

**IPC DEFINITION PROJECT FILES/
DOSSIERS DE PROJET DE DÉFINITION DE LA CIB**

**MECHANICAL FIELD/
DOMAINE DE LA MÉCANIQUE**



IPC/D 015/00

ORIGINAL: English/French

DATE: September 26, 2002

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 DEFINITION PROJECT FILE/DOSSIER DE PROJET DE DÉFINITION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	GB	IPC AREA: DOMAINE DE LA CIB :	B 60 T

ANNEX/ ANNEXE	CONTENT/CONTENU	ORIGIN/ ORIGINE	DATE
1	Proposal / Proposition	GB	12.01
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RAPPORTEUR : GB

TECHNICAL FIELD/DOMAINE TECHNIQUE :

M

UK Patent and Trademark Office	Rapporteur Report
Definition Project D015 – B60T	Date: Thursday, 15 November 2001

Introduction

B60T is an active subclass, parts of which relate to very complex subject matter. Parts relating to the most complex and active subject matter are currently being revised. GB submitted a proposal for subclass definitions in August 2001.

Comments

Comments were received from US and SE.

SE

SE think that the title of B60T does not clearly cover main groups 1/00 to 5/00 and propose an amended title.

SE also think that the definition statement should correspond more with the wording of the main groups.

Se don't think the relationship between large subject matter areas is necessary.

They also propose changes and additions to the limiting and informative references.

US

US think that the definition statement doesn't cover 1/00 to 5/00

US want to have explicit definition statements for brake control in general and for vehicle brake control

US don't want the subclass symbol referred to in the definition.

US would like a clear distinction between B60T 1/00 to 5/00 and F16D 49/00 to 66/00.

The Guide Heading before 7/00 as a special rule is not proper.

Rapporteur's opinion

Groups 1/00 to 5/00

It is indeed correct that Groups 1/00 to 5/00 don't fit well under the title of B60T. Rapporteur tried to reflect this in the third paragraph of the Definition Statement in the proposal. Rapporteur agrees that the title of B60T should really be amended in this respect but this is probably best done in the body of the IPC and the definition changed accordingly. Amendment to the title should be flagged for attention of the Revision Working Group.

Definition statement

The question of vehicle brake systems being specifically and separately, mentioned is difficult as the only main group clearly limited to vehicles is 5/00, one of those flagged for attention above.

SE would like the definition statement to follow more closely the wording of the main groups but Rapporteur wonders whether this is not going against one of the basic ideas behind the definitions in providing different wording to help the classifier/searcher. Rapporteur feels that use of different wording is especially valuable in relation to this subclass, particularly in relation to control which is the most important part of this subclass. Rapporteur believes this is a fundamental point which should be discussed by the Revision and Reform Working Groups, so has not altered the proposal in this respect for the moment.

Rapporteur does not understand why subclass codes should not be used as they make the definitions clearer.

Relationships between large subject matter areas

The relationships between large subject matter areas is necessary, in Rapporteur's view, as the distinction between parts of brakes and their controls is often very difficult and the two areas of subject matter obviously share great affinity. Any guidance here is helpful.

A clear distinction between B60T 1/00 to 5/00 and F16D 49/00 to 66/00 is clearly desirable but Rapporteur wonders whether the above-mentioned consideration by the Revision Working Group may not conclude that 1/00 to 5/00 should not be in B60T at all. An all-embracing distinction on a subclass level would be difficult to write as the subject matter is so disparate.

References

Rapporteur sympathises with SE in proposing B60K as a limiting reference as opposed to the informative reference proposed by Rapporteur. Whether in practice this reference would be informative or limiting is a matter of some complexity, as classification is possible in both B60T and B60K if brake control is of interest on its

own. Perhaps it would be possible to have B60K referred to in both the informative and the limiting fields.

Rapporteur cannot, however, see the point of simply referring to the wording of B60K 41/00 here as the definition must give the user additional guidance to this complex question.

Apart from B60K, the various references proposed by SE seem desirable and have therefore been included in the modified proposal, but Rapporteur thinks the wording may ultimately need expansion to avoid merely repeating the wording of existing references.

Special Rules

Are Guide Headings special rules suitable for this field? Rapporteur thinks they can be, but also thinks that B60T illustrates that they can be misused in the present IPC. Whilst Rapporteur does not agree with US that the Guide Heading is superfluous due to the Subclass Index, it appears desirable to delete the Guide Heading and modify the wording of groups if necessary. Reference to the Guide Heading has therefore been deleted from the proposal. This is perhaps another matter that should be flagged up for the Revision Working Group to consider.

Synonyms

Rapporteur attempted to structure the list according to those terms to do with ABS, then those to do with traction control, and then others. It may be that SE comment about mixing up of these terms show how loosely the terms are used in this art, rather than a lack of structure.

