

F23M

CASINGS, LININGS, WALLS OR DOORS SPECIALLY ADAPTED FOR COMBUSTION CHAMBERS, e.g. FIREBRIDGES; DEVICES FOR DEFLECTING AIR, FLAMES OR COMBUSTION PRODUCTS IN COMBUSTION CHAMBERS; SAFETY ARRANGEMENTS SPECIALLY ADAPTED FOR COMBUSTION APPARATUS; DETAILS OF COMBUSTION CHAMBERS, NOT OTHERWISE PROVIDED FOR

Definition statement

This place covers:

- Constructional details of combustion chambers, including accessories and peripheral devices such as for example lining, cooling, baffles for creating special flow path, doors, heat storage means independently of the type of the fuel which is burned.
- Safety measures.
- Noise reduction means.

References

Informative references

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

Construction or support of tube walls for steam boilers	F22B
Combustion chambers and related components specially adapted for generating combustion products of high pressure or high velocity	F23R
Details of heat-treatment chambers	F27D

Special rules of classification

When classifying in this subclass, add also codes [F23M 2900/05001-F23M 2900/13004](#).

Codes [F23M 2700/00-F23M 2700/008](#) are not used.

Glossary of terms

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

Air	a mixture of gases containing free oxygen and able to promote or support combustion
Primary air	air supplied to the burning fuel in order to liberate combustible gases
Secondary air	air supplied to the combustible gases liberated by the primary