N	*13/703*	• • • *characterised by spacers between contact carrying layers*
N	*13/704*	• • • *characterised by the layers, e.g. by their material or structure (13/703 takes precedence)*
N	*13/7057*	• • • • *characterised by the arrangement of keys or other operating parts*
N	*13/7065*	• • • • *characterised by the mechanism between keys and layered keyboards*
N	*13/7073*	• • • • • *characterised by springs, e.g. Euler springs*
N	*13/78*	• • *characterised by the material of the contacts, e.g. conductive polymers*
N	*13/79*	• • *characterised by the form of the contacts, e.g. interspersed fingers or helical networks*
N	*13/80*	• • *characterised by the manner of cooperation of the contacts, e.g. with both contacts movable or with bounceless contacts*
N	*13/81*	• • *characterised by electrical connections to external devices*
N	*13/82*	• • *characterised by contact space venting means*
N	*13/83*	• • *characterised by legends, e.g. liquid crystal displays, light emitting or optical elements*
N	*13/84*	• • *characterised by ergonomic or operational sensory functions, e.g. for miniature keyboards or for safety purposes*
N	*13/85*	• • • *characterised by tactile feedback features*
N	*13/86*	• • *characterised by the casing, e.g. sealed casings or casings reducible in size*
N	*13/88*	• • *Processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards*

EUROPEAN PATENT OFFICE
Principal Directorate Documentation

Comments
23 August 2001

Project: C 379 Subclass: H01H

At IPC/WG/5, comments have been invited on the following points.

1) Correctness of wording1 of group 13/7057 in view of its intended scope

We asked our experts for further clarifications on the intended scope of this group, also with reference to the original title as proposed in Annex 48 to the project file.

As a technical background, it should be said that the devices in question usually comprise:

a) a layered structure (i.e. the assembly of conductive and non-conductive layers bonded together to form a unitary structure), in which a plurality of electrical switches are realised, also comprising the necessary electrical connections therefor
b) a plurality of keys or buttons, i.e. the mechanical portions onto which the physical action of operation, e.g. pushing, is exerted by the user.

Portions (a) and (b) are mutually arranged so that acting on (pushing) a key of portion (b) causes (at least) one corresponding switch of portion (a) to operate.

Buttons (or keys) can be directly fixed (e.g. one by one) on the layered structure, or previously joined together to form groups, for instance a button row.

More in general, the buttons can be previously assembled on a support plate or frame **8** of suitable shape, and only thereafter are portions (a) and **8** assembled together to form the final device, i.e. the keyboard.

Group 13/7057 should be meant to relate to such aspect of the construction of a keyboard, e.g. to the ways buttons can be arranged with relation to the layered structure, to the way they may be arranged together among each other before being actually assembled on the layered structure, and so on.

Possibly, the title of group 13/7057 could be improved by taking into account this clarification.

An attempt could be the following:

13/7057	characterised by the arrangement of keys, e.g. separate keys, pre-assembled groups of keys

Thanks to the above-mentioned consultation, our experts let us notice that it would be wrong to keep group 13/7057 as a subgroup of 13/704, as the latter merely concerns characteristics of the layers, whereas the first, as just shown, concerns features of the assembly *of* the layered structure with other elements *external* to it.

That's why, reconsidering previously expressed opinions on this aspect, we take this opportunity to ask for a modification of this part of the already adopted scheme, i.e. **to change the 13/7057 into a three-dot group.**

Similarly, as group 13/7065 relates to the mechanism between keys and the layered structure, **group 13/7065 should be also a three-dot group, and 13/7073 a four-dot group.**

2) Consistency of the terminology used in main group 13/00.

In point 1, we tried to precise the notion of keys (= buttons) and of layered structure.

Possibly, some further short clarifications may help improve the consistency of the terminology throughout the main group, wherever deemed necessary, that's why we attempt to give some further definition of common terms in this main group.

- *Switch* is generally used in these titles to indicate a single point of mechanically operable electrical connection (or interruption).

- *Contacts*, are meant to indicate the necessary elementary components of a switch that ensure the electrical connection, each switch comprising at least two contacts, and possibly more than two.
- *Switch site* is, according to our experts, a common term used to indicate the location where the contact layers can touch each other (such explanation shall be used in point 5)

3) Desirability of a common head group for approved groups 13/78 to 13/80.
From a logical point of view, we don't have any objection to the creation of such a head group. Nevertheless, our experts expect such a group to be sparsely populated, if not empty.

4) Overlap between groups 13/83 and 13/84, possible references and further comments thereupon.
In case legends would embody functionalities that could be interpreted as part of the ergonomic features of the keyboard, there may be an overlap between these two groups.
Our expert suggested us that, even in such cases, it would be preferable to keep all legends in only one group. That's why we support the insertion of a precedence reference pointing to group 13/83 for legends, i.e.

13/84 - - - (legends 13/83)

Furthermore, our experts let us notice that the second example contained in approved group 13/84 does not correspond to the desired scope for such a group. That's why we take this opportunity to ask for a review of the approved title of group 13/84, and in particular for the elimination of the second example ("or for safety purposes") thereof.

5) Proposed group 13/794
The title of such group, as in Annex 48 to the project file, was:

13/794 characterised by the location of the switch sites, e.g. superimposed sites

We asked our experts to provide clarifications on this point.
With reference to the definition of switch site given in point (2), examples may concern the following aspects:
I) Superimposed switch sites (ex. US4771139), i.e. a plurality of contact couples on the same axis and operable by the movement of only one key
II) Switch sites arranged in different planes to increase density (ex. DE3631428)
III) Different switch sites under on actuator (ex. US5461376)

Furthermore, our experts asked for a possible enlargement of the scope of this group, also considering the <u>function</u> of the switch sites, along with the following examples:

IV) Normally closed (in combination with normally open) (ex. GB2100517)
V) Consecutive operation (ex. US5952629)

Therefore, we propose to amend the proposed title as follows:

13/794 . . characterised by the spatial arrangement or function of the switch sites [*alternatives*: /contact sites /switches], e.g. superimposed sites, plurality of switches under one actuator, consecutive operation

P. Foglia

The Canadian Intellectual Property Office

CIPO OPIC

L'Office de la propriété intellectuelle du Canada

Project Number: C379	Date: September 21, 2001
Class/Subclass: H01H	Page 1 of 1

The wording of group 13/7057 correctly reflects its intended scope and it=s terminology does seem to be consistent with that used in the main group 13/00.

We are not in favour of creating a common head group for approved groups 13/78, 13/79, and 13/80. There is no need to further broaden the scope. These groups sufficiently fall under the main group 13/00.

We do not see any overlap between groups 13/83 and 13/84.

Pertaining to the wording of proposed group H01H 13/794 we are in favour of the alternative wording Acharacterized by spatial arrangement of a plurality of contacts.@ since in our opinion it more adequately clarifies its purpose and intent.

Hassan Bayaa

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RO COMMENTS

Date:September 2001

PROJECT C379

CLASS/SUBCLASS H01H

-correctness of wording of group 13/7057 in view of its intended scope

We agree the EP proposal to change the 13/7057 into a three-dot group with the improved wording:

13/7057 ... characterised by the arrangement of keys, e.g. separate keys, preassembled groups of keys.

-desirability of creating a common head for approved groups 13/78, 13/79 and 13/80:

We agree with the creating a common head for groups 13/78 to 13/80, covering Afeatures of the contacts@.

-overlap between groups 13/83 and 13/84:

We consider that may be overlap between groups 13/83 and 13/84 and the approved group 13/84 does not correspond to the desire scope.

-desirability of the proposed group H01H 13/794:

Taking into account the example documents cited by EP we believe that the wording of the proposed group H01H 13/794 could be improved.

L. Cornea

Swedish Patent and Registration Office

IPC Revision Project C 379, subclass H01H **26 September 2001**

COMMENTS
relating to Annex 49

Comments were invited on:

– whether the wording of group 13/7057 correctly reflected its intended scope and, in this context, whether the terminology used in main group 13/00 was consistent;

Neither the intended scoop of group 13/7057 nor the word ‘arrangement‘ is clear. After looking through the documents in group 13/705 we suggest to separate into group 13/7057 documents regarding positioning push-buttons in relation to each other. Group 13/705 would fit better in with the other three-dot groups in the area if the title started with "characterised by". We suggest the following:

13/705 … characterised by construction, mounting or arrangement of push-buttons or other operating parts.

13/7057 …. characterised by the positioning of push-buttons or other operating parts in relation to each other.

We also suggest to use the word ‘push-buttons’ instead of ‘keys’ in the main group, for example in group 13/7065.

– the desirability of creating a common head group for approved groups 13/78, 13/79 and 13/80, covering “features of the contacts”;

We are in favour of creating a common head group.

– whether there was any overlap between groups 13/83 and 13/84, and if that were the case, whether references between those groups were necessary;

It might be a minor overlap, for example Braille. This can be solved by a reference in group 13/84 saying (legends or Braille 13/83)

– **the desirability of the proposed group H01H 13/794 (see Annex 48 to the project file)and its wording, for example, whether it should be “characterised by spatial arrangement of a plurality of contacts.”**

We propose “characterised by spatial arrangement of the contact sites, e.g. superimposed sites**”**

Sture Elnäs
Anders Bruun

UK Patent Office **Date: 26 September 2001**

Comments on Project C379 , Subclass H01H

Comments were invited on:

- whether the wording of group 13/7057 correctly reflected its intended scope and, in this, context, whether the terminology used in main group 13/00 was consistent;

The present wording of 13/7057 certainly leads to ambiguity, especially regarding the Aother operating parts@ which broadens the group beyond its apparent intended scope. We have looked at the detailed comments provided by the EPO (23 August 2001), and agree that the proposed modifications would resolve this ambiguity. The proposals to change 13/7057 and 13/7065 into three-dot groups and 13/7073 into a four-dot group also appear to be sensible.

- the desirability of creating a common head group for approved groups 13/78, 13/79 and 13/80, covering Afeatures of the contacts@;

We support the creation of a common head group for these groups. To avoid this group being empty, we propose incorporating one of the groups into this head group, preferably 13/78. We suggest:

13/78 **$$** characterised by the contacts, e.g. the material of the contacts
13/79 **$$$** characterised by the form of the contacts, e.g. interspersed fingers or helical networks
13/80 **$$$** characterised by the manner of cooperation of the contacts, e.g. with both contacts movable or with bounceless contacts

- whether there was any overlap between groups 13/83 and 13/84, and if that were the case, whether references between those groups were necessary;

There is possible overlap between these two groups, but this could be easily overcome by inserting a precedence reference into 13/84, such as proposed in the EPO comments.

- the desirability of the proposed group H01H 13/794 (see Annex 48 to the project file) and its wording, for example, whether it should be Acharacterised by spatial arrangement of a plurality of contacts.@

Here again the EPO have provided clarification of terms used, and in general we support their proposed modification to 13/794. The EPO have also proposed broadening the scope of this group to encompass the function of the switch sites. We wonder though if it would it be preferable to have a separate group dealing with the function?

Peter Emerson

ANNEX 55

Session:	**IPC/WG**
Subclass:	**H 01 H**
Project(s):	**C 379**
Language:	**F**
Translator office:	**CH**
Translation source session:	**IPC/WG/5**
Translation source annex filename:	**Annex 19**

Mod. type	IPC entry (interval)	Text or Instruction
C	*11/00*	*--- **d'interrupteurs électriques** (procédés spécialement adaptés à la fabrication d'interrupteurs à mouvement rectiligne ayant plusieurs éléments moteurs associés à différents jeux de contacts, p.ex. claviers 13/88; procédés ou appareils spécialement ---*
	13/02	. Détails (spécialement adaptés à des interrupteurs à mouvement rectiligne ayant une pluralité d'éléments moteurs associés à différents jeux de contacts, p.ex. claviers 13/70)
N	*13/703*	*. . . caractérisés par des espaceurs entre les couches de support*
N	*13/704*	*. . . caractérisés par les couches, p.ex. par leur matériau ou leur structure (13/703 a priorité)*
N	*13/7057*	*. . . . caractérisés par la disposition des touches ou d'autres organes moteurs*
N	*13/7065*	*. . . . caractérisés par le mécanisme entre les touches et les claviers multicouches*
N	*13/7073*	*. . . . . caractérisés par des ressorts, p.ex. des ressorts de type Euler*
N	*13/78*	*. . caractérisés par le matériau des contacts, p.ex. polymères conducteurs*
N	*13/79*	*. . caractérisés par la forme des contacts, p.ex. doigts intercalés ou réseaux en hélice*

N	*13/80*	*.. caractérisés par la façon dont les contacts coopèrent, p.ex. avec les deux contacts mobiles ou avec des contacts sans rebond*
N	*13/81*	*.. caractérisés par les connexions électriques aux dispositifs externes*
N	*13/82*	*.. caractérisés par des moyens de ventilation de la zone de contact*
N	*13/83*	*.. caractérisés par des légendes, p.ex. affichage à cristaux liquides, éléments émetteurs de lumière ou éléments optiques*
N	*13/84*	*.. caractérisés par des fonctions ergonomiques ou à actionnement sensoriel, p.ex. pour claviers miniature ou à des fins de sécurité*
N	*13/85*	*... caractérisés par des éléments de rétroaction tactile*
N	*13/86*	*.. caractérisés par le boîtier, p.ex. boîtier étanche ou boîtier réductible*
N	*13/88*	*.. Procédés spécialement adaptés à la fabrication d'interrupteurs à mouvement rectiligne ayant plusieurs éléments moteurs associés à différents jeux de contacts, p.ex. claviers*

UK Patent Office **Date: 26 October 2001**

Rapporteur Report on Project C379, Subclass H01H

Introduction

At the fifth meeting of the Revision Working Group, comments were invited on several aspects of the previous proposal:

- whether the wording of group 13/7057 correctly reflected its intended scope and, in this, context, whether the terminology used in main group 13/00 was consistent;

- the desirability of creating a common head group for approved groups 13/78, 13/79 and 13/80, covering Afeatures of the contacts@;

- whether there was any overlap between groups 13/83 and 13/84, and if that were the case, whether references between those groups were necessary;

- the desirability of the proposed group H01H 13/794 (see Annex 48 to the project file) and its wording, for example, whether it should be Acharacterised by spatial arrangement of a plurality of contacts.@

Comments

Comments were received from EP, SE, RO, FR, CA and JP, with the EP comments providing clarification on the intended scope of the groups and technical definitions received a month before the others, allowing further comments on these.