Jim Calvert

IPC DEFINITION FOR SUBCLASS B60T

DEFINITION FORMAT	DESCRIPTION
1. Title	<p>Vehicle Brake Control Systems or Parts Thereof</p> <p>Brake control systems or Parts Thereof in General</p>
2. Definition Statement	<p>B60T primarily relates to how variables which affect the extent or duration of a braking event are processed. The variables are often electronic signals representing vehicle data but can also be hydraulic or pneumatic signals.</p> <p>The subclass also however includes ancillary functions which are closely associated with how those variables are affected, e.g. cooling brakes</p> <p>B60T also includes parts of the brake control system, particularly details of how a command is transmitted from an initiating means, such as a master cylinder, to the ultimate brake actuator.</p> <p>The subclass also includes arrangements of braking elements, portable devices for preventing unwanted movement of vehicles, e.g. chocks</p>
3. Relationships Between Large Subject Matter Areas (e.g., Subclasses)	<p>Brakes themselves, i.e. the devices where the braking effect actually occurs, and actuators directly acting on those devices, are classified in F16D.</p>
4. Limiting References	<p>Brakes per se, i.e. devices where the braking effect occurs, including ultimate brake actuators, F16D</p> <p>Brakes or other retarding apparatus peculiar to rail vehicles B61H, B61K</p> <p>Electrodynamic brake systems and control thereof for vehicles, and in general, B60L</p> <p>Conjoint control of brakes and other drive units of vehicles, such as engine, gearing or clutch B60K</p> <p>Arrangement of brakes on rail vehicles B61H</p>

	<p>Arrangement of brakes on cycles B62L</p> <p>Arrangement of brakes on aircraft B64C 25/42</p>
5. Informative References	<p>Conjoint control of brakes and other drive units such as engine, gearing or clutch is classified in B60K. This may be particularly significant when traction control systems operating on more than just brakes are being classified.</p> <p>Attention is also drawn to the following places:</p> <p>B61H Brakes specially adapted for rail vehicles</p> <p>B61K 7/00 Railway stops, track brakes or retarding apparatus, fixed to permanent way</p> <p>B62L Brakes specially adapted for cycles</p> <p>B64C 25/42 Brakes specially adapted for aircraft</p> <p>F16D Brakes per se, i.e. devices where the braking effect actually occurs; Actuators directly acting on those devices</p>
6. Special Rules of Classification	<p>In 8/00 when the subject matter to be classified is characterised by both electronic and non-electronic aspects it should be classified both in subgroups of 8/17 and 8/18.</p>
7. Glossary of Terms	<p>B60T includes means for providing power assistance to the braking effort and these devices are commonly called boosters.</p>
8. Synonyms and Keywords	<p>Antilock, anti-lock, anti-skid, antiskid, ABS, wheel slip, wheel-slip,</p> <p>Wheel spin, wheel-spin, traction control, ASR</p> <p>Electronic Brake Assist (EBA)</p>

United States Patent and Trademark Office

Project: D015

Subclass – B60T

Date: January 17, 2002

US Comments On GB's Modified Definition for B60T

1. US agrees with Rapporteur that the definition statement **should not follow** the wording of the main groups more closely as suggested by SE. We agree with Rapporteur that this is going against one of the fundamental ideas behind creating definitions. This idea is that a definition **is** a restatement of concepts found in the titles using less concise alternative phraseology to help classifiers and searchers to more completely understand the concepts covered. US concurs with Rapporteur's belief that the use of different wording is especially valuable in relation to B60T and particularly in relation to brake controls which are the most important part of the subclass. US supports discussion of this fundamental point by the Revision and Reform Working Groups, but firmly believes this issue was previously agreed to by the Reform WG and needs only clarification to some Offices.
2. US continues to believe that explicit statements in the subclass definition statement are necessary to cover all of the concepts specified in the subclass title and main group titles. The proposed modified subclass definition statement is an improvement, but it still does not clearly cover all of the subject matter appropriate for subclass B60T.
3. In our opinion, Rapporteur is mistaken when he states that "the question of **vehicle** brake systems being specifically and separately mentioned *in the subclass definition* is difficult as the only main group clearly limited to vehicles is 5/00". US believes that main groups 3/00 (i.e., of vehicles) and 8/00 (i.e., vehicular) are also limited **solely** to use with vehicles. US suggest that the scope should be further clarified by incorporating a portion of the Note that follows class B60 into the definition for subclass B60T. This would alert searchers that the subject matter of subclass B60T is related to use primarily with "vehicles". It would also clarify exactly what the term "vehicles" means (e.g., group 3/00, group 5/00, group 8/00) and what the terms of groups related to vehicle parts mean (e.g., group 1/02, group 1/12, group 7/16) when used in the context of this subclass. We suggest the following note after the definition statement:

(1) Note - In this subclass the term 'vehicles' encompasses both (a) roadway vehicles (e.g., automobiles, highway trailers) and other vehicles (e.g., farm or yard trailers) except for railway vehicles, waterborne vessels, aircraft, space vehicles, hand carts, cycles, animal-drawn vehicles, and sledges; and (b) railway vehicles, waterborne vessels, aircraft, space vehicles, hand carts, cycles, animal-drawn

vehicles, sledges, roadway vehicles, and other vehicles when their brake control systems may be used by more than two distinct categories of these vehicles (e.g., railway vehicles and roadway vehicles).

4. Furthermore, we suggest adding to the definition statement the clause

“This subclass covers apparatus to actuate, regulate, monitor, or transmit variables to (i.e., the control system or its parts) a means for slowing, retarding, preventing, or stopping (i.e., the braking event) either normal or unwanted movement of vehicles.”

In US’s opinion this subject matter in particular must be explicitly covered separately in the definition statement from ‘brake control systems in general’, since its ‘parts thereof’ portion in the subclass title is intended to be more expansive in scope than the ‘parts thereof’ portion associated with the ‘brake control systems in general’ portion of the title. We also suggest modifying Rapporteur’s last proposed clause to

“Additionally this subclass covers means per se for slowing, retarding, preventing or stopping the normal or unwanted movement of vehicles (e.g., arrangements of braking elements) and portable devices for preventing unwanted movement of vehicles (e.g. chocks).”

