

EUROPEAN PATENT OFFICE  
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1673

DATE: JANUARY 1, 2025

PROJECT MP12349

**The following classification changes will be effected by this Notice of Changes:**

| <u>Action</u>         | <u>Subclass</u> | <u>Group(s)</u> |
|-----------------------|-----------------|-----------------|
| <b>SCHEME:</b>        |                 |                 |
| Titles Changed:       | F22G            | SUBCLASS        |
|                       | F22G            | 1/00, 1/165     |
|                       | F22G            | 3/00, 3/001     |
|                       | F22G            | 5/00, 5/12      |
| Warnings Deleted:     | F22G            | SUBCLASS        |
|                       |                 |                 |
| <b>DEFINITIONS:</b>   |                 |                 |
| Definitions New:      | F22G            | 1/14, 1/165     |
|                       | F22G            | 3/001           |
|                       | F22G            | 5/12            |
| Definitions Modified: | F22G            | SUBCLASS        |
|                       | F22G            | 3/00            |
|                       | F22G            | 5/00            |

**No other subclasses/groups are impacted by this Notice of Changes.**

**This Notice of Changes includes the following** *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES

- ☒ A. New, Modified or Deleted Group(s)
- ☒ B. New, Modified or Deleted Warning(s)
- ☐ C. New, Modified or Deleted Note(s)
- ☐ D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- ☒ A. New or Modified Definitions (Full definition template)
- ☐ B. Modified or Deleted Definitions (Definitions Quick Fix)

3. ☐ REVISION CONCORDANCE LIST (RCL)

4. ☐ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5. ☐ CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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## 1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

## SUBCLASS F22G - SUPERHEATING OF STEAM

| <u>Type*</u> | <u>Symbol</u> | <u>Indent Level</u><br><u>Number of dots</u><br><u>(e.g. 0, 1, 2)</u> | <u>Title</u><br>“CPC only” text should normally be<br>enclosed in {curly brackets}**            | <u>Transferred to<sup>#</sup></u> |
|--------------|---------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------|
| M            | F22G          | Subclass                                                              | SUPERHEATING OF STEAM                                                                           |                                   |
| M            | F22G1/00      | 0                                                                     | Steam superheating characterised by heating method                                              |                                   |
| M            | F22G1/165     | 2                                                                     | {by electricity}                                                                                |                                   |
| M            | F22G3/00      | 0                                                                     | Steam superheaters characterised by constructional features; Details or component parts thereof |                                   |
| M            | F22G3/001     | 1                                                                     | {Steam tube arrangements not dependent of location}                                             |                                   |
| M            | F22G5/00      | 0                                                                     | Controlling superheat temperature                                                               |                                   |
| M            | F22G5/12      | 1                                                                     | by attenuating the superheated steam, e.g. by injected water sprays                             |                                   |

\*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T = existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

## NOTES:

- \*\*No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required “anchor” symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- “Transferred to” column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the “Transferred to” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “<administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.

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- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or <administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“Transferred to”) symbol, however it is required to specify “<no transfer>” in the “Transferred to” column for such cases.
- For finalization projects, the deleted “F” symbols should have <no transfer> in the “Transferred to” column.
- For more details about the types of scheme change, see CPC Guide.

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B. New, Modified or Deleted Warning notice(s)

**SUBCLASS F22G - SUPERHEATING OF STEAM**

| <b><u>Type*</u></b> | <b><u>Location</u></b> | <b><u>Old Warning notice</u></b>                                                                                                      | <b><u>New/Modified Warning</u></b> |
|---------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| D                   | F22G                   | In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme. | Delete Entire Warning              |

\*N = new warning, M = modified warning, D = deleted warning

NOTE: The "Location" column only requires the symbol PRIOR to the location of the warning. No further directions such as "before" or "after" are required.