JP, CA support the proposal, although CA are in favour of amending 13/794.

EP had detailed suggestions concerning clarification of the scope of the groups. They also propose including the function of the switch sites into 13/794.

FR and RO generally agreed with EP comments.

SE provided detailed comments, in general agreement with the EP comments. They also suggested replacing Akey@ with Apush-button@.

Rapporteur=s opinion

As far as possible, the suggestions and comments have been taken into account, and incorporated into the modified proposal. In particular:

1) AKey@ has been changed to Apush-button@ throughout, as suggested by SE. In the EP

comments, the two terms seem to be equivalent.

ii) 13/7057 has been amended to reflect intended scope, in view of EP=s comments. 13/7057 and 13/7065 has been kept as four-dot groups as they remain subgroups of 13/705, a three-dot group.

iii) A common head-group has been created for groups 13/78 to 13/80. To avoid this group being empty, 13/78 has been incorporated into it.

iv) 13/84 now has reference to 13/83 as suggested by SE, EP, FR. The second example (Asafety features@) has been removed.

v) 13/794 (now 13/87) has been amended to refer to the Aspatial arrangement of switch sites@. The EP suggestion has been used here, including the reference to the function of the sites.

Peter Emerson

Rapporteur Proposal

C 11/00 - - - switches (processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards, 13/88; processes or apparatus specially - - -

C 13/02 **$** Details (specially adapted for rectilinearly movable switches having operating members associated with different sets of contacts, e.g. keyboards, 13/70)

N 13/703 **$ $ $** characterised by spacers between contact carrying layers

N 13/704 **$ $ $** characterised by the layers, e.g. by their material or structure (13/073 takes precedence)

C 13/705 **$ $ $** characterised by construction, mounting or arrangement of push-buttons or other operating parts

N 13/7057 **$ $ $ $** characterised by the arrangement of push-buttons or other operating parts in relation to each other, e.g. separate keys, pre-assembled groups of keys

N 13/7065 **$ $ $ $** characterised by the mechanism between push-buttons and layered keyboards

N 13/7073 **$ $ $ $ $** characterised by springs, e.g. Euler springs

N 13/78 **$ $** characterised by the contacts, e.g. the material of the contacts

N 13/79 **$ $ $** characterised by the form of the contacts, e.g. interspersed fingers or helical networks

N 13/80 **$ $ $** characterised by the manner of cooperation of the contacts, e.g. with both contacts movable or with bounceless contacts

N 13/81 **$ $** characterised by electrical connections to external devices

N 13/82 **$ $** characterised by contact space venting means

N 13/83 **$ $** characterised by legends, e.g. liquid crystal displays, light emitting or optical elements

N 13/84 **$ $** characterised by ergonomic or operational sensory functions, e.g. for miniature keyboards (legends or Braille 13/83)

N 13/85 **$ $ $** characterised by tactile feedback features

N 13/86 **$ $** characterised by the casing, e.g. sealed casings or casings reducible in size

N 13/87 **$ $** characterised by the spatial arrangement or function of the switch sites [alternatives: /contact sites /switches], e.g. superimposed sites, plurality of switches under one actuator, consecutive operation

N 13/88 **$ $** Processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards (for electric switches in general 11/00)

Peter Emerson

IPC/C 407/01
ORIGINAL: English/French
DATE: November 19, 2001

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE

GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: **RU** **PROPOSITION DE :**	**REVISION OF IPC AREA:** **H 01 B** **RÉVISION DU DOMAINE DE LA CIB :**
KIND OF REVISION: **Creation of an indexing scheme** **TYPE DE RÉVISION :** **Création d'un schéma d'indexation**	

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée	RU	01.97
2	Comments	/ Observations	SE	08.98
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12	Comments	/ Observations	DE	09.00
13	Comments	/ Observations	GB	09.00
14	Comments	/ Observations	EP	09.00

RAPPORTEUR : **RU** **TECHNICAL FIELD/DOMAINE TECHNIQUE :** **E**

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
15	Comments	/ Observations	JP	09.00
16	Comments	/ Observations	FR	09.00
17	Comments	/ Observations	RO	09.00
18	Rapporteur report	/ Rapport du rapporteur	RU	10.00
19	French version of approved amendments	/ Version française des modifications approuvées	FR	10.00
20	Comments	/ Observations	CA	11.00
21	Decision of the Working Group	/ Décision du groupe de travail	WG	01.01
22	French version of approved amendments	/ Version française des modifications approuvées	FR	05.01
23	Decision of the Working Group	/ Décision du groupe de travail	WG	08.01

EXCERPT FROM DOCUMENT IPC/WG/5/3
EXTRAIT DU DOCUMENT IPC/WG/5/3

ANNEXE 25	**H 01 B**	**[Project-Rapporteur : 407/RU] (T:FR) - SC/04/5**	**<SC05017F> <SC04021E>**
Note(s) après le titre			
N	*(3)*	*Dans les groupes 1/00 à 7/00 et 17/00, le classement selon plusieurs aspects est appliqué aux conducteurs, aux corps conducteurs, aux isolateurs ou aux corps isolants en ce qui concerne leur forme et leur matériau, de façon que si la forme et le matériau présentent tous deux un intérêt, la matière soit classée dans chacun des groupes pertinents.*	

IPC/C 408/97
ORIGINAL: English/French
DATE: November 19, 2001

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE

GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: **DE** **PROPOSITION DE :**	**REVISION OF IPC AREA:** **H 01 L** **RÉVISION DU DOMAINE DE LA CIB :**
KIND OF REVISION: **Creation of subgroups** **TYPE DE RÉVISION :** **Création de sous-groupes**	

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée	DE	04.02.97
2	Comments	/ Observations	SE	08.98
3	Comments	/ Observations	JP	08.98
4	Comments	/ Observations	CA	08.98
5	Comments	/ Observations	EP	08.98
6	Comments	/ Observations	US	08.98
7	Comments	/ Observations	FR	08.98
8	Comments	/ Observations	GB	08.98
9	Comments	/ Observations	JP	08.98
10	Rapporteur report	/ Rapport du rapporteur	NO	05.99
11	Comments	/ Observations	JP	03.00
12	Decision of the Working Group	/ Décision du groupe de travail	WG	06.00
13	Proposal	/ Proposition	EP	07.00
14	Comments	/ Observations	DE	09.00

RAPPORTEUR : NO **TECHNICAL FIELD/DOMAINE TECHNIQUE : E**

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
15	Comments	/ Observations	GB	09.00
16	Comments	/ Observations	JP	09.00
17	Comments	/ Observations	RO	09.00
18	Comments	/ Observations	FR	09.00
19	Comments	/ Observations	SE	10/00
20	Rapporteur report	/ Rapport du rapporteur	NO	10/00
21	Decision of the Working Group	/ Décision du groupe de travail	WG	01/01
22	Rapporteur proposal	/ Proposition du rapporteur	NO	04.01
23	Comments	/ Observations	EP	04.01
24	Comments	/ Observations	JP	04.01
25	Comments	/ Observations	CA	04.01
26	Comments	/ Observations	RO	04.01
27	Comments	/ Observations	FR	05/01
28	Comments	/ Observations	DE	05/01
29	Comments	/ Observations	SE	05/01
30	Rapporteur report	/ Rapport du rapporteur	NO	08.01
31	Decision of the Working Group	/ Décision du groupe de travail	WG	08.01
32	Comments	/ Observations	DE	10.01
33	French version of approved amendments	/ Version française des modifications approuvées	CH	10.01

IPC Revision Project C 408, subclass H 01 L
Rapporteur report
Date: 2001-06-13

Introduction

At the fourth session of the IPC Revision Working Group Rapporteur was invited to submit, in cooperation with the EPO and DE, a consolidated proposal on the basis of the initial proposal, counterproposals submitted and all other comments in the project file.

Comments were invited on the consolidated proposal submitted and on whether the term "container" should be replaced by the term "housing" throughout subclass H01L.

Comments received

Comments of the consolidated proposal have been received from EP, JP, CA, RO, FR, DE and SE.

EP, CA, RO and DE support the consolidated proposal.
DE supports the JP amendment to the text of the proposed new note concerning 'wafer'.

FR and SE are in favour of the proposal. FR has a remark concerning covering subject matter over 'positioning'. SE thinks there is overlap between subgroups H01L 21/676 and 21/68, the reference in H01L 21/672 is too wide, and points out unclear wording in the subclass notes and in the proposed subgroups.

JP opposes the replacement of term and does not support the reference in subgroup 21/672 in the proposal. JP submits a counter proposal with amended wording in subgroups and notes.

Rapporteur submits a revised proposal where most of the comments have been taken into account. The wording in the proposed subclass notes and in the subgroups have been amended mostly according to the SE suggestions.

Rapporteur's proposal

Rapporteur proposes the WG to consider

- whether the submitted revised proposal as enclosed could be used for further progress in the work of this project

- whether the term "container" should be replaced by the term "housing" throughout the whole subclass H01L, namely in the subgroups identified by SE

- the wording in subgroup H01L 31/048 as proposed by SE

Kai Haugseth

IPC Revison Project C 408, subclass H 01 L
Rapporteur's revised proposal
Date: 2001-06-13

H 01 L

"housing" replaces "container" throughout the whole subclass H 01 L, namely in the following places:

Note (2)5, Note (2)7, 21/48, 21/52, 21/54, 23/02, 23/043, 23/053, 23/06, 23/10, 23/16, 23/42, 25/04, 25/10, 31/0203, 39/04.

C Note(2) (after the subclass title H 01 L)

In this subclass, the following terms or expressions are used with the meaning indicated:

– "wafer" means a slice of semiconductor or crystalline substrate material, eg. modified by impurity diffusion (doping), ion implantation or epitaxy, and whose active surface can be processed into arrays of discrete components or integrated circuits, eg. by metallization, passivation or glassification.

– "solid state body" means -----

C Note(2)5

– "housing" (eg. package) is an enclosure forming part ----

C Note (after group title 21/00)
---- groups 21/02 to 21/67.

N 21 / 67 • Apparatus specially adapted for handling semiconductor or electric solid state devices during manufacturing or treatment thereof; Apparatus specially adapted for handling wafers during manufacture or treatment of semiconductor or electric solid state devices or components or of parts thereof;

N 21 / 672 • • using specially adapted carriers or containers (containers merely intended for transport or storage of wafers or finished devices B 65 D 85/30 and B 65 D 85/86)

N 21 / 674 • • for conveying, e.g. using air tracks

N 21 / 676 • • for supporting or gripping (for positioning, orientation or alignment 21/68)

N 21 / 678 • • • using mechanical gripping means, eg. chucks, clamps or pinches

C 21 / 68 • • for positioning, orientation or alignment

C 31/ 048 • • • encapsulated or equipped with protective covering

B 65 G

C 49 / 07 • • for semiconductor wafers (conveying of semiconductor wafers during manufacturing of semiconductor or electric solid state devices H 01 L 21/67)

ANNEX 31

EXCERPT FROM DOCUMENT IPC/WG/5/3
EXTRAIT DU DOCUMENT IPC/WG/5/3

Project C 408 (electrical) – The consolidated proposal submitted by the Rapporteur was approved (see Annexes 26 and 27 to this report). Germany was requested to incorporate in classification definitions of subclass H 01 L the informative reference to subclass B 65 D proposed in group H 01 L 21/672 (see Annex 30 to the project file).

Projet C 408 (électricité) – La proposition de synthèse présentée par le rapporteur a été approuvée (voir les annexes 26 et 27 du présent rapport). Il a été demandé à l'Allemagne d'intégrer dans les définitions relatives au classement de la sous-classe H 01 L le renvoi indicatif à la sous-classe B 65 D proposée dans le groupe H 01 L 21/672 (voir l'annexe 30 du dossier de projet).

ANNEX 26 **B 65 G** **[Project-Rapporteur : 408/NO]** **<SC05024E>**

C *49/07* • • *for semiconductor wafers (specially adapted for conveying of semiconductor wafers during manufacture or treatment of semiconductor or electric solid state devices or components H 01 L 21/677)*

ANNEX 27 **H 01 L** **[Project-Rapporteur : 408/NO]** **<SC05023E>**

Note(s) after the title

(2) – – – with the meaning indicated:

N – *"wafer" means a slice of semiconductor or crystalline substrate material, which can be modified by impurity diffusion (doping), ion implantation or epitaxy, and whose active surface can be processed into arrays of discrete components or integrated circuits;*

– "solid state body" ==>

Note(s) after 21/00

– – – 21/02 to 21/67.