This type of subject matter is not covered by the ‘in general’ clause of the title.

5. Moreover, US believes that the following statement, that was derived from section (g) of the Note that follows class B60, should also be added to the end of the ‘definition statement’ section to clarify this addition to the normal scope of the term ‘vehicles’:

“Furthermore, this subclass includes railway vehicle power-brake systems and some other features of railway vehicle brake systems.”

6. It is still our opinion that the subclass’ code should not be used in the body of the definition statement. We suggest instead the use of ‘this subclass’ or ‘the subclass’. To use the code in this situation is confusing since this portion of the definition is **limited** to only the subject matter covered by subclass B60T. For example, this type usage in American is similar to Jim Calvert asking his wife at breakfast while alone together “would you please pass Jim Calvert the butter” and not stating instead “would you pass me the butter”. In other words its usage is technically correct, but it confuses the user and sounds odd.

Projet IPC / D 015
Sous-classe **B60T**

Observations sur la proposition du rapporteur (annexe 5)

1. Titre

Le titre existant de la sous-classe est un peu différent dans la version anglaise et la version française

Si la version anglaise ne couvre pas complètement le contenu de la sous classe, la version française est un peu plus large.

Nous proposons comme nouvelle version :

Freinage ou commande de frein pour véhicules. Commande ou éléments de commande de frein en général.

Braking or vehicles brake control. Brake control or parts thereof in general.

2. Définition de la sous-classe

Nous sommes d'accord avec la proposition du rapporteur (annexe 5) à laquelle nous proposons d'ajouter le contenu de la note (g) qui suit le titre de la classe B60

3. Liens entre secteurs d'une large portée par exemple sous-classes

Nous sommes d'accord avec la proposition du rapporteur (annexe 5)

4. Renvois de limitation

Il n'y a pas lieu de reprendre le lien avec F16D déjà cité au paragraphe (3)

Nous proposons d'ajouter :

H02K 49/00 freins dynamo-électriques

5. Renvois indicatifs

Nous sommes d'accord avec le premier paragraphe de la proposition du rapporteur (annexe 5) nous nous demandons si il y a lieu de reprendre des indications qui sont déjà dans le paragraphe (4)

6. Règles particulières de classement

Nous sommes d'accord avec la proposition du rapporteur (annexe 5)

7. Glossaire

Nous sommes d'accord avec la proposition du rapporteur (annexe 5)

8. Synonymes et mots clés

Nous sommes d'accord avec la proposition du rapporteur (annexe 5)

Ajouter : anti-blocking

**OFICIUL DE STAT PANTRU
INVENTII SI MARCI**

RO. COMMENTS

Date: April 2002

Project : D015

Area: B60T

In general lines we sustain the UK Office proposal.

We consider that B60T would cover only brake control systems or parts thereof which are parts of the vehicles.

We agree with the Rapporteur proposal regarding the **Relationship** section.

In our opinion the reference to B60L, Electrodynamic brake....., it is an limiting reference.

Maybe it is necessary to add a reference to H02K.

Would be taken into account references to B61H, K, B62L, B64C AND F16D as informative references.

We agree with the proposed **Special rules**, **Glossary** and **Synonyms** sections.

N. MURARUS

Project: D.015 Subclass: B60T

EP supports the inclusion of note (g) after class title B60 into the definition field of B60T as proposed by FR and US.

EP would like to draw the attention on the title of E01F15/00 and suggests comparing it with the second definition proposed in page 2; paragraph 4 of A.6 ("Additionally...").

If there is a need for the definition of "a vehicle" here, EP suggests repeating the one given in the first lines of the note after class title B60.

We support the rapporteur's proposal (A5).

A.Narminio

UK Patent Office	Rapporteur Report
Definition Project D015 B B60T	Date: 12 September 2002

Introduction

B60T is an active subclass, parts of which relate to very complex subject matter. Parts relating to the most complex and active subject matter are currently being revised. GB submitted a proposal for subclass definitions in August 2001.

A Rapporteur Report appeared as Annex 5, followed by comments from US, FR, RO and EP (Annexes 6-9).

Comments

US refer to a previous SE suggestion that the definition statement could follow more closely the wording of the main groups, but US agrees with the Rapporteur that this is going against one of the basic ideas behind the definitions in providing different wording to help the classifier/searcher. US feels that use of different wording is especially valuable in relation to this subclass, particularly in relation to control which is the most important part of this subclass.

US also think that the definition statement doesn't cover all subject matter appropriate to the subclass (which presumably means 1/00 to 5/00, a point they made earlier). They also make various suggestions for a definition of the term *Avehicle@*, as well as suggesting some of the Notes following the B60 class title, including adding note (g) therefrom. They don't want a change in the title, and don't want the subclass symbol referred to in the definition.

FR suggest an amendment to the title, agree with US about adding Note (g) following the B60 class title, suggest not repeating any of the limiting references in the informative references area, want H02K 49/00 added as a reference, and suggest adding *Aanti-blocking@* to the glossary.

RO want no change in the title, suggest that B60L is a limiting reference, and agree with FR that a reference to H02K is desirable.

EP suggest adding Note (g) as above, mention E01F 15/00 as a possible reference, and want a definition of the word *Avehicle@* as in the Notes under the B60 class title.

Rapporteur's opinion and proposals

Title

Three Offices want no change, only one Office suggest a change. No change has been made.

Definition statement

Regarding groups 1/00 to 5/00, Rapporteur notes that 1/00 to 5/00 don't fit well under the title of B60T, but Rapporteur has reflected these groups in the Definition Statement in the proposal. Rapporteur agrees that the title of B60T should really be amended in this respect but this is probably best done in the body of the IPC and the definition changed accordingly (nothing was done in this area in respect of IPC Revision Project C355).

Regarding a definition of the term *Vehicle*, Rapporteur has inserted a definition in line with the Notes following the B60 class title, as suggested by EP. Rapporteur has also deleted the subclass code B60T from the definition statement, as suggested by US, and will avoid making the verbal solecism pointed out by US when having a meal at home!

References

A reference to H02K 49/00 has been introduced, as suggested by RO and FR, and to E01F 15/00 as suggested by EP. Rapporteur has taken on board FR's suggestion that limiting references should not be repeated in the as informative references section, and has made the necessary changes.

It is not entirely clear to Rapporteur, however, what the difference is between *electrodynamic brake systems for vehicles* as in B60L 7/00, and *dynamo-electric brakes* as in H02K 49/00; this may be an IPC revision or maintenance problem and should be dealt with in the body of the IPC first.

Synonyms

An addition to the synonyms has been made in line with FR's suggestion.

Rapporteur's proposal is made concurrently.

Martin Price

Title - B60T

Vehicle brake control systems or parts thereof
Brake control systems or parts thereof in general

Definition statement

This subclass covers:

This subclass primarily relates to how variables which affect the extent or duration of a braking event are processed. The variables are often electronic signals representing vehicle data but can also be hydraulic or pneumatic signals.

The subclass also includes ancillary functions which are closely associated with how those variables are affected, e.g. cooling brakes.

The subclass also includes parts of the brake control system, particularly details of how a command is transmitted from an initiating means, such as a master cylinder, to the ultimate brake actuator.

The subclass also includes means for slowing, retarding, preventing or stopping the normal or unwanted movement of vehicles, e.g. arrangements of braking elements, and portable devices for preventing unwanted movement of vehicles, e.g. chocks.

This subclass includes brake control systems of general applicability, and in this respect it is not limited to vehicles. It also includes rail-vehicle power-brake systems and some other features of rail-vehicle brake systems.

Notes (1) In this subclass, the term “vehicle” means all vehicles except those restricted to one of the following types of vehicles: rail vehicles, waterborne vessels, aircraft, space vehicles, hand carts, cycles, animal-drawn vehicles, and sledges, which are covered by the relevant subclasses of B61 to B64.

(2) The term “vehicle” also includes (i) vehicular characteristics which are common to more than one of the above-listed types, and (ii) certain characteristics restricted to automobiles, road or cross-country trailers.

Relationship between large subject matter areas

Brakes themselves, i.e. the devices where the braking effect actually occurs, and actuators directly acting on those devices, are classified in [F16D](#).

Limiting references

This subclass does not cover:

Brakes per se, i.e. devices where the braking effect occurs, including ultimate [F16D](#)

brake actuators	
Brakes or other retarding apparatus peculiar to rail vehicles	B61H
	B61K
Electrodynamic brake systems and control thereof for vehicles, and in general	B60L
Conjoint control of brakes and other drive units of vehicles, such as engine, gearing or clutch (this may be particularly significant when traction control systems operating on more than just brakes are being classified)	B60K
Arrangement of brakes on rail vehicles	B61H
Arrangement of brakes on cycles	B62L
Arrangement of brakes on aircraft	B64C 25/42
Dynamo-electric brakes	H02K 49/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Railway stops, track brakes or retarding apparatus, fixed to permanent way	B61K 7/00
Safety arrangements on roads for slowing, redirecting or stopping errant vehicles, e.g. guard posts, bollards	E01F 15/00

Special rules of classification

In 8/00 when the subject matter to be classified is characterised by both electronic and non-electronic aspects it should be classified both in subgroups of 8/17 and 8/18.

Glossary

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

boosters means for providing power assistance to the braking effort

Synonyms and Keywords

Antilock, anti-lock, anti-skid, antiskid, anti-blocking, ABS
Wheel slip, wheel-slip, wheel spin, wheel-spin, traction control, ASR
Electronic Brake Assist (EBA)

Projet IPC / D 015
Sous-classe B 60 T

Les Offices SE et US (annexes 2 et 3) ont signalé que le titre de la sous-classe ne reflète pas correctement le contenu de la sous classe.

De plus l'office FR (annexe 7) a signalé que les versions anglaise et française du titre ne sont pas identiques.

Il semble que si la version anglaise ne couvre pas complètement le contenu de la sous classe, la version française est , elle, un peu plus large.

Les projets de définitions sont une occasion de soulever ces problèmes : peut-on y remédier dans le cadre de projet de définitions ou faut il passer par un nouveau projet?