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## 2. A. DEFINITIONS (new)

**F22G 1/14**

### References

#### Informative references

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

|                                                                                                                                |                            |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Apparatus or devices using heat produced by exothermal chemical reactions other than by combustion, not otherwise provided for | <a href="#">F24V 30/00</a> |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------|

**F22G 1/165**

### References

#### Informative references

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

|                                                             |                           |
|-------------------------------------------------------------|---------------------------|
| Steam generation in boilers heated electrically, in general | <a href="#">F22B 1/28</a> |
|-------------------------------------------------------------|---------------------------|

**F22G 3/001**

### References

#### Informative References

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

|                                                                          |                           |
|--------------------------------------------------------------------------|---------------------------|
| Steam superheaters characterised by location, arrangement or disposition | <a href="#">F22G 7/00</a> |
|--------------------------------------------------------------------------|---------------------------|

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**F22G 5/12**

## **References**

### **Informative References**

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

|                                |                                                            |
|--------------------------------|------------------------------------------------------------|
| Mixing gases with liquids      | <a href="#">B01F 23/20</a>                                 |
| Flow mixers, e.g. spray-mixers | <a href="#">B01F 25/00</a> ,<br><a href="#">B01F 25/70</a> |

## 2. A. DEFINITIONS (modified)

### F22G

Replace: The existing Relationships text with the following updated text.

#### Relationships with other classification places

Methods of steam generation and steam boilers are classified in [F22B](#).

Economisers and all aspects concerning feed water supply and circulation of feed water in boilers are classified in [F22D](#).

Engine plants where engine aspects predominate are classified in [F01K](#).

Domestic central heating systems using steam are classified in [F24D](#).

Heat exchange or heat transfer in general is classified in [F28](#).

The generation of vapour in cores of nuclear reactors is classified in [G21](#).

#### References

Insert: The following three new references in the Informative references table.

#### Informative references

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

|                                                                                                                   |                            |
|-------------------------------------------------------------------------------------------------------------------|----------------------------|
| Steam-separating arrangement in boilers                                                                           | <a href="#">F22B 37/26</a> |
| Removing solid combustion residues from passages or chambers beyond the fire                                      | <a href="#">F23J 3/00</a>  |
| Cleaning of internal or external surfaces of heat-exchange or heat-transfer conduits, e.g. water tubes or boilers | <a href="#">F28G</a>       |

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Replace: The existing Glossary of terms table with the following updated table.

### **Glossary of terms**

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

|                    |                                                                                                                                      |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| desuperheater      | reduction of superheated steam temperature                                                                                           |
| attemperator       | reduction of superheated steam temperature by bringing superheated steam into direct contact with water or steam or mixtures thereof |
| steam conditioners | reduction of superheated steam to the needed temperature                                                                             |

### **F22G 3/00**

Insert: A comma after “Furthermore”, so that the updated Definition statement appears as follows.

### **Definition statement**

*This place covers:*

Constructional features and details of component parts of steam superheaters such as steam tube arrangements, superheater drain arrangements, steam tubes with steam flowing in opposite direction in one pipe, annular steam tubes, steam superheaters with heating tubes, headers and collectors of superheaters. Furthermore, arrangements for the protection of superheater elements and connecting or sealing of superheater tubes are covered.



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## References

Insert: The following new reference in the Informative references table.

## Informative references

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

|                                             |      |
|---------------------------------------------|------|
| General aspects of enclosed heat-exchangers | F28D |
|---------------------------------------------|------|

## F22G 5/00

Replace: The existing Definition statement text with the following updated text.

## Definition statement

*This place covers:*

Methods and devices for controlling superheat steam by regulating flue gas flow, by circulating flue gases, by displacing superheater sections, by attemperating the superheated steam (i.e. spraying water into steam), by indirectly cooling or heating the superheated steam in auxiliary enclosed heat-exchangers, by by-passing steam around superheater sections. Furthermore, applications of combustion-control devices and combined control procedures for controlling superheat temperature are covered.

Delete: The entire Relationships section.

## References

Insert: The following two new references in the Informative references table.

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**Informative references**

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

|                                   |                            |
|-----------------------------------|----------------------------|
| Control systems for steam boilers | <a href="#">F22B 35/00</a> |
| Control of temperature in general | <a href="#">G05D 23/00</a> |