N *21/67* • *Apparatus specially adapted for handling semiconductor or electric solid state devices during manufacture or treatment thereof; Apparatus specially adapted for handling wafers during manufacture or treatment of semiconductor or electric solid state devices or components*

N	*21/673*	• • *using specially adapted carriers*
N	*21/677*	• • *for conveying, e.g. between different work stations*
C	*21/68*	• • *for positioning, orientation or alignment (for conveying 21/677)*
N	*21/683*	• • *for supporting or gripping (for conveying 21/677, for positioning, orientation or alignment 21/68)*
N	*21/687*	• • • *using mechanical means, e.g. chucks, clamps or pinches*

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.:**H01L**
	Date : 28. August 2001
DE - Comment — C 408	

Re: IPC/WG/5/3

 # Germany was requested to incorporate in classification definitions of subclass H01L the informative reference to subclass B65D proposed in group H01L 21/672 (see annex 30 to the project file)

The following text is an excerpt from the DE-Comment on the Definition Project D011/00 dated 28. August 2001:

----- 5. Informative References

B65D 85/30 and 85/86: containers merely intended for transport or storage of wafers or finished devices (see H01L 21/672) [8];

Rainer Anders

ANNEX 33

Session:	**IPC/WG**
Subclass:	**B 65 G**
Project(s):	**C 408**
Language:	**F**
Translator office:	**CH**
Translation source session:	**IPC/WG/5**
Translation source annex filename:	**Annex 26**

Mod. type	IPC entry (interval)	Text or Instruction
C	*49/07*	. . *pour des plaquettes semi-conductrices (spécialement adaptés pour transporter les plaquettes semi-conductrices pendant leur fabrication ou pendant le traitement des dispositifs à semi-conducteurs ou des dispositifs électriques à l'état solide ou de leurs composants H 01 L 21/677)*

Session:	**IPC/WG**
Subclass:	**H 01 L**
Project(s):	**C 408**
Language:	**F**
Translator office:	**CH**
Translation source session:	**IPC/WG/5**
Translation source annex filename:	**Annex 27**

Mod. type	IPC entry (interval)	Text or Instruction		
	Note(s) après le titre	(2)	---	ont la signification ci-dessous indiquée :
N			-	*"plaquette" désigne une tranche d'un matériau de substrat semi-conducteur ou cristallin, qui peut-être modifiée par diffusion d'impuretés (dopage), implantation d'ions ou épitaxie, et dont la surface active peut être organisée en ensembles de composants discrets ou en circuits intégrés ;*
			-	"corps à l'état solide" ===>
	Note(s) après 21/00		---	21/02 à 21/67.
N	*21/67*			*. Appareils spécialement adaptés pour la manipulation des dispositifs à semi-conducteurs ou des dispositifs électriques à l'état solide pendant leur fabrication ou leur traitement; Appareils spécialement adaptés pour la manipulation des plaquettes pendant la fabrication ou le traitement des dispositifs à semi-conducteurs ou des dispositifs électriques à l'état solide ou de leurs composants*
N	*21/673*			*. . utilisant des supports spécialement adaptés*
N	*21/677*			*. . pour le transport, p.ex. entre différents postes de travail*
C	*21/68*			*. . pour le positionnement, l'orientation ou l'alignement (pour le transport 21/677)*
N	*21/683*			*. . pour le maintien ou la préhension (pour le transport 21/677, pour le positionnement, l'orientation ou l'alignement 21/68)*
N	*21/687*			*. . . en utilisant des moyens mécaniques, p.ex. mandrins, pièces de serrage, pinces*

IPC/C 410/97
ORIGINAL: English/French
DATE: November 19, 2001

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE

GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: **DE** **PROPOSITION DE :**	**REVISION OF IPC AREA:** **H 02 P** **RÉVISION DU DOMAINE DE LA CIB :**
KIND OF REVISION: **Creation of subgroups** **TYPE DE RÉVISION :** **Création de sous-groupes**	

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée	DE	10.02.97
2	Comments	/ Observations	EP	08.98
3	Comments	/ Observations	EP	08.98
4	Comments	/ Observations	SE	08.98
5	Comments	/ Observations	JP	08.98
6	Comments	/ Observations	CA	08.98
7	Comments	/ Observations	FR	08.98
8	Comments	/ Observations	GB	08.98
9	Comments	/ Observations	DE	05.99
10	Proposal	/ Proposition	DE	05.99
11	Rapporteur report	/ Rapport du rapporteur	DE	05.99
12	Comments	/ Observations	JP	07.99
13	Decision of the Working Group	/ Décision du groupe de travail	WG	07.99
14	Rapporteur report	/ Rapport du rapporteur	DE	10.99

RAPPORTEUR : DE **TECHNICAL FIELD/DOMAINE TECHNIQUE : E**

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
15	Rapporteur report	/ Rapport du rapporteur	DE	10.99
16	Rapporteur proposal	/ Proposition du rapporteur	DE	10.99
17	Comments	/ Observations	RO	10.99
18	Comments	/ Observations	EP	11.99
19	Decision of the Working Group	/ Décision du groupe de travail	WG	12.99
20	Comments	/ Observations	GB	03.00
21	Comments	/ Observations	EP	03.00
22	Comments	/ Observations	JP	03.00
23	Comments	/ Observations	CA	03.00
24	Comments	/ Observations	SE	03.00
25	Comments	/ Observations	RO	03.00
26	Comments	/ Observations	DE	04.00
27	Rapporteur report	/ Rapport du rapporteur	DE	04.00
28	Rapporteur proposal	/ Proposition du rapporteur	DE	04.00
29	Rapporteur proposal	/ Proposition du rapporteur	DE	04.00
30	Decision of the Working Group	/ Décision du groupe de travail	WG	06.00
31	Comments	/ Observations	DE	09.00
32	Comments	/ Observations	JP	09.00
33	Comments	/ Observations	EP	09.00
34	Comments	/ Observations	FR	09.00
35	Comments	/ Observations	RO	09.00
36	Comments	/ Observations	SE	10/00
37	Comments	/ Observations	CA	11/00
38	Rapporteur report	/ Rapport du rapporteur	DE	11/00
39	Rapporteur proposal	/ Proposition du rapporteur	DE	11/00
40	Decision of the Working Group	/ Décision du groupe de travail	WG	01/01
41	Rapporteur report	/ Rapport du rapporteur	DE	04.01
42	Rapporteur proposal	/ Proposition du rapporteur	DE	04.01
43	Comments	/ Observations	RO	04.01

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
44	Comments	/ Observations	FR	05/01
45	Comments	/ Observations	SE	05/01
46	Comments	/ Observations	EP	05/01
47	Rapporteur report	/ Rapport du rapporteur	DE	05.01
48	French version of approved amendments	/ Version française des modifications approuvées	FR	05.01
49	Decision of the Working Group	/ Décision du groupe de travail	WG	08.01
50	Rapporteur report	/ Rapport du rapporteur	DE	10.01
51	Rapporteur proposal	/ Proposition du rapporteur	DE	10.01
52	Comments	/ Observations	CA	10.01
53	Comments	/ Observations	RO	10.01
54	Comments	/ Observations	SE	10.01
55	Comments	/ Observations	GB	10.01
56	Comments	/ Observations	JP	10.01
57	Comments	/ Observations	RU	10.01
58	Comments	/ Observations	EP	10.01
59	French version of approved amendments	/ Version française des modifications approuvées	FR	10.01
60	Comments	/ Observations	PT	11.01
61	Rapporteur report	/ Rapport du rapporteur	DE	11.01
62	Rapporteur proposal	/ Proposition du rapporteur	DE	11.01

ANNEX 49

EXCERPT FROM DOCUMENT IPC/WG/5/3
EXTRAIT DU DOCUMENT IPC/WG/5/3

Project C 410 (electrical) – Main groups H 02 P 21/00, 23/00, 25/00, 27/00 and their subgroups were approved. Notes after each of the above-mentioned main groups, specifying the rules for multiple classification in this area, were also approved (see Annex 28 to this report).

The Working Group agreed that group H 02 P 21/00 should take precedence over main groups 1/00 to 19/00. The Rapporteur was invited to propose appropriate Notes or references to this effect. The Rapporteur was further invited to propose necessary changes in groups 5/00 and 7/00, in view of the creation of the new main groups.

Comments were invited on the proposals to be submitted.

Japan and the EPO were invited to cite patent documents relating to the integration of vector control with other types of control. Comments were invited on how such documents should be classified in the approved scheme and whether any changes were necessary to the said scheme in order to provide for the correct classification of the documents.

The Rapporteur was invited to submit explanations of the terms “adaptation” and “estimation” used in the wordings of the approved groups H 02 P 21/14 and 23/14 (see Annex 28 to this report). Comments were invited on those explanations.

Comments were further invited on:

– the correctness of the wording of group 23/08 and, in particular, whether it covered its intended scope;

– whether there was any overlap between groups 25/12 and 25/14 and, if that were the case, how it could be solved;

– whether group 27/20 was correctly placed as a subgroup under group 27/04, and whether its wording should be adapted or a precedence reference would be preferable.

Projet C 410 (électricité) – Les groupes principaux H 02 P 21/00, 23/00, 25/00, 27/00 et leurs sous-groupes ont été approuvés. Les notes placées à la suite de chacun des groupes principaux précités, précisant les règles de classement multiple dans ce secteur, ont aussi été approuvées (voir l’annexe 28 du présent rapport).

Le groupe de travail a convenu que le groupe H 02 P 21/00 doit avoir priorité sur les groupes principaux 1/00 à 19/00. Le rapporteur a été invité à proposer les notes ou les renvois appropriés à cet égard. Le rapporteur a en outre été invité à proposer les modifications nécessaires dans les groupes 5/00 et 7/00, compte tenu de la création de nouveaux groupes principaux.

Des observations ont été demandées en ce qui concerne les propositions qui doivent être présentées.

Le Japon et l'OEB ont été invités à indiquer des documents de brevet relatifs à l'incorporation de la commande par vecteur dans d'autres types de commandes. Des observations ont été demandées sur la façon dont ces documents doivent être classés dans le schéma approuvé et sur la question de savoir s'il est nécessaire d'apporter des changements à ce schéma afin de permettre que les documents soient classés correctement.

Le rapporteur a été invité à présenter des explications en ce qui concerne les termes "adaptation" et "estimation" utilisés dans le libellé des groupes approuvés H 02 P 21/14 et 23/14 (voir l'annexe 28 du présent rapport). Des observations ont été demandées sur ces explications.

Des observations ont en outre été demandées

– sur le bien-fondé du libellé du groupe 23/08 et, en particulier, sur la question de savoir s'il a effectivement la portée envisagée;

– sur la question de savoir s'il y a chevauchement entre les groupes 25/12 et 25/14 et, dans l'affirmative, sur la façon d'y remédier;

– sur la question de savoir si le groupe 27/20 a été correctement placé en tant que sous-groupe sous le groupe 27/04 et si son libellé doit être adapté ou si un renvoi de priorité est préférable.

ANNEX 28 H 02 P [Project-Rapporteur : 410/DE] <SC05022E>

R

N	*Note(s) after 21/00*	
		When classifying in this group, it is desirable to also classify in groups 25/00 to 27/00 if the kind of ac-motor, structural details, or the kind of supply voltage are of interest.
N	*21/02*	• *specially adapted for optimising the efficiency at low load*
N	*21/04*	• *specially adapted for very low speeds*
N	*21/06*	• *Rotor flux based control*
N	*21/08*	• • *Indirect field-oriented control, e.g. field phase angle calculation based on rotor voltage equation by adding slip frequency and speed proportional frequency*
N	*21/10*	• • *Direct field-oriented control*
N	*21/12*	• *Stator flux based control*
N	*21/14*	• *Estimation or adaptation of machine parameters, e.g. rotor time constant, flux, speed, current or voltage*

N	***23/00***	***Arrangements or methods for the control of ac-motors characterised by a control method other than vector control***	R
N	*Note(s) after 23/00*		
		When classifying in this group, it is desirable to also classify in groups 25/00 to 27/00 if the kind of ac-motor, structural details, or the kind of supply voltage are of interest.	
N	*23/02*	• *specially adapted for optimising the efficiency at low load*	
N	*23/04*	• *specially adapted for damping motor oscillations, e.g. for reducing hunting*	
N	*23/06*	• *Controlling the motor in four quadrants*	
N	*23/08*	• *Controlling based on slip frequency, e.g. adding slip frequency and speed proportional frequency*	
N	*23/10*	• *Controlling by adding a dc current (dc current braking 3/24)*	
N	*23/12*	• *Observer control, e.g. using Luenberger observer or Kalman filter*	
N	*23/14*	• *Estimation of motor parameters, e.g. rotor time constant, flux, speed, current or voltage*	
N	***25/00***	***Arrangements or methods for the control of ac-motors characterised by the kind of ac-motor or by structural details***	R
N	*Note(s) after 25/00*		
		When classifying in this group, it is desirable to also classify in groups 21/00, 23/00 or 27/00 if the control method or the kind of supply voltage are of interest.	
N	*25/02*	• *characterised by the kind of motor*	
N	*25/04*	• • *Single phase motors, e.g. capacitor motors*	
N	*25/06*	• • *Linear motors*	
N	*25/08*	• • *Reluctance motors*	
N	*25/10*	• • *Commutator motors, e.g. repulsion motors*	
N	*25/12*	• • • *Shifting the brushes of commutator motors*	
N	*25/14*	• • • *Universal motors*	
N	*25/16*	• *characterised by the circuit arrangement or by the kind of wiring*	
N	*25/18*	• • *with arrangements for switching the windings, e.g. with mechanical switches or relays*	
N	*25/20*	• • • *for pole-changing*	
N	*25/22*	• • *Multiple windings; Windings for more than three phases*	
N	*25/24*	• • *Variable impedance in stator or rotor circuit*	
N	*25/26*	• • • *with arrangements for controlling secondary impedance*	

N	*25/28*	• • *using magnetic devices with controllable degree of saturation, e.g. transductors*
N	*25/30*	• • *the motor being controlled by a control effected upon an ac generator supplying it*
N	*25/32*	• • *using discharge tubes*
N	*Note(s) after 27/00*	
		When classifying in this group, it is desirable to also classify in groups 21/00, 23/00 or 25/00 if the control method, the kind of the ac-motor or structural details are of interest.
N	*27/02*	• *using supply voltage with constant frequency and variable amplitude*
N	*27/04*	• *using variable-frequency supply voltage, e.g. inverter or converter supply voltage*
N	*27/06*	• • *using dc to ac converters or inverters*
N	*27/08*	• • • *with pulse width modulation*
N	*27/10*	• • • • *using bang-bang controllers*
N	*27/12*	• • • • *pulsing by guiding the flux-, current-, or voltage-vector on a circle or a closed curve, e.g. direct torque control*
N	*27/14*	• • • • *with three or more levels of voltage*
N	*27/16*	• • *using ac to ac converters without intermediate conversion to dc*
N	*27/18*	• • • *varying the frequency by omitting half waves*
N	*27/20*	• • *using ac supply for both rotor and stator circuits, the frequency of supply to at least one circuit being variable*

DEUTSCHES PATENT- UND MARKENAMT German Patent and Trademark Office	Class/Subclass: **H 02 P** Date: 23. August 2001
DE – Rapporteur-Report - C 410	

Re.: IPC/WG/5/3

- WG agreed that group H02P 21/00 should take precedence over main groups 1/00 to 19/00. Rapporteur was invited to propose appropriate Notes or references to this effect.

In the enclosed Rapporteur proposal references are included in groups 1/00, 3/00, 5/00, 6/00 7/00, 8/00, 9/00, 11/00, 15/00, 17/00 and 19/00. A reference in group 13/00 is dispensable, because no rotating field exists in this technical subject matter, which is a necessary requirement for vector control.

- Rapporteur was further invited to propose necessary changes in groups 5/00 and 7/00, in view of the creation of the new main groups.

IPC7 groups 5/05, 5/28 to 5/44, 7/05, 7/36 to 7/66 are transferred to or covered by the new main groups 23/00 to 27/00. For details see transfer references for the groups 5/05, 5/28 to 5/44, 7/05 and 7/36 to 7/66 in the Rapporteur proposal.

IPC7 groups 5/04, 5/06 to 5/26 cover arrangements for speed regulation of electric dc-motors or motors not otherwise provided for and IPC7 groups 7/01 to 7/04, 7/06 to 7/30 arrangements for controlling of speed or torque of electric dc-motors or motors not otherwise provided for, respectively. Rapporteur proposes to *combine* these two parallel sets of groups in main group 7/00. The reason is that from a actual technical point of view it gives no sense to have further on two sets of groups for regulation of speed and for control of speed or torque. For details see transfer references for groups 5/04, 5/06 to 5/26, amended title for group 7/00 and maintained IPC7 groups 7/01 to 7/04 and 7/06 to 7/34 in the Rapporteur proposal .

IPC7 groups 5/46 to 5/52 cover regulation of speed of two or more electric motors and IPC7 groups 7/67 to 7/80 control of speed or torque of two ore more electric motors. Rapporteur proposes to *combine* both in main group 5/00. From a actual technical point of view it gives no sense to have regulation of speed, and control of speed or torque in two different maingroups. For details see the amended title for group 5/00, the maintained IPC7 groups 5/46 to 5/52, and the new groups 5/68 to 5/80, which are transferred from IPC7 groups 7/67 to 7/80, in the Rapporteur proposal .

In IPC7 main groups 1/00 (starting motors), 3/00 (stopping or slowing motors), 6/00 (synchronous motors with electronic commutators) and 8/00 (stepping motors) take precedence over main group 7/00. Since parts of subject matter of main group 7/00 are transferred to groups 5/00, 23/00, 25/00 and 27/00, these precedence reference must be transferred to groups 5/00, 23/00 to 27/00, too. A further precedence in 23/00 to 27/00 for the amended group 5/00 (two or more motors) is useful. For details see amended references in the titles of groups 5/00, 23/00, 25/00 and 27/00 in the Rapporteur proposal.

- Rapporteur was invited to submit explanations of the terms 'adaptation' and 'estimation' used in the wordings of the approved groups H02P 21/14 and 23/14.

An example of 'estimation' is the process of determining, eg measuring, motor parameters, and of 'adaptation' the process of converting them into analogous or digital signals and using them as parameters for the control circuit.
Rapporteur proposes to use the term 'estimation or adaptation' in both group titles 21/14 and 23/14. See amended title of group 23/14 in the Rapporteur proposal.

- Comments were further invited on the correctness of the wording of group 23/08 and, in particular, whether it covered its intended scope.

The title is correct and covers the intended scope.

- whether there was any overlay between groups 25/12 and 25/14 and, if that were the case, how it could be solved.

There may be a little overlap. This can be solved by a precedence of 25/12 over 25/14. See Rapporteur proposal group 25/14.

- whether group 27/20 were correctly placed as a subgroup under group 27/04 or whether a precedence reference would be preferable and whether the title could be amended.

Group 27/20 is correctly placed as a two-dot subgroup of group 27/04. The title is nearly the same as IPC7 group 7/46.

Rainer Anders

DEUTSCHES PATENT- UND MARKENAMT German Patent and Trademark Office	Class/Subclass: **H 02 P**
	Date: 23. August 2001
Rapporteur Proposal -- C 410	

H02P

	1/00	- - - converters (starting of synchronous motor with electronic commutators 6/20, 6/22; vector control 21/00)
	3/00	- - - converters (stopping of synchronous motors with electronic commutators 6/24; vector control 21/00)
C	5/00	Arrangements for controlling the speed or torque of two or more electric motors (starting 1/00; stopping or slowing 3/00; vector control 21/00)
D	5/04	(transferred to 7/04)
D	5/05	(transferred to 25/08)
D	5/06	(transferred to 7/06)
D	5/08	(transferred to 7/06, covered by 7/08 to 7/22)
D	5/10	(transferred to 7/06, covered by 7/08 to 7/22)
D	5/12	(transferred to 7/24)
D	5/14	(transferred to 7/26)
D	5/16	(transferred to 7/28)
D	5/162	(transferred to 7/282)
D	5/165	(transferred to 7/285)
D	5/168	(transferred to 7/288)
D	5/17	(transferred to 7/29)
D	5/172	(transferred to 7/292)
D	5/175	(transferred to 7/295)
D	5/178	(transferred to 7/298)
D	5/18	(transferred to 7/30)
D	5/20	(transferred to 7/32)
D	5/22	(transferred to 7/34)
D	5/24	(transferred to 7/34)
D	5/26	(transferred to 7/34)
D	5/28	(covered by 23/00, 25/00, 27/00)

D	5/30	(transferred to 25/18)
D	5/32	(transferred to 25/18)
D	5/34	(transferred to 27/04)
D	5/36	(covered by 23/00, 25/00, 27/00)
D	5/38	(transferred to 25/32)
D	5/40	(covered by 23/00, 25/00, 27/00)
D	5/402	(transferred to 27/02)
D	5/405	(transferred to 25/26)
D	5/408	(transferred to 27/04)
D	5/41	(transferred to 27/06)
D	5/412	(transferred to 27/16)
D	5/415	(transferred to 27/20, covered by 23/00)
D	5/418	(transferred to 25/10)
D	5/42	(transferred to 25/28)
D	5/44	(transferred to 25/12, covered by 25/16)
IPC7	5/46	. speed regulation of two or more dynamo-electric motors in relation to one another
IPC7	5/48	.. by comparing mechanical values representing the speeds
IPC7	5/50	.. by comparing electrical values representing the speeds
IPC7	5/52	.. additionaly providing control of relative angular displacement
N	5/68	. controlling two or more dc dynamo-electric motors (IPC7 7/68)
N	5/685	.. electrically connected in series, i.e. carrying the same current (IPC7 7/685)
N	5/69	.. mechanically coupled by gearing (IPC7 7/69)
N	5/695	... Differential gearing (IPC7 7/695)
N	5/74	. controlling two or more ac dynamo-electric motors (IPC7 7/74)
N	5/747	.. mechanically coupled by gearing (IPC7 /747)
N	5/753	... Differential gearing (IPC7 7/753)
N	5/80	.. controlling combination of dc and ac dynamo-electric motors (IPC7 7/80)
	6/00	- - - therefor (stepping motors 8/00; vector control 21/00)
C	7/00	Arrangements for controlling the speed or torque of electric dc-motors or of motors not otherwise provided for

(starting 1/00; stopping or slowing 3/00; vector control 21/00)

IPC7 7/01 unchanged
IPC7 7/04 unchanged

D 7/05 (transferred to 25/08)

IPC7 7/06 to 7/34 unchanged

D 7/36 (covered by 23/00, 25/00, 27/00)
D 7/38 (covered by 23/00, 25/00, 27/00)
D 7/40 (transferred to 25/24)
D 7/42 (transferred to 27/04)
D 7/44 (transferred to 27/04)
D 7/46 (transferred to 27/20)
D 7/48 (transferred to 25/20)
D 7/50 (transferred to 25/12)
D 7/52 (covered by 23/00, 25/00, 27/00)
D 7/54 (transferred to 25/18)
D 7/56 (transferred to 25/18)
D 7/58 (covered by 23/00, 25/00, 27/00)
D 7/60 (transferred to 25/32)
D 7/62 (covered by 23/00, 25/00, 27/00)
D 7/622 (transferred to 27/02)
D 7/625 (transferred to 25/26)
D 7/628 (transferred to 27/04)
D 7/63 (transferred to 27/06)
D 7/632 (transferred to 27/16)
D 7/635 (transferred to 27/20, covered by 23/00)
D 7/638 (transferred to 25/10)
D 7/64 (transferred to 25/28)
D 7/66 (transferred to 25/30)

D 7/67 (transferred to 5/00)
D 7/68 (transferred to 5/68)
D 7/685 (transferred to 5/685)
D 7/69 (transferred to 5/69)
D 7/695 (transferred to 5/695)
D 7/74 (transferred to 5/74)
D 7/747 (transferred to 5/747)
D 7/753 (transferred to 5/753)

D	7/80	(transferred to 5/80)
	8/00	- - - step by step (vector control 21/00)
	9/00	- - - arrangements 7/34; vector control 21/00; feeding - - -
	11/00	- - - or slowing 3/00; vector control 21/00; feeding - - -
	15/00	- - - of a separate brake 7/04, vector control 21/00)
	17/00	- - - gears (vector control 21/00)
	19/00	- - - to more than one of groups 1/00, 3/00, 5/00, 7/00 or 23/00 (vector control 21/00)
WG5	23/00	- - - other than vector control (starting 1/00; stopping or slowing 3/00; two or more motors 5/00; synchronous motors with electronic commutators 6/00; dc-motors or motors not otherwise provided for 7/00; stepping motors 8/00)
WG5	23/14	- - - Estimation or adaptation - - -
WG5	25/00	- - - structural details (starting 1/00; stopping or slowing 3/00; two or more motors 5/00; synchronous motors with electronic commutators 6/00; dc-motors or motors not otherwise provided for 7/00; stepping motors 8/00)
WG5	25/14	- - - motors (25/12 takes precedence)
WG4	27/00	- - - kind of supply voltage (starting 1/00; stopping or slowing 3/00; two or more motors 5/00; synchronous motors with electronic commutators 6/00; dc-motors or motors not otherwise provided for 7/00; stepping motors 8/00)

Rainer Anders

The Canadian Intellectual Property Office

CIPO OPIC

L'Office de la propriété intellectuelle du Canada

Project Number: C410	Date: September 21, 2001
Class/Subclass: H02P	Page 1 of 1

Comments were invited on:

- correctness of wording of group 23/08:

Since the IEEE Standard Dictionary of Electrical and Electronics Terms defines *slip* as the ratio of: (synchronous frequency - actual rotor frequency)/(synchronous frequency), 23/08 might be better worded as:

Controlling based on slip, e.g., Controlling synchronous frequency relative to actual rotor frequency

- overlap between 25/12 and 25/14

It has been difficult finding examples to either support or refute this case.

- 27/20 placed correctly under 27/04

CA agrees that 27/20 is placed correctly since control of the supply frequency should include the frequency of stator, rotor or both supplies.

John Dowding
CIPO

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RO COMMENTS

Date:September2001

PROJECT C410

CLASS/SUBCLASS H02P

- on the correctness of the wording of group 23/08;

We consider that the wording of group 23/08 is correct and covers the intended scope.

- whether there was any overlap between groups 25/12 and 25/14;

We agree the Rapporteur proposal for the group 25/14.

-whether group 27/20 were correctly placed as a subgroup under group 27/04;

We think that the group 27/20 is correctly placed as a two-dot subgroup of group 27/04.

L. Cornea

Swedish Patent and Registration Office

IPC/WG/5/3, Project C410, subclass H02P **20 September 2001**

COMMENTS
relating to Annex 49

Comments were invited on:

- the proposal to be submitted from the Rapporteur regarding Notes and necessary changes in groups 5/00 and 7/00

We agree with the proposal from the Rapporteur with some minor remarks. In 1/00 and 3/00, references should also be made to 8/04 and 8/24 respectively for step-motors.

When deleting subgroups 5/xx, some notes and references have to be changed, see for example the note before 5/08.

The title of 5/00 should read "Arrangements specially adapted for controlling…."

-regarding the explanation of the terms 'adaptation' and 'estimation'

We believe that 'estimation' is the process of determining by calculation (perhaps based on measurements of other parameters than the estimated) of a parameter, eg. not using sensors for the parameter. 'Adaptation' is in its meaning very close to 'regulating' or 'controlling', so we propose not to use 'adaptation' in 21/14 nor in 23/14.