IPC/D 018/00
ORIGINAL: English/French
DATE: October 17, 2002

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 DEFINITION PROJECT FILE/DOSSIER DE PROJET DE DÉFINITION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	EP	IPC AREA: DOMAINE DE LA CIB :	F 04 C
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ANNEX/ ANNEXE	CONTENT/CONTENU	ORIGIN/ ORIGINE	DATE
1	Proposal / Proposition	EP	12.01
2	Proposal / Proposition	EP	12.01
3	Comments / Observations	JP	12.01
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7	Comments / Observations	US	01.02
8	Comments / Observations	RO	02.02
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11	Rapporteur proposal / Proposition du rapporteur	EP	03.02
12	Proposal / Proposition	EP	04.02
13	Rapporteur proposal / Proposition du rapporteur	EP	09.02
14	Comments / Observations	DE	10.02
15	Comments / Observations	JP	10.02
16	Rapporteur report / Rapport du rapporteur	EP	10.02

RAPPORTEUR : EP TECHNICAL FIELD/DOMAINE TECHNIQUE : M

ANNEX/ ANNEXE	CONTENT/CONTENU	ORIGIN/ ORIGINE	DATE
17	Rapporteur proposal / Proposition du rapporteur	EP	10.02

Title - F04C

Rotary-piston, or oscillating-piston, positive-displacement machines for liquids;

Rotary-piston, or oscillating-piston, positive-displacement pumps

Definition statement

This subclass covers:

a) Pumps with rotary or oscillating pistons for a liquid, for elastic fluid or the combination of liquid and elastic fluid.

b) Positive displacement machines with rotary or oscillating pistons for liquid.

This subclass in essence covers the genus of pumping apparatus and by extension also covers the subgenus of structurally similar liquid operated "machines". Two different types of subject matter, one having a more general character than the other, are thus covered by the same subclass.

Relationship between large subject matter areas

Subclass F01C in its part dealing with "rotary piston or oscillating-piston machines for liquid and elastic fluid or elastic fluid" should be considered as being the general subclass in relationship to subclass F04C for machines.

Subject matter like cyclically operating valves, lubricating or cooling are classified in subclasses F01L, F01M, F01P irrespective of their stated application, unless their classifying features are peculiar to their application, in which case they are classified only in the relevant subclass of F04C. The subclasses F01L, F01M, F01P do not cover pump or machine features per se.

Limiting references

This subclass does not cover:

Rotary-piston or oscillating piston machines for elastic fluids and for liquids and elastic fluids	F01C
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Positive-displacement engines driven by liquids	F03C
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Positive displacement machines for liquids, or pumps in which the working-fluid is displaced by one or more reciprocating pistons or by flexible working	F04B
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members

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cyclically operating valves for machines or engines	F01L
Lubrication of machines or engines in general	F01M
Gas-flow silencer or exhaust apparatus for machines or engines in general	F01N
Cooling of machines or engines in general	F01P
Rotary fluid gearing using pumps and motors of the volumetric type for conveying rotary motion	F16H
Sealing in general	F16J
Means for thermal insulation in general	F16L

Glossary

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

- pump** means a device for continuously raising, forcing, compressing, or exhausting fluid by mechanical or other means
- machine** means a device that could equally be both an engine and a pump or it separately could cover each an engine or a pump
- positive displacement** means the way the energy of a working fluid is transformed into mechanical energy, in which variations of volume created by the working fluid in a working chamber produce equivalent displacements of the mechanical member transmitting the energy, the dynamic effect of the fluid being of minor importance, and vice versa
- oscillating piston machine** means a positive-displacement machine in which a fluid-engaging work-transmitting member oscillates
- rotary piston machine** means a positive-displacement machine in which a liquid-engaging work-transmitting member rotates about a fixed axis or about an axis moving along a circular or similar orbit
- rotary piston** means the work-transmitting member of a rotary-piston machine or pump and may be of any suitable form, e.g., like a toothed gear
- cooperating members** means the "oscillating piston" or "rotary piston" and another member, e.g., the working-chamber wall, which assists in the pumping action or machine's action

movement of the cooperating members is to be interpreted as relative, so that one of the "cooperating members" may be stationary, even though reference may be made to its rotational axis, or both may move

teeth or tooth equivalents include lobes, projections or abutments

internal axis type means that the rotational axes of the inner and outer co-operating members remain at all times within the outer member, e.g., in a similar manner to that of a pinion meshing with the internal teeth of a ring gear

working fluid means the driven fluid in a pump or driving or driven liquid in a machine. In the former case, it is possible for the working fluid to be in a gaseous state, i.e., compressible, a liquid state, or in a coexistence of the two states

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: F04C
	Date : 30.09.2002
DE - Comments — D018	

We would like to submit the following comment with regard to the last rapporteur report (annex 13):

Definition Statement:

In sentence a) and b) we would like to cancel the word “oscillating” because in our opinion this subject matter is covered by the subclass F04B (see “limiting references”, F04B).

We would like to add “c) fluid ring pumps” because this subject matter is not covered by the definition statements a) and b).

We think that the last sentence in this paragraph (“This subclass in essence ...”) does not give a real help to the reader, possibly confuses him, specially in finding the difference between the subclasses F04C and F01C (see limiting references F01C). Therefore we would prefer to cancel this sentence.

Relationship between large subject matter areas:

In the first sentence of this paragraph we would prefer for clarification the wording “... should be considered as being the *more* general subclass in relationship to subclass F04C.” The words “for machines” are canceled to place no particular emphasize on this aspect.

Further we would like to add the following relationships:

“Hydraulic and pneumatic systems are covered by class F15” - because in most cases compressors or pumps are part of hydraulic or pneumatic systems.