– the correctness of the wording of group 23/08 and, in particular, whether it covers its intended scope

We agree on the wording of the title of group 23/08, the intended scope is covered.

– whether there was any overlap between groups 25/12 and 25/14 and, if that were the case, how it could be solved

The overlap is solved with the proposal of the Rapporteur.
The title of group 25/12 should read ' Motors with shiftable brushes'

– whether group 27/20 was correctly placed as a subgroup under group 27/04, and whether its wording should be adapted or a precedence reference would be preferable

The relation between group 27/20 and group 27/04 is correct. We would like a reference in 27/20 saying (27/06, 27/16 take precedence).

Sture Elnäs

UK Patent Office **Date: 26 September 2001**

Comments on Project C410 , Subclass H02P

Comments were invited on:

- *the correctness of the wording of group 23/08 and, in particular, whether it covered its intended scope;*

The wording of 23/08 appears to be correct.

- *whether there was any overlap between groups 25/12 and 25/14 and, if that were the case, how it could be solved;*

There is possible overlap between 25/12 and 25/14. We agree with the Rapporteur that a simple precedence note would solve this problem.

- *whether group 27/20 was correctly placed as a subgroup under group 27/04, and whether its wording should be adapted or a precedence reference would be preferable.*

27/20 is correctly placed as a subgroup of 27/04.

In addition, comments were invited on the proposals to be submitted by the Rapporteur (submitted 23 August 2001).

In general, the proposals appear acceptable. However, proposed group 7/00 should be changed to A- - - dc-motors or of *electric* motors not otherwise provided for- - -@.

Peter Emerson

Japan Patent Office

September 28, 2001

Project:C-410 Subclass:H02P

JPO Comments on IPC Revision Proposals for Project C 410

The Fifth Working Group Report

In accordance with the report of the fifth Working Group, JPO raises some examples of patent documents relating to the integration of vector control with other types of control as follows.

1. Example Documents

1-1. International Documents

EP 1045514 A1:
Electromagnetic coupling value is calculated from a discrete model finding the coupling variation at sampling instants with two components, the free evolution value and the value without the command voltage.

DE 10012280 A1:
Measured and observed values are calculated from a reference point adjuster which adjusts a point at an arbitrary position on a stator current vector surface plane. A rotor resistance is calculated as a result of the difference between values, and a stator resistance is calculated as a result of the difference between phases.

EP 921632 A2 :
In a vector control apparatus and method for an induction motor, a magnetic flux observer of a full order consists of a T-I type equivalent circuit of the induction motor.

US 5057759 A:
A gain of a state estimation observer is changed over depending on a rotor angular velocity of an alternating-current motor control in order to improve an applicability of the gain.

1-2. National Documents

JP has approximate 100 national documents relating to the same matter.

2. 21/00 and 23/00

In respect of our previous comments at the session of 5th IPC Revision WG on subgroup items that are not covered by 21/00 but are only by 23/00, JPO remarked only about the observer control. Besides, we would like to add a single comment regarding to the subdivisions.

What we have noticed is an obscurity of a reason for the absence of them under 21/00 contrary to their presence under 23/00, providing the both 21/00 and 23/00 are exclusive.

Especially, the definition of 23/04 “specially adapted for damping motor oscillations” represents a technique being adaptable to a vector control as well, and we expect a future increase of its related documents.

Consequently, we propose the subgroup items such as 23/04 should be created under both 23/00 and 21/00.

DE Rapporteur Report for C 410

On the Rapporteur Report for C 410 submitted by DE on August 23rd, 2001, JPO proposes the following remarks.

In respect to the Rapporteur Report on combining subgroups 5/04, 5/06 - 5/26 into 7/01 - 7/04 and 7/06 - 7/30, and 7/67 - 7/80 into 5/46 - 5/52, DE mentioned for its reason that “it gives no sense to have regulation of speed, and control of speed or torque in two different maingroups” of 5/00 and 7/00.

We support the combination of these sets of items, but it is not clear to us why the former proposed case is transferred to 7/00 while the latter is to 5/00. According to IPC 7th edition, 7/00 seems to be a generic concept for 5/00. Therefore, we propose to combine all proposed 5/00 groups into 7/00 for more appropriate classification if any.

FEDERAL INSTITUTE OF INDUSTRIAL PROPERTY

RU comments	
Project : C 410	**Date: 03.10.2001**
Class/Subclass : H02P	

Re: IPC/WG/5/3, par.13
IPC/c 410 rev.4

Comments were invited on:

- the correctness of the wording of group 23/08 and, in particular whether it covered its intended scope.

Analysed documents were cited by the Rapporteur with request for revision, we propose to modify wording.

C 23/08. Controlling based on slip frequency e.g., by adding or subtracting a slip frequency to or from a frequency corresponding to a rotation speed of the electric motor.

- whether there was any overlap between groups 25/12 and 25/14 and, if that was the case, how it could be solved.

We agree with the Rapporteur that overlapping could be avoided by including precedence reference of group 25/12 over group 25/14.

- whether group 27/20 was correctly placed as a subgroup under group 27/04 and whether its wording should be adapted or precedence reference would be preferable.

The group 7/42 transferred to 27/04, and the group 7/46 transferred to the group 24/20 respectively. Therefore we agree with the place and wording of H02P27/20.

Precedence reference is not needed.

- As to DE proposed wording of 7/00 (Rapporteur Proposal dated 23.08.2001, p.2).

We wonder which kind of "electric motors not otherwise provided for" and covered by the groups 7/01, 7/04, 5/04 could be classified in group 7/00, and why such motors can't be classified in new groups 23/00, 25/00, 27/00 or other main groups of subclass H02P?

V.Nioukhovsky.

EUROPEAN PATENT OFFICE
Principal Directorate Documentation

Comments
01 September 2001

Project: C 410 Subclass: H02P

Re: IPC/WG/5/3

Comments have been invited on the following items:

On the wording of group 21/14 and 23/14, i.e. "estimation or adaptation..."
On top of the explanations provided by Rapporteur, we could also add some more information on the technical background thereof, as follows:

- about "estimation": according to our experts, the parameters listed in the example of this title are the ones that are used as input for the control algorithm in use. Such parameters can be directly measured, but this is usually expensive (need for transducers, etc.). That's why a common technique is their *estimation,* i.e. the calculation of their approximate values on the basis of the actual value of other, easily measurable parameters (e.g. voltage, current, speed, etc.).
- about "adaptation": this term should instead refer to aspects of adjustment of the previously mentioned parameters to the working conditions of the machine, e.g. temperature.

We agree with Rapporteur's proposal on this point.

Correctness of wording of group 23/08
We support the title as it is and deem it correct for the intended scope.

Possible overlap between groups 25/12 and 25/14
Our experts are of the opinion that there is no overlap between these two groups, and therefore no reference should be needed. Nevertheless, we wouldn't oppose the introduction of a precedence reference as proposed by Rapporteur, in order to address possible situations unforseen by our experts.

Group 27/20
We support this group as it stands.

Combination of parallel sets of groups between main groups 5/00 and 7/00.
We agree on the approach proposed by Rapporteur and the new scheme as proposed.

Precedence notes concerning main group 21/00
We agree on the notes introduced in Rapporteur's proposal.

Changes in groups 5/00 and 7/00 - transfers
We agree on the proposed transfers.

P. Foglia

INSTITUT NATIONAL DE LA PROPRIÉTÉ INDUSTRIELLE **FR - oct. 2001**

Projet IPC / C **410**
Sous-classe **H 02 P**

VERSION FRANÇAISE

Ce document a été établi sur la base de notre proposition, après consultation des autres offices et du Bureau international.

(ref : annexe 28 du document IPC/WG/5/3)

H 02 P

ANNEX 28 H 02 P [Project-Rapporteur : 410/DE] <SC05022E>

C	***21/00***	***Dispositions ou procédés pour la commande de machines électriques par commande par vecteur, p.ex. par commande de l'orientation du champ***
N	*Note(s) après 21/00*	*Lors du classement dans le présent groupe, un classement dans les groupes 25/00 à 27/00 est également attribué si le type de moteur à courant alternatif, des détails de structure, ou le type de tension d'alimentation présentent un intérêt.*
N	*21/02*	• *spécialement adaptés pour optimiser le rendement à faible charge*
N	*21/04*	• *spécialement adaptés pour les très faibles vitesses*
N	*21/06*	• *Commande basée sur le flux rotorique*
N	*21/08*	• • *Commande indirecte par orientation du champ, p.ex. calcul de l'angle de phase du champ basé sur l'équation de la tension de rotor en additionnant la fréquence de glissement et une fréquence proportionnelle à la vitesse*
N	*21/10*	• • *Commande directe par orientation du champ*
N	*21/12*	• *Commande basée sur le flux statorique*
N	*21/14*	• *Estimation ou adaptation des paramètres des machines, p.ex. constante de temps du rotor, flux, vitesse, courant ou tension*
N	***23/00***	***Dispositions ou procédés pour la commande de moteurs à courant alternatif caractérisés par un procédé de commande autre que la commande par vecteur***

N	*Note(s) après 23/00*	
		Lors du classement dans le présent groupe, un classement dans les groupes 25/00 à 27/00 est également attribué si le type de moteur à courant alternatif, des détails de structure, ou le type de tension d'alimentation présentent un intérêt.
N	*23/02*	• *spécialement adaptés pour optimiser le rendement à faible charge*
N	*23/04*	• *spécialement adaptés pour amortir les oscillations des moteurs, p.ex. pour la réduction du pompage*
N	*23/06*	• *Commande des moteurs dans quatre quadrants*
N	*23/08*	• *Commande basée sur la fréquence de glissement, p.ex. en additionnant la fréquence de glissement et une fréquence proportionnelle à la vitesse*
N	*23/10*	• *Commande par superposition d'un courant continu (freinage par courant continu 3/24)*
N	*23/12*	• *Commande par observateurs, p.ex. en utilisant des observateurs de Luenberger ou des filtres de Kalman*
N	*23/14*	• *Estimation des paramètres des moteurs, p.ex. constante de temps du rotor, flux, vitesse, courant ou tension*
N	***25/00***	***Dispositions ou procédés pour la commande de moteurs à courant alternatif caractérisés par le type de moteur ou par des détails de structure***
N	*Note(s) après 25/00*	
		Lors du classement dans le présent groupe, un classement dans les groupes 21/00, 23/00 ou 27/00 est également attribué si le procédé de commande ou le type de tension d'alimentation présentent un intérêt.
N	*25/02*	• *caractérisés par le type de moteur*
N	*25/04*	• • *Moteurs monophasés, p.ex. moteurs à condensateur*
N	*25/06*	• • *Moteurs linéaires*
N	*25/08*	• • *Moteurs à réluctance*
N	*25/10*	• • *Moteurs à collecteur, p.ex. moteurs à répulsion.*
N	*25/12*	• • • *Décalage des balais des moteurs à collecteur*
N	*25/14*	• • • *Moteurs universels*
N	*25/16*	• *caractérisés par des dispositions de circuit ou par le type de câblage*
N	*25/18*	• • *avec des dispositions pour la commutation des enroulements, p.ex. par des interrupteurs mécaniques ou des relais*
N	*25/20*	• • • *pour le changement du nombre de pôles*

N	*25/22*	• • *Enroulements multiples; Enroulements pour plus de trois phases*
N	*25/24*	• • *Impédance variable dans le circuit statorique ou le circuit rotorique*
N	*25/26*	• • • *avec des dispositions pour la commande de l'impédance secondaire*
N	*25/28*	• • *utilisant des dispositifs magnétiques à degré de saturation commandable, p.ex.. des transducteurs*
N	*25/30*	• • *le moteur étant commandé par une commande s'exerçant sur la génératrice à courant alternatif qui l'alimente*
N	*25/32*	• • *utilisant des tubes à décharge*
N	***27/00***	***Dispositions ou procédés pour la commande de moteurs à courant alternatif caractérisés par le type de tension d'alimentation***
N	*Note(s) après 27/00*	*Lors du classement dans le présent groupe, un classement dans les groupes 21/00, 23/00 ou 25/00 est également attribué si le procédé de commande, le type de moteur à courant alternatif ou des détails de structure présentent un intérêt.*
N	*27/02*	• *utilisant une tension d'alimentation à fréquence constante et à amplitude variable*
N	*27/04*	• *utilisant une alimentation à fréquence variable, p.ex. tension d'alimentation de convertisseurs ou d'onduleurs*
N	*27/06*	• • *utilisant des convertisseurs de courant continu en courant alternatif ou des onduleurs*
N	*27/08*	• • • *avec modulation de largeur d'impulsions*
N	*27/10*	• • • • *utilisant des régulateurs par tout ou rien*
N	*27/12*	• • • • *appliquant des impulsions en guidant le vecteur-flux, le vecteur- courant ou le vecteur-tension sur un cercle ou une courbe fermée, p.ex. commande directe du couple*
N	*27/14*	• • • • *avec au moins trois niveaux de tension*
N	*27/16*	• • *utilisant des convertisseurs de courant alternatif en courant alternatif sans conversion intermédiaire en courant continu*
N	*27/18*	• • • *modifiant la fréquence en supprimant les demi-ondes*
N	*27/20*	• • *utilisant une alimentation en courant alternatif pour les circuits rotorique et statorique, la fréquence d'alimentation d'au moins un des circuits étant variable*

N.B. : 27/02, 27/04 "**à**" fréquence - - - comme en H02P 7/42

EUROPEAN PATENT OFFICE
Principal Directorate Documentation

Comments
15 August 2001

Project: C 410 Subclass: H02P

Re: IPC/WG/5/3

At IPC/WG/5, Japan and the EPO were invited to cite example documents relating to the integration of vector control with other types of control.

Integration of vector control with other types of control - Examples

Our experts did not manage to produce interesting examples of such kind of integration, nevertheless they did not exclude this technical possibility, i.e. these different techniques can coexist and be used simultaneously on the machine under control.

In case of control systems obtained by combining vector plus other control techniques, double classification, i.e. in 21/00 (and subgroups) and 23/00 (and subgroups) could be envisaged.

P. Foglia

DEUTSCHES PATENT- UND MARKENAMT German Patent and Trademark Office	Class/Subclass: **H 02 P**
	Date: 29. October 2001
DE – Rapporteur-Report - C 410	

Re.: IPC/WG/5/3

Comments were received by EP (August 15 and September 01, 2001), DE (Rapporteur, August 23, 2001), SE (September 20, 2001), RO (September, 2001), CA (September 21, 2001), GB (September 26, 2001), JP (September 28, 2001), RU (October 3, 2001) and FR (October, 2001) on the following items:

- WG agreed that group H02P 21/00 should take precedence over main groups 1/00 to 19/00. Rapporteur was invited to propose appropriate Notes or references to this effect.

Rapporteur proposed references for 21/00 included in groups 1/00, 3/00, 5/00, 6/00 7/00, 8/00, 9/00, 11/00, 15/00, 17/00 and 19/00. A reference in group 13/00 is dispensable, because no rotating field exists in this technical subject matter, which is a necessary requirement for vector control.
There were no objections against in the comments. Rapporteur proposes WG to adopt the references.

- Rapporteur was further invited to propose necessary changes in groups 5/00 and 7/00, in view of the creation of the new main groups.

Rapporteur proposed transfer references for subject matter moving from IPC7 5/00 and 7/00 to the new main groups 21/00 to 27/00.

Rapporteur rearranged the groups in 5/00 and 7/00 and collected subject matter concerning control of two and more electric motors in 5/00 and subject matter concerning control of dc-motors or electric motors otherwise not provided for in 7/00.

In general all commenting offices are in favour of the Rapporteur propositions. SE , FR and GB propose amendments of the new titles of 5/00 and 7/00, respectively. FR notice that the aspect of 'speed regulation' is not clearly distinguished in 5/00 and 7/00. SE remind of the notes before 5/08 which are not taken up by the Rapporteur. JP think that IPC7 group 7/00 is a generic concept for 5/00 and propose to combine all groups into 7/00. RU wonder which kind of motors are thought by 'motors not otherwise provided for' and propose to transfer groups 7/01, 7/04 and 5/04 to the new main groups 21/00 to 27/00.

Rapporteur included most proposed amendments in the new Rapporteur proposal. The majority of commenting offices seems to be content with the splitting of subject matter in main groups 5/00 and 7/00 and not combining all groups in 7/00 as proposed by JP.

The Note before 5/08 (question SE) is not present in the parallel set of groups in IPC7 main group 7/00 and in the view of our experts there is indeed no danger of overlap. The Note before 5/30 is no longer relevant because of the different structure of the new main groups 21/00 to 27/00. The Note before IPC7 7/10 is not consistent with the rules of the IPC, because 3-dot groups 7/24 and 7/30 are subgroups of 2-dot group 7/18 ('with auxiliary power') and

therefor cannot have precedence over groups 7/10 and 7/14 which are subgroups of two-dot group 7/08 ('without auxiliary power'). To make things clear Rapporteur proposes instead of the Note in question a precedence of three-dot groups 7/24 and 7/30 over the other three-dot groups 7/20 and 7/22.

Groups 5/04 and 7/04 (question RU) dealing 'with separate brakes' are far away from actual techniques and hold -very old- documents, but may concern ac- or dc-motors. Rapporteur proposes not to continue this groups and to transfer subject matter to main group 7/00.
In group 7/01 (question RU) the 'two or more voltage or current supplies' can be either ac or dc supplies, e.g. an electric shaver motor which can be supplied by 3 Volt dc of a built-in accumulator, 12 Volt dc of a car accumulator or 110 or 230 Volt ac domestic current.

- JP and EP were invited to cite patent documents relating to the integration of vector control with other types of control. Comments were invited on how such documents should be classified in the approved scheme and whether any changes were necessary to the said scheme in order to provide for the correct classification of the documents.

EP did not manage to produce interesting examples of such kind of integration, nevertheless did not exclude this technical possibility. JP cited four documents and mentioned further documents would exist in Japanese language.
Rapporteur acknowledge the technical possibility of these subject matter, but nevertheless expects it not to be very typical for this technical field. As a practical solution, Rapporteur states that the present scheme does not explicitly forbid a classification in both main groups 21/00 and 23/00, but it does indeed not encourage to do so. R. thinks this to be reasonable because of the overwhelming part of documents belonging strictly either to 21/00 or to 23/00.

- Rapporteur was invited to submit explanations of the terms 'adaptation' and 'estimation' used in the wordings of the approved groups H02P 21/14 and 23/14.

Rapporteur refers to the explanation of the terms in the DE and especially in the EP comment which try to make clear that 'estimation or adaptation' is useful in both groups 21/14 and 23/14. In contrary SE think that 'adaptation' is in its meaning very close to 'regulating' or 'controlling' and is against using it.
Rapporteur thinks the explanations confirm the use of both terms. Further on a majority of comments (EP, FR, DE) is in favour of using 'estimation or adaptation' in both groups 21/14 and 23/14.

- Comments were further invited on the correctness of the wording of group 23/08 and, in particular, whether it covered its intended scope.

EP, FR, GB, SE, RO and DE agree with the title of 23/08. CA and RU suggest a change of the wording. Rapporteur finds the CA proposed wording not enough specific. Concerning the RU proposal R. remarks that the slip frequency may have positive or negative sign, so 'adding' is correct in both cases. Rapporteur proposes to let the title as it is.

- whether there was any overlay between groups 25/12 and 25/14 and, if that were the case, how it could be solved.

FR, GB, SE, RO, RU and DE are in favour of creating a precedence of group 25/12 over 25/14. EP is not against it.
Furthermore Rapporteur supports the SE proposal that the title of 25/12 should read 'Commutator motors with shiftable brushes'. The new wording fits much better into the context of main group 25/00.

- whether group 27/20 were correctly placed as a subgroup under group 27/04 or whether a precedence reference would be preferable and whether the title could be amended.

All comments say that the relation is correct. There are no proposals for anamendment of the title.
SE propose a precedence reference between the two-dot groups 27/06, 27/16 and 27/20. Rapporteur confirms the need for this precedence reference, but propose a precedence of 27/20 over 27/06 and 27/16. The reason is that subject matter of 27/20 is more specific and with a precedence in other direction group 27/20 would be nearly empty.

- JP propose a new group in main group 21/00 parallel to group 23/04 in main group 23/00.

Rapporteur supports the JP suggestion to create a further group parallel to the adopted group 23/04.

21/05 **.** specially adapted for damping motor oscillations, e.g. for reducing hunting

- further remarks:

In the enclosed Rapporteur proposal all places which are changed compared to the foregoing Rapporteur proposal (dated 23. August 2001) are printed in *italics*.

FR prepared a French version of the groups already adopted by the WG.

Rainer Anders

DEUTSCHES PATENT- UND MARKENAMT German Patent and Trademark Office	Class/Subclass: **H 02 P**
	Date: 29. October 2001
Rapporteur Proposal -- C 410	

H02P

	1/00	- - - converters (starting of synchronous motor with electronic commutators 6/20, 6/22; *starting dynamo-electric motors rotating step by step 8/04;* vector control 21/00)
	3/00	- - - converters (stopping of synchronous motors with electronic commutators 6/24; *stopping dynamo-electric motors rotating step by step 8/24;* vector control 21/00)
C	5/00	Arrangements *specially adapted* for *regulating the speed or* controlling the speed or torque of two or more electric motors (starting 1/00; stopping or slowing 3/00; vector control 21/00)
D	5/04	*(tranferred to 7/00, covered by 3/00)*
D	5/05	(transferred to 25/08)
D	5/06	(transferred to 7/06)
D	5/08	(transferred to 7/06, covered by 7/08 to 7/22)
D	5/10	(transferred to 7/06, covered by 7/08 to 7/22)
D	5/12	(transferred to 7/24)
D	5/14	(transferred to 7/26)
D	5/16	(transferred to 7/28)
D	5/162	(transferred to 7/282)
D	5/165	(transferred to 7/285)
D	5/168	(transferred to 7/288)
D	5/17	(transferred to 7/29)
D	5/172	(transferred to 7/292)
D	5/175	(transferred to 7/295)
D	5/178	(transferred to 7/298)
D	5/18	(transferred to 7/30)
D	5/20	(transferred to 7/32)
D	5/22	(transferred to 7/34)
D	5/24	(transferred to 7/34)
D	5/26	(transferred to 7/34)

D	5/28	(covered by 23/00, 25/00, 27/00)
D	5/30	(transferred to 25/18)
D	5/32	(transferred to 25/18)
D	5/34	(transferred to 27/04)
D	5/36	(covered by 23/00, 25/00, 27/00)
D	5/38	(transferred to 25/32)
D	5/40	(covered by 23/00, 25/00, 27/00)
D	5/402	(transferred to 27/02)
D	5/405	(transferred to 25/26)
D	5/408	(transferred to 27/04)
D	5/41	(transferred to 27/06)
D	5/412	(transferred to 27/16)
D	5/415	(transferred to 27/20, covered by 23/00)
D	5/418	(transferred to 25/10)
D	5/42	(transferred to 25/28)
D	5/44	(transferred to 25/12, covered by 25/16)
IPC7	5/46	. speed regulation of two or more dynamo-electric motors in relation to one another
IPC7	5/48	.. by comparing mechanical values representing the speeds
IPC7	5/50	.. by comparing electrical values representing the speeds
IPC7	5/52	.. additionaly providing control of relative angular displacement
N	5/68	. controlling two or more dc dynamo-electric motors (IPC7 7/68)
N	5/685	.. electrically connected in series, i.e. carrying the same current (IPC7 7/685)
N	5/69	.. mechanically coupled by gearing (IPC7 7/69)
N	5/695	... Differential gearing (IPC7 7/695)
N	5/74	. controlling two or more ac dynamo-electric motors (IPC7 7/74)
N	5/747	.. mechanically coupled by gearing (IPC7 /747)
N	5/753	... Differential gearing (IPC7 7/753)
N	5/80	.. controlling combination of dc and ac dynamo-electric motors (IPC7 7/80)
	6/00	- - - therefor (stepping motors 8/00; vector control 21/00)
C	7/00	Arrangements for *regulating the speed or* controlling the

speed or torque of electric dc-motors or of *electric* motors not otherwise provided for (starting 1/00; stopping or slowing 3/00; vector control 21/00)

IPC7 7/01 unchanged

D 7/04 (transferred to 7/00, covered by 3/00)

D 7/05 (transferred to 25/08)

7/06 . for *regulating or* controlling - - -

IPC7 7/08 unchanged

D Note before 7/10 deleted

ipc7 7/10 to 7/18 unchanged

7/20 - - - relays (7/24, 7/30 take precedence)
7/22 - - - resistance (7/24, 7/30 take precedence)

IPC7 7/24 to 7/34 unchanged

D 7/36 (covered by 23/00, 25/00, 27/00)
D 7/38 (covered by 23/00, 25/00, 27/00)
D 7/40 (transferred to 25/24)
D 7/42 (transferred to 27/04)
D 7/44 (transferred to 27/04)
D 7/46 (transferred to 27/20)
D 7/48 (transferred to 25/20)
D 7/50 (transferred to 25/12)
D 7/52 (covered by 23/00, 25/00, 27/00)
D 7/54 (transferred to 25/18)
D 7/56 (transferred to 25/18)
D 7/58 (covered by 23/00, 25/00, 27/00)
D 7/60 (transferred to 25/32)
D 7/62 (covered by 23/00, 25/00, 27/00)
D 7/622 (transferred to 27/02)
D 7/625 (transferred to 25/26)
D 7/628 (transferred to 27/04)
D 7/63 (transferred to 27/06)
D 7/632 (transferred to 27/16)

D	7/635	(transferred to 27/20, covered by 23/00)
D	7/638	(transferred to 25/10)
D	7/64	(transferred to 25/28)
D	7/66	(transferred to 25/30)
D	7/67	(transferred to 5/00)
D	7/68	(transferred to 5/68)
D	7/685	(transferred to 5/685)
D	7/69	(transferred to 5/69)
D	7/695	(transferred to 5/695)
D	7/74	(transferred to 5/74)
D	7/747	(transferred to 5/747)
D	7/753	(transferred to 5/753)
D	7/80	(transferred to 5/80)
	8/00	- - - step by step (vector control 21/00)
	9/00	- - - arrangements 7/34; vector control 21/00; feeding - - -
	11/00	- - - or slowing 3/00; vector control 21/00; feeding - - -
	15/00	- - - of a separate brake 7/04, vector control 21/00)
	17/00	- - - gears (vector control 21/00)
	19/00	- - - to more than one of groups 1/00, 3/00, 5/00, 7/00 or 23/00 (vector control 21/00)
N	*21/05*	*. specially adapted for damping motor oscillations, e.g. for reducing hunting*
WG5	23/00	- - - other than vector control (starting 1/00; stopping or slowing 3/00; two or more motors 5/00; synchronous motors with electronic commutators 6/00; dc-motors or motors not otherwise provided for 7/00; stepping motors 8/00)
WG5	23/14	- - - Estimation or adaptation - - -
WG5	25/00	- - - structural details (starting 1/00; stopping or slowing 3/00; two or more motors 5/00; synchronous motors with electronic commutators 6/00; dc-motors or motors not

otherwise provided for 7/00; stepping motors 8/00)