Limiting references:

We would like to add the following reference:

“Charging in combustion engines F02B 33/34 and F02B 53/08”

Informative references:

We would like to add the following reference:

“ Refrigeration machines, plants, or systems F25B”

U. Rödiger

Japan Patent Office

October 9, 2002

Project: D018

Subclass:F04C

**JP Comments on DE Comments Dated September 30, 2002
& Rapporteur Report (Annex 13) Dated September 12, 2002**

Definition Statement (DE)

- JP does not support the proposed deletion of the term “oscillating” since “oscillating piston” is different concept from the “reciprocating piston” and also included in the title of F04C.
- Proposed wording “c) fluid ring pumps” should not be added because “fluid ring pumps” is “rotary-piston pump” according to the wording “Rotary-piston pumps with fluid ring” of F04C7/00 (19/00).
- We prefer to delete the last paragraph beginning with “This subclass in essence...” since definitions a) and b) sufficiently describe the subject matter covered by F04C. As DE stated, this paragraph may confuse users.

Relationship between large subject matter areas (DE)

- As it is stated in the very last note after the subsection title “engines or pumps” of section F in IPC7, which says “... - For the same kind of apparatus in a given genus, the characteristic of ‘working fluid’ associates: ...F01C and F04C: Machines...,” F01C and F04C have a relation to machines, and the wording “for machines” should not be deleted but rather stressed.
- We agree with the additional description about the relationship with class F15.

Limiting references (DE)

Reference from F04C to F02B33/34 and F02B53/08 is general one from a function-oriented place to an application classification place and the proposed “Charging in combustion engines F02B 33/34 and F02B 53/08” should not be added here. If necessary, this should be moved to informative reference part.

Informative references (DE)

We agree with the additional reference to subclass F25B.

Rapporteur Report (Annex 13)

Discrepancies of terms scattering across the report should be modified, e.g. “liquids” and “liquid” or “fluids” and “fluid.” It is not preferable that “a liquid” and “liquid” are applied in “Definition Statement” while “liquids” in “Title.”

Project: D018/00 Subclass: F04C

Comments have been received from DE and JP.

Definition Statement:

DE would like to delete the word "oscillating" from the Definition Statement because they believe that this subject matter is covered by subclass F04B. JPO argues against pointing out that the oscillating piston concept which is included in F04C is different from the reciprocating piston concept which is classified in F04B. RR agrees to these arguments and refers to the Guide of subsections F01 to F04 before F01B. RR will further add a description of F04B to the "Relationship part" to clarify the special relation to subclass F04B.

DE proposes to add "fluid ring pumps" to the Definition Statement because this subject is not covered in the section a) and b). JPO points out that the "fluid ring pumps are a special form of rotary-piston pumps according to the wording of the pertinent group title: 19/00 "Rotary piston pumps with fluid ring or the like" and thus covered by section a).

DE and JPO both prefer to delete the last paragraph of the Definition Statement. RR agrees that this part possibly confuses the reader more than it gives help to him.

Relationship between large subject matter areas:

DE wanted to remove the words "for machines" relating to subclass F04C not to emphasize this aspect. JPO argues strongly against because the relation to machines is an essential subject of F01C and F04C. RR agrees, refers again to the Guide of subsections F01 to F04 and will propose a more detailed wording for this relationship.

Both commenting offices propose to add an additional description about the relationship with class F15. RR will add this description.

Limiting references:

DE proposed an additional reference: "Charging in combustion engines F02B33/34 and F02B53/08". JPO argues that this reference points from a function related place to an application place and therefor should not be a limiting reference. RR agrees and will add the reference to the section of informative references.

Informative references:

DE would like to add a further reference: "Refrigeration machines, plants or systems F25B"
JPO and RR think that this addition is useful for the classifier.

JPO complains about the inconsistent use of singular and plural of the terms "fluid" and "liquid" in the definition. RR will correct that in the new definition proposal.

Title - F04C

Rotary-piston, or oscillating-piston, positive-displacement machines for liquids;

Rotary-piston, or oscillating-piston, positive-displacement pumps

Definition statement

This subclass covers:

- a) Pumps with rotary or oscillating pistons for liquids, for elastic fluids or the combination of liquid and elastic fluid.
- b) Positive displacement machines with rotary or oscillating pistons for liquids.

Relationship between large subject matter areas

Positive displacement machines with rotary or oscillating pistons for elastic fluids or for liquids and elastic fluids are classified in [F01C](#).

For the same kind of machine the working fluid is the classifying characteristic between the related subclasses [F01C](#) and [F04C](#).

[F04B](#) covers machines or pumps with reciprocating pistons or other kind of positive displacement mechanisms referring out rotary or oscillating piston type machines or pumps.

Subject matter like cyclically operating valves, lubricating or cooling are classified in subclasses [F01L](#), [F01M](#), [F01P](#) irrespective of their stated application, unless their classifying features are peculiar to their application, in which case they are classified only in the relevant subclass of [F04C](#). The subclasses [F01L](#), [F01M](#), [F01P](#) do not cover pump or machine features per se.

Class [F15](#) covers hydraulic or pneumatic systems in general.

Limiting references

This subclass does not cover:

Rotary-piston or oscillating piston machines for elastic fluids and for liquids and elastic fluids	F01C
Positive-displacement engines driven by liquids	F03C
Positive displacement machines for liquids, or pumps in which the working-fluid is displaced by one or more reciprocating pistons or by flexible working members	F04B

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cyclically operating valves for machines or engines	F01L
Lubrication of machines or engines in general	F01M
Gas-flow silencer or exhaust apparatus for machines or engines in general	F01N
Cooling of machines or engines in general	F01P
Combustion engines with pumps for charging	F02B33/34 F02B53/08
Rotary fluid gearing using pumps and motors of the volumetric type for conveying rotary motion	F16H
Sealing in general	F16J
Means for thermal insulation in general	F16L
Refrigeration machines, plants or systems	F25B

Glossary

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

- pump** means a device for continuously raising, forcing, compressing, or exhausting fluid by mechanical or other means
- machine** means a device that could equally be both an engine and a pump or it separately could cover each an engine or a pump
- positive displacement** means the way the energy of a working fluid is transformed into mechanical energy, in which variations of volume created by the working fluid in a working chamber produce equivalent displacements of the mechanical member transmitting the energy, the dynamic effect of the fluid being of minor importance, and vice versa
- oscillating piston machine** means a positive-displacement machine in which a fluid-engaging work-transmitting member oscillates
- rotary piston machine** means a positive-displacement machine in which a liquid-engaging work-transmitting member rotates about a fixed axis or about an axis moving along a circular or similar orbit
- rotary piston** means the work-transmitting member of a rotary-piston machine or pump and may be of any suitable form, e.g., like a toothed gear

cooperating members means the "oscillating piston" or "rotary piston" and another member, e.g., the working-chamber wall, which assists in the pumping action or machine's action

movement of the cooperating members is to be interpreted as relative, so that one of the "cooperating members" may be stationary, even though reference may be made to its rotational axis, or both may move

teeth or tooth equivalents include lobes, projections or abutments

internal axis type means that the rotational axes of the inner and outer co-operating members remain at all times within the outer member, e.g., in a similar manner to that of a pinion meshing with the internal teeth of a ring gear

working fluid means the driven fluid in a pump or driving or driven liquid in a machine. In the former case, it is possible for the working fluid to be in a gaseous state, i.e., compressible, a liquid state, or in a coexistence of the two states

EP/12-SEP-02 :We propose this project for adoption.

Heiko Wongel

JP/21-OCT-02 :JP approves the Rapporteur proposal of ANNEX 17.



IPC/D 030/01
ORIGINAL: English/French
DATE: October 14, 2002

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 DEFINITION PROJECT FILE/DOSSIER DE PROJET DE DÉFINITION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	EP	IPC AREA: DOMAINE DE LA CIB :	B 32 B
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ANNEX/ ANNEXE	CONTENT/CONTENU	ORIGIN/ ORIGINE	DATE
1	Proposal / Proposition	EP	12.01
2	Comments / Observations	CA	12.01
3	Comments / Observations	JP	12.01
4	Comments / Observations	RO	12.01
5	Comments / Observations	US	12.01
6	Rapporteur proposal / Proposition du rapporteur	EP	12.01
7	Comments / Observations	US	02.02
8	Comments / Observations	RO	03.02
9	Rapporteur proposal / Proposition du rapporteur	EP	03.02
10	Proposal / Proposition	EP	09.02
11	Comments / Observations	FR	09.02
12	Comments / Observations	DE	09.02
13	Comments / Observations	RO	09.02
14	Comments / Observations	GB	10.02

RAPPORTEUR : EP TECHNICAL FIELD/DOMAINE TECHNIQUE : M

Title – B32B

Layered products, i.e. products built-up of strata of flat or non-flat, e.g. cellular or honeycomb, form

Definition statement

This subclass covers:

- Layered products comprising different kinds of material
- Products similar to layered products but comprising only material in the form of a sheet or network embedded in a mass of plastics or of physically-similar substances which mass penetrates the said sheet or network and lies on both sides of the latter (e.g. so that the sheet or network reinforces the plastics substance) provided that the embedded sheet or network extends coherently or connectedly over substantially the whole area of the product; thus the embedded sheet or network may be a fabric or a series of rods connected by cross wires.
- Methods or apparatus for making layered products; Method or apparatus for treating layers or layered products either preliminary to or subsequent to their manufacture.

Relationship between large subject matter areas

The classification of layered products is provided for in many places, most of which are confined to a particular kind of material. However, in order that this subclass may provide a basis for making a complete search with respect to layered products, any similar layered products that specify relevant useful information are in this subclass even though it may also be classified in other classes.

However, this subclass does not cover:

- Processes or apparatus used in, or in connection with, the production or treatment of any product, if the process or apparatus is solely applicable to and fully classifiable in a single other class or subclass for processes or apparatus, e.g. by coating B05, C08J, C09J, C23, by moulding B29, by decorating B44D;
- Compositions or preparation or treatment thereof, unless they are essentially restricted to layered products and cannot be fully classified in another class without ignoring this restriction;

Limiting references

This subclass does not cover:

Etched metallic patterns on the surface of a printed circuit board

H05K1/00

Special rules of classification

In groups 1/00 to 33/00, at each level of indentation, in the absence of an indication to the contrary, classification is made in the first appropriate place.

In groups 9/00 to 29/00 a "specific substance" covers specified alternative substances if they are all covered by a single main group

Layered products are classified in groups 37/00 or 38/00 if not characterized by their structure or composition.

Glossary

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

adhesive:	substance applied in any state or in any manner, which is incorporated for the purpose of bonding
laminating:	action of combining previously unconnected layers to become one product whose layers will remain together
partial laminating	occurs when one layer does not fully cover a surface of another layer
layer:	sheet or strip or anything else having a small thickness relatively to its other dimensions which, together with at least one other layer, exists in a product, whether it pre-existed, e.g. as a separate sheet or strip, or was formed during the production of the layered product. It may or may not be homogeneous or cohesive; it may be an assembly of fibres or pieces of material. It may be discontinuous, e.g. in the form of a grating, honeycomb, or frame. It may or may not be in complete contact with the next layer, e.g. a corrugated layer against a flat layer
-layered product	material composed of strata (continuous, discontinuous, or with gaps) of any form (e.g., honeycomb, corrugated) secured together in any way. Normally of substantially uniform thickness overall (i.e., ignoring local variations such as are produced by a corrugated face layer); may be in the form of an article, e.g., a container. This term is of wider scope than "laminated", covering material with voids between or in any layer.
-filamentary layer	a layer of threads or filaments of any substance (e.g. wires) of more or less unlimited length placed in an orderly arrangement and secured together; it may be woven, knitted, braided, or netted, or formed of threads crossed or laid side and bonded together
-fibrous layer:	a random assembly of fibres or filaments, usually of limited length, e.g. felt, fleece; the fibres may or may not be interengaged or connected, e.g. by adhesive
-particulate layer	layer that is composed from numerous small separate particles, e.g. chips, finely chopped fibres, powder

film: formed by spreading a substance, it serves only as an adhesive or to finish a surface of a product.

Projet IPC / **D 030**
Sous-classe **B 32 B**

La définition de "layered product" est différente de celle figurant actuellement dans la CIB : peut être faut il se demander si la nouvelle définition convient.

Quelle est la nuance entre "strata" et "layer" en VE ? La VF semble ne pas faire cette différence.

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: B32B
	Date : 25.09.2002
DE - Comments — D030	

We support the last Rapporteur proposal in Annex 10.

U. Rödiger

**OFICIUL DE STAT PENTRU
INVENTII SI MARCI**

RO COMMENTS

Date: Sept.2002

Project: **D030**
Subclass: **B32B**

We relate our comments to the Annex 10.

The subclass definition statement does not cover **ALayered** products not specifying, or characterised by the material utilised (e.g. particular shaped products, non-planar products)@, mentioned in the previous annexes. We would like to have explained the reasons for deleting it.

We are also a little concerned with FR's remark about the terms **Astrata@** and **Alayer@**. Romanian language makes no difference between them. In the Glossary, **Alaminating@** is defined by means of the term **Alayer@**, while **Alayered product@** by means of the term **Astrata@**. On the other hand, the terms **Afilamentary layer@** and **Aparticulate layer@** are defined by means of **Alayer@** and not **Astrata@**.

About the term **Alayered product@**, we do not think it is the best to define a product as a material. If we try to take as concrete example subgroup **B32B 1/08 . Tubular products**, according to the classification these belong to **ALayered products essentially having a general shape other than plane@**. Can these tubular products be defined as materials composed of strata...?

We are also not very happy with the definition of the term **Afilm@**. Is it absolutely necessary, taking into account the provision of Note (3)?

Bucura Ionescu

UK Patent Office**Date: 4 October 2002**

Comments on Project D030 , Subclass B32B

We agree with the comments by FR and RO in Annexes 11 and 13, and have some comments of our own.

\$ ALayered product@

FR state that the definition of **ALayered product@** is inconsistent with that in the IPC itself. RO also have comments about the definition of **ALayered product@**.

The definition in the R proposal is the same as in paragraph 99 of the Guide (in response to US comments); this definition differs from the definition in Note (4) of the subclass - a clear inconsistency within the IPC. We feel that both those definitions should be merged, although the result would be rather long.

\$ Astrata@ vs Alayer@

FR and RO wonder why there is a difference between the words **Astrata@** and **Alayer@**. Incidentally RO appear to have misunderstood the FR comment since both comments appear to say the same thing.

Our opinion is that there appears to be no material difference in English, or in French, between these words. The word **Astrata@** (or more accurately its singular, **Astratum@**) has a definition more or less identical to that of **Alayer@** in the Oxford English Dictionary; it is also defined therein as **Aa layer@**. We think the Glossary should consistently use the word **Alayer@**, with perhaps an additional definition in the glossary to the effect that **Astrata/stratum@** means the same as **Alayer@**. See our proposal below.

\$ Definition statement

RO correctly state that the subclass definition statement omits mentioning **ALayered products** not specifying, or characterised by the material utilised@. US also make this point. Since this is the first statement in Note (1) in the IPC itself, it should be in the definition statement.

\$ AFilm@

RO are not happy with the definition of **AFilm@**. We think the definition in Note (3) of the subclass should be used instead, to emphasise that a film is not a layer. See our proposal.

\$ What to put into subclass definitions

There is still a debate going on about what to put into subclass definitions. Our view is that the definition should mirror what is in the IPC itself while possibly adding something extra that is useful to the user. More importantly nothing defined in the IPC should be taken away - that would confuse the user.

Proposal

Glossary

strata/stratum means the same as a layer.

film a film formed on a layer by spreading a substance thereon is not considered to constitute a layer itself if it serves only as an adhesive or its purpose is merely to finish a surface of a product.

Martin Price

EP/07-NOV-02 :It seems that the project is almost completed. The few issues to be clarified look like they can be solved in a coffee break during IPC/WG/8. Please indicate if you agree with this procedure.