WG5 *25/12* ***...*** *Commutator motors with shiftable brushes*

WG5 25/14 - - - motors (25/12 takes precedence)

WG5 *27/06* *- - - inverters (27/20 takes precedence)*

WG5 *27/16* *- - - dc (27/20 takes precedence)*

WG4 27/00 - - - kind of supply voltage (starting 1/00; stopping or slowing 3/00; two or more motors 5/00; synchronous motors with electronic commutators 6/00; dc-motors or motors not otherwise provided for 7/00; stepping motors 8/00)

Rainer Anders

IPC/C 419/98
ORIGINAL: English/French
DATE: November 19, 2001

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE

GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: RU **PROPOSITION DE :**	**REVISION OF IPC AREA:** G 01 M **RÉVISION DU DOMAINE DE LA CIB :**
KIND OF REVISION: Creation of subgroups **TYPE DE RÉVISION :** Création de sous-groupes	

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée	RU	12.98
2	Comments	/ Observations	EP	05.99
3	Comments	/ Observations	SE	05.99
4	Comments	/ Observations	CA	05.99
5	Comments	/ Observations	RO	05.99
6	Comments	/ Observations	JP	07.99
7	Comments	/ Observations	GB	07.99
8	Comments	/ Observations	DE	09.99
9	Rapporteur report	/ Rapport du rapporteur	RU	09.99
10	Rapporteur proposal	/ Proposition du rapporteur	RU	09.99
11	Decision of the Working Group	/ Décision du groupe de travail	WG	09.00
12	Comments	/ Observations	EP	09.00
13	Comments	/ Observations	JP	09.00

RAPPORTEUR : RU **TECHNICAL FIELD/DOMAINE TECHNIQUE : E**

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
14	French version of approved amendments	/ Version française des modifications approuvées	FR	09.00
15	Comments	/ Observations	FR	09.00
16	Comments	/ Observations	CA	09.00
17	Comments	/ Observations	RO	09.00
18	Comments	/ Observations	SE	11.00
19	Rapporteur report	/ Rapport du rapporteur	RU	11.00
20	Rapporteur proposal	/ Proposition du rapporteur	RU	11.00
21	French version of approved amendments	/ Version française des modifications approuvées	FR	11.00
22	Decision of the Working Group	/ Décision du groupe de travail	WG	01/01
23	Comments	/ Observations	EP	04.01
24	French version of approved amendments	/ Version française des modifications approuvées	FR	04.01
25	Comments	/ Observations	JP	06.01
26	Comments	/ Observations	RO	06.01
27	Comments	/ Observations	FR	06.01
28	Comments	/ Observations	SE	06.01
29	Rapporteur report	/ Rapport du rapporteur	RU	06.01
30	Rapporteur proposal	/ Proposition du rapporteur	RU	06.01
31	Comments	/ Observations	FR	06.01
32	Decision of the Working Group	/ Décision du groupe de travail	WG	08.01
33	Comments	/ Observations	FR	11.01
34	French version of approved amendments	/ Version française des modifications approuvées	FR	11.01

EXCERPT FROM DOCUMENT IPC/WG/5/3
EXTRAIT DU DOCUMENT IPC/WG/5/3

ANNEX 33E G 01 M [Project-Rapporteur : 419/RU] <SC05025E>

15/00 **– – – of engines**

N *Note(s) after 15/00*

Informative note

References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

Measurement of mechanical vibrations in general G 01 H

Analysing gases in general G 01 N

Arrangements for testing electrical properties; Arrangements for locating electric faults; Arrangements for electrical testing characterised by what is being tested not provided for elsewhere G 01 R 31/00.

N *Note(s) after 15/04*

Informative note

References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

Monitoring or diagnostic devices for exhaust-gas treatment apparatus F 01 N 11/00

Indicating or supervising devices of internal-combustion engines F 02 B 77/08

Running in of internal-combustion engines F 02 B 79/00

Controlling combustion engines F 02 D

Apparatus for testing, tuning or synchronising carburettors, e.g. carburettor flow stands F 02 M 19/01

Testing fuel-injection apparatus F 02 M 65/00

Testing internal-combustion engine ignition, e.g. timing F 02 P 17/00

Devices for determining the value of power, e.g. by measuring and simultaneously multiplying the values of torque and revolutions per unit of time, by multiplying the values of tractive or propulsive force and velocity G 01 L 3/24

Determining the characteristic of torque in relation to revolutions per unit of time G 01 L 5/26

Devices for detecting or indicating knocks in internal-combustion engines G 01 L 23/22

Devices for measuring pressure in inlet or exhaust ducts of internal combustion engines G 01 L 23/24

Means for indicating positions of pistons or cranks of internal-combustion engines by measuring pressure G 01 L 23/30.

N *Note(s) before 15/05*

Group 15/05 takes precedence over groups 15/06 to 15/12.

N *15/05* • • *by combined monitoring of two or more different engine parameters*

N *Note(s) after 15/14*

Informative note

References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

Rocket-engine plants characterised by specially adapted arrangements for testing or measuring F 02 K 9/96.

ANNEXE 33F **G 01 M** **[Project-Rapporteur : 419/RU]** **<SC05026F>**
(T:FR) - SC/04/5 **<SC04023E>**

N *15/09* • • *par contrôle de la pression dans les conduits de fluide, p.ex. dans des parties de lubrification ou de refroidissement*

N *15/11* • • *par détection des défauts d'allumage*

INSTITUT NATIONAL DE LA PROPRIÉTÉ INDUSTRIELLE **FR - sept. 2001**

Projet IPC / C **419** Annexe 33
Sous-classe **G 01 M**

PROPOSITION DE VERSION FRANÇAISE

(ref : annexe 33E du document IPC/WG/5/3)

ANNEX 33E G 01 M [Project-Rapporteur : 419/RU] <SC05025E>

15/00 **– – – des moteurs**

N *Note(s) après 15/00*

Note d'information

Les renvois ci-après indiquent les endroits de la CIB qui peuvent également présenter un intérêt pour une recherche portant sur la matière couverte par le groupe qui précède :

Mesure de vibrations mécaniques en général G 01 H

Analyse des gaz en général G 01 N

Dispositions pour vérifier les propriétés électriques; Dispositions pour la localisation des pannes électriques; Dispositions pour l'essai électrique caractérisées par ce qui est testé, non prévues ailleurs G 01 R 31/00.

N *Note(s) après 15/04*

Note d'information

Les renvois ci-après indiquent les endroits de la CIB qui peuvent également présenter un intérêt pour une recherche portant sur la matière couverte par le groupe qui précède :

Dispositifs de surveillance ou de diagnostic pour les appareils de traitement des gaz d'échappement F 01 N 11/00

Dispositifs d'indication ou de surveillance des moteurs à combustion interne F 02 B 77/08

Rodage des moteurs à combustion interne F 02 B 79/00

Commande des moteurs à combustion F 02 D

Appareils de contrôle, de réglage ou de synchronisation des carburateurs, p.ex. bancs d'essai pour carburateurs F 02 M 19/01

Essai des appareils d'injection de combustible F 02 M 65/00

Essai de l'allumage des moteurs à combustion interne, p.ex. synchronisme F 02 P 17/00

Dispositifs pour déterminer la valeur de la puissance, p.ex. en mesurant et en multipliant simultanément les valeurs du couple par le nombre de tours par unité de temps, en multipliant les valeurs de la force de traction ou propulsive par la vitesse G 01 L 3/24

Détermination de la caractéristique de couple en fonction du nombre de tours par unité de temps G 01 L 5/26

Dispositifs pour détecter ou indiquer les cognements dans les moteurs à combustion interne G 01 L 23/22

Dispositifs pour mesurer la pression dans les collecteurs d'admission ou d'échappement des moteurs à combustion interne G 01 L 23/24

Moyens pour indiquer les positions des pistons ou des manivelles des moteurs à combustion interne par mesure de pression G 01 L 23/30

N Note(s) avant 15/05

Le groupe 15/05 a priorité sur les groupes 15/06 à 15/12.

N 15/05 • • par contrôle combiné d'au moins deux paramètres différents des moteurs

N Note(s) après 15/14

Note d'information

Les renvois ci-après indiquent les endroits de la CIB qui peuvent également présenter un intérêt pour une recherche portant sur la matière couverte par le groupe qui précède :

Moteurs-fusées caractérisés par des aménagements spécialement conçus pour des essais ou des mesures F 02 K 9/96.

INSTITUT NATIONAL DE LA PROPRIÉTÉ INDUSTRIELLE **FR - oct. 2001**

Projet IPC / C **419** Annexe 34 du dossier de projet
Sous-classe **G 01 M**

VERSION FRANÇAISE

Ce document a été établi sur la base de notre proposition, après consultation des autres offices et du Bureau international.

(ref : annexe 33E du document IPC/WG/3/3)

G 01 M

ANNEX 33E G 01 M [Project-Rapporteur : 419/RU] <SC05025E>

15/00 **– – – des moteurs**

N *Note(s) après 15/00*

Note d'information

Les renvois ci-après indiquent les endroits de la CIB qui peuvent également présenter un intérêt pour une recherche portant sur la matière couverte par le groupe qui précède :

Mesure de vibrations mécaniques en général G 01 H

Analyse des gaz en général G 01 N

Dispositions pour vérifier les propriétés électriques; Dispositions pour la localisation des pannes électriques; Dispositions pour l'essai électrique caractérisées par ce qui est testé, non prévues ailleurs G 01 R 31/00.

N *Note(s) après 15/04*

Note d'information

Les renvois ci-après indiquent les endroits de la CIB qui peuvent également présenter un intérêt pour une recherche portant sur la matière couverte par le groupe qui précède :

Dispositifs de surveillance ou de diagnostic pour les appareils de traitement des gaz d'échappement F 01 N 11/00

Dispositifs d'indication ou de surveillance des moteurs à combustion interne F 02 B 77/08

Rodage des moteurs à combustion interne F 02 B 79/00

Commande des moteurs à combustion F 02 D

Appareils de contrôle, de réglage ou de synchronisation des carburateurs, p.ex. bancs d'essai pour carburateurs F 02 M 19/01

Essai des appareils d'injection de combustible F 02 M 65/00

Essai de l'allumage des moteurs à combustion interne, p.ex. synchronisme F 02 P 17/00

Dispositifs pour déterminer la valeur de la puissance, p.ex. en mesurant et en multipliant simultanément les valeurs du couple par le nombre de tours par unité de temps, en multipliant les valeurs de la force de traction ou propulsive par la vitesse G 01 L 3/24

Détermination de la caractéristique de couple en fonction du nombre de tours par unité de temps G 01 L 5/26

Dispositifs pour détecter ou indiquer les cognements dans les moteurs à combustion interne G 01 L 23/22

Dispositifs pour mesurer la pression dans les collecteurs d'admission ou d'échappement des moteurs à combustion interne G 01 L 23/24

Moyens pour indiquer les positions des pistons ou des manivelles des moteurs à combustion interne par mesure de pression G 01 L 23/30

N *Note(s) avant 15/05*

Le groupe 15/05 a priorité sur les groupes 15/06 à 15/12.

N *15/05* • • *par contrôle combiné d'au moins deux paramètres différents des moteurs*

N *Note(s) après 15/14*

Note d'information

Les renvois ci-après indiquent les endroits de la CIB qui peuvent également présenter un intérêt pour une recherche portant sur la matière couverte par le groupe qui précède :

Moteurs-fusées caractérisés par des aménagements spécialement conçus pour des essais ou des mesures F 02 K 9/96.

IPC/C 423/00
ORIGINAL: English/French
DATE: November 20, 2001

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE

GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: **DE** **PROPOSITION DE :**	**REVISION OF IPC AREA:** **H 01 L** **RÉVISION DU DOMAINE DE LA CIB :**
KIND OF REVISION: **Creation of subgroups** **TYPE DE RÉVISION :** **Création de sous-groupes**	

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée	DE	12.98
2	Decision of the Working Group	/ Décision du groupe de travail	WG	09.00
3	Comments	/ Observations	EP	09.00
4	Proposal	/ Proposition	EP	09.00
5	Comments	/ Observations	DE	09.00
6	Comments	/ Observations	JP	09.00
7	Comments	/ Observations	CA	09.00
8	Comments	/ Observations	RO	09.00
9	Comments	/ Observations	RU	09.00
10	Comments	/ Observations	FR	09.00
11	Rapporteur report	/ Rapport du rapporteur	DE	11.00
12	Rapporteur proposal	/ Proposition du rapporteur	DE	11.00
13	Decision of the Working Group	/ Décision du groupe de travail	WG	01/01
14	French version of approved amendments	/ Version française des modifications approuvées	CH	04.01

RAPPORTEUR : DE **TECHNICAL FIELD/DOMAINE TECHNIQUE : E**

ANNEX/ ANNEXE	CONTENT/CONTENU		ORIGIN/ ORIGINE	DATE
15	Comments	/ Observations	EP	04.01
16	Comments	/ Observations	JP	06.01
17	Comments	/ Observations	CA	06.01
18	Comments	/ Observations	RU	06.01
19	Comments	/ Observations	RO	06.01
20	Comments	/ Observations	FR	06.01
21	Comments	/ Observations	SE	06.01
22	French version of approved amendments	/ Version française des modifications approuvées	CH	06.01
23	Rapporteur proposal	/ Proposition du rapporteur	DE	06.01
24	Decision of the Working Group	/ Décision du groupe de travail	WG	08.01
25	French version of approved amendments	/ Version française des modifications approuvées	CH	11.01

EXCERPT FROM DOCUMENT IPC/WG/5/3
EXTRAIT DU DOCUMENT IPC/WG/5/3

ANNEX 39	**H 01 L**	**[Project-Rapporteur : 423/DE]**	**<SC05027E>**
	21/00	**Processes or apparatus specially adapted for** – – – (processes or apparatus specially adapted for the manufacture – – – 31/00 to 51/00 or of – – –	R
C	*21/64*	• *– – – thereof, not specially adapted for a single type of device provided – – – 31/00 to 51/00*	
C	*25/03*	• *– – – 27/00 to 51/00, e.g. assemblies – – –*	
C	*25/16*	• *– – – 27/00 to 51/00, e.g. forming – – –*	
C	*25/18*	• *– – – 27/00 to 51/00*	
C	***27/00***	*– – – or apparatus specially adapted for – – – 31/00 to 51/00; details thereof 23/00, 29/00 to 51/00; assemblies consisting – – –*	R
	27/02	• including semiconductor components specially adapted for rectifying, oscillating, amplifying or switching and having at least one potential-jump barrier or surface barrier; including integrated – – –	
	27/14	• – – – electromagnetic radiation of shorter wavelength or corpuscular radiation and specially adapted either for the conversion – – –	
	27/15	• – – – or surface barrier, specially adapted for – – –	
N	*27/30*	• • *with components specially adapted for sensing infra-red radiation, light, electromagnetic radiation of shorter wavelength, or corpuscular radiation; with components specially adapted for either the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation*	R
	29/00	**Semiconductor devices specially adapted for rectifying, amplifying, oscillating or switching and having at least one potential-jump barrier or surface barrier; Capacitors or resistors with** – – – to 47/00, 51/05 take precedence; processes or apparatus specially adapted for the – – –	R
C	***31/00***	***– – – radiation and specially adapted either – – – or apparatus specially adapted for the manufacture – – – Details thereof*** *(51/42 takes precedence; – – –*	R
	31/12	• – – – surface barrier specially adapted for – – –	
	31/18	• Processes or apparatus specially adapted for the manufacture – – – parts thereof (for manufacture or treatment of semiconductor or solid state devices or of parts thereof in general 21/00)	

C	***33/00***	***– – – surface barrier specially adapted for – – – or apparatus specially adapted for the manufacture – – – Details thereof*** *(51/50 takes precedence; devices consisting of a plurality of components formed in or on a common substrate 27/00; couplings of light guides – – –*	R
	35/00	**– – – or apparatus specially adapted for the manufacture – – –**	
	35/34	• Processes or apparatus specially adapted for the manufacture – – – parts thereof (for manufacture or treatment of semiconductor or solid state devices or of parts thereof in general 21/00)	
	37/00	**– – – or apparatus specially adapted for the manufacture – – –**	
	39/00	**– – – or apparatus specially adapted for the manufacture – – –**	
	39/24	• Processes or apparatus specially adapted for the manufacture – – – parts thereof (for manufacture or treatment of semiconductor or solid state devices or of parts thereof in general 21/00; magnetic – – –	
	41/00	**– – – or apparatus specially adapted for the manufacture – – –**	
	41/22	• Processes or apparatus specially adapted for the manufacture – – – parts thereof (for manufacture or treatment of semiconductor or solid state devices or of parts thereof in general 21/00)	
	43/00	**– – – or apparatus specially adapted for the manufacture – – –**	
	43/12	• Processes or apparatus specially adapted for the manufacture – – – parts thereof (for manufacture or treatment of semiconductor or solid state devices or of parts thereof in general 21/00)	
	45/00	**Solid state devices specially adapted for – – – or apparatus specially adapted for the manufacture – – –**	
	47/00	**– – – or apparatus specially adapted for the manufacture – – –**	
C	***49/00***	*– – – 47/00 and 51/00 and not provided for in any – – – or apparatus specially adapted for the manufacture – – –*	R
C	***51/00***	***Solid state devices using organic – – – with other materials as the active part; Processes – – – parts thereof*** *(theremoelectric devices using organic material 35/00, 37/00; piezo-electric, electrostrictive or magnetostrictive elements using organic material 41/00; devices consisting of a plurality of components formed in or on a common substrate 27/28)*	R
N	*51/05*	• *specially adapted for rectifying, amplifying, oscillating or switching and having at least one potential-jump barrier or surface barrier; Capacitors or resistors with at least one potential-jump barrier or surface barrier*	R
D	*51/20*	*(transferred to 51/05, 51/42, 51/50)*	R
N	*51/42*	• *specially adapted for sensing infra-red radiation, light, electromagnetic radiation of shorter wavelength, or corpuscular radiation; specially adapted either for the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation*	R

N	*51/54*	• • *Selection of materials (organic luminescent materials C 09 K 11/06)*	R

ANNEX 40 **H 01 S** **[Project-Rapporteur : 423/DE]** **<SC05028E>**

5/32	• • – – – double- hetero-structures (5/34, 5/36 take precedence)
5/34	• • – – – lasers (GRINSCH-lasers) (5/36 takes precedence)

ANNEX 41 **H 05 B** **[Project-Rapporteur : 423/DE]** **<SC05029E>**

C	***33/00***	*– – – light emission H 01 L 27/15, 33/00; organic light emitting devices H 01 L 27/32, 51/50; lasers H 01 S 3/00, 5/00; compositions per se, see the – – –*	R

ANNEX 25

Session:	**IPC/WG**
Subclass:	**H 01 L**
Project(s):	**C 423**
Language:	**F**
Translator office:	**CH**
Translation source session:	**IPC/WG/4; IPC/WG/5**
Translation source annex filename:	**Annex 56; Annex 39**

Mod. type	IPC entry (interval)	Text or Instruction
C	*21/00*	*--- les groupes H 01 L 31/00 à 51/00, ou de leurs parties ---*
C	*21/02*	. *--- leurs parties constitutives*
C	*21/64*	. *--- par des méthodes non spécialement adaptées pour un seul type de dispositifs couverts par les groupes H01L 31/00 à 51/00*
	Note(s) après 23/00	- < = = par ledit groupe; - --- des groupes H 01 L 31/00 à 51/00, qui sont couverts ---
C	*25/03*	. *--- des groupes H 01 L 27/00 à 51/00, p.ex. ensembles ---*
C	*25/16*	. *--- des groupes principaux H 01 L 27/00 à 51/00, p.ex. circuit hybrides*
C	*25/18*	. *--- des groupes H 01 L 27/00 à 51/00*
C	*27/00*	*--- (procédés ou appareils spécialement adaptés à la fabrication --- leurs parties constitutives H 01 L 21/70, 31/00 à 51/00; détails 23/00, 29/00 à 51/00; ensembles consistant en ---*

C Note(s) après 27/00 (1) Dans le présent groupe, sauf indication contraire ---

27/02 . comprenant des composants semi-conducteurs spécialement adaptés pour le redressement, l'amplification, la génération d'oscillations ou la commutation et ayant au moins une barrière de potentiel ou une barrière de surface; comprenant des éléments ---

27/14 . --- au rayonnement corpusculaire, et spécialement adaptés, soit comme convertisseurs ---

27/15 . --- barrière de surface, spécialement adaptés pour l'émission de lumière

N *27/28* *. comprenant des composants qui utilisent des matériaux organiques comme partie active, ou qui utilisent comme partie active une combinaison de matériaux organiques et d'autres matériaux*

N *27/30* *. . avec des composants spécialement adaptés pour détecter les rayons infrarouges, la lumière, le rayonnement électromagnétique d'ondes plus courtes, ou le rayonnement corpusculaire; avec des composants spécialement adaptés, soit comme convertisseurs de l'énergie dudit rayonnement en énergie électrique, soit comme dispositifs de commande de l'énergie électrique par ledit rayonnement*

N *27/32* *. . avec des composants spécialement adaptés pour l'émission de lumière, p.ex. panneaux d'affichage plats utilisant des diodes émettrices de lumière organiques*

29/00 **Dispositifs à semi-conducteurs spécialement adaptés au redressement, à l'amplification, à la génération d'oscillations ou à la commutation et ayant au moins une barrière de potentiel ou une barrière de surface; Condensateurs ou résistances ayant** --- H01L 31/00 à 47/00, 51/05 ont priorité; ---

C *31/00* ***--- au rayonnement corpusculaire, et spécialement adaptés, soit comme convertisseurs --- Leurs détails*** *(51/42 a priorité; dispositifs* ---

31/12 ▪ --- ou de surface spécialement adaptés pour l'émission de lumière ---

31/18 ▪ --- leurs parties constitutives (pour la fabrication ou le traitement de dispositifs à semi-conducteurs ou de dispositifs à l'état solide, ou bien de leurs parties constitutives, en général 21/00)

C *33/00* *--- **barrière de surface, spécialement adaptés pour l'émission de lumière --- leurs parties constitutives; Détails** (51/50 a priorité; dispositifs consistant en une pluralité de composants formés dans ou sur un substrat commun 27/00; dispositifs de couplage ---*

35/00 <inchangé>

35/34 ▪ --- leurs parties constitutives (pour la fabrication ou le traitement de dispositifs à semi-conducteurs ou de dispositifs à l'état solide, ou bien de leurs parties constitutives, en général 21/00)

37/00 <inchangé>

39/00 <inchangé>

39/24 ▪ --- leurs parties constitutives (pour la fabrication ou le traitement de dispositifs à semi-conducteurs ou de dispositifs à l'état solide, ou bien de leurs parties constitutives, en général 21/00; séparation magnétique des ---

41/00 <inchangé>

41/22 ▪ --- leurs parties constitutives (pour la fabrication ou le traitement de dispositifs à semi-conducteurs ou de dispositifs à l'état solide, ou bien de leurs parties constitutives, en général 21/00)

43/12 ▪ Procédés ou appareils spécialement adaptés à la fabrication --- leurs parties constitutives (pour la fabrication ou le traitement de dispositifs à semi-conducteurs ou de dispositifs à l'état solide, ou bien de leurs parties constitutives, en général 21/00)

43/00 <inchangé>

45/00 **Dispositifs à l'état solide spécialement adaptés pour le redressement ---**

C ***49/00*** *--- H01L 27/00 à 47/00 et 51/00, et non couverts ---*

C ***51/00*** ***Dispositifs à l'état solide qui utilisent des matériaux organiques --- et d'autres matériaux; Procédés --- leurs parties constitutives*** *(Dispositifs thermo-électriques utilisant des compositions organiques 35/00, 37/00; Eléments piézo-électriques, électrostrictifs ou magnétostrictifs utilisant des compositions organiques 41/00; dispositifs consistant en une pluralité de composants formés dans ou sur un substrat commun 27/28)*

REM *> l'ordre des renvois semble étrange ; ne devrait-on pas mettre le dernier renvoi en premier ?*

*> VE « ther**rm**oelectric » à corriger*

N *51/05* . *spécialement adaptés au redressement, à l'amplification, à la génération d'oscillations ou à la commutation et ayant au moins une barrière de potentiel ou une barrière de surface; Condensateurs ou résistances à l'état solide, ayant au moins une barrière de potentiel ou une barrière de surface*

C *51/10* <ajouter un point>

D *51/20* *(transféré en 51/05, 51/42, 51/50)*

C *51/30* <ajouter un point>

C *51/40* . . *--- ou au traitement de tels dispositifs ou de leurs ---*

N *51/42* . *spécialement adaptés pour détecter les rayons infrarouges, la lumière, le rayonnement électromagnétique d'ondes plus courtes, ou le rayonnement corpusculaire; spécialement adaptés, soit comme convertisseurs de l'énergie dudit rayonnement en énergie électrique, soit comme dispositifs de commande de l'énergie électrique par ledit rayonnement*

N	*51/44*	*. . Détails des dispositifs*
N	*51/46*	*. . Emploi de matériaux spécifiés*
N	*51/48*	*. . Procédés ou appareils spécialement adaptés à la fabrication ou au traitement de tels dispositifs ou de leurs parties constitutives*
N	*51/50*	*. spécialement adaptés pour l'émission de lumière, p.ex. diodes émettrices de lumière organiques (OLED) ou dispositifs émetteurs de lumière à base de polymères (PLED) (lasers à semi-conducteurs organiques H 01 S 5/36)*
N	*51/52*	*. . Détails des dispositifs*
N	*51/54*	*. . Emploi de matériaux spécifiés (matériaux organiques luminescents C 09 K 11/06)*
N	*51/56*	*. . Procédés ou appareils spécialement adaptés à la fabrication ou au traitement de tels dispositifs ou de leurs parties constitutives*

Session:	**IPC/WG**
Subclass:	**H 01 S**
Project(s):	**C 423**
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Translation source annex filename:	**Annex 57 ; Annex 40**

Mod. type	IPC entry (interval)	Text or Instruction
	5/32	. . --- ou doubles hétérostructures (5/34, 5/36 ont priorité)
	5/34	. . --- progressif (lasers GRINSCH) (5/36 a priorité)
N	*5/36*	. . *comportant des matériaux organiques (lasers à colorant 3/213)*

Session:	**IPC/WG**
Subclass:	**H 05 B**
Project(s):	**C 423**
Language:	**F**
Translator office:	**CH**
Translation source session:	**IPC/WG/4; IPC/WG/5**
Translation source annex filename:	**Annex 58 ; Annex 41**

Mod. type	IPC entry (interval)	Text or Instruction
C	***33/00***	*--- de lumière H01L 27/15, 33/00; dispositifs émetteurs de lumière organiques H 01 L 27/32, 51/50; lasers H 01 S 3/00, 5/00; compositions en soi ---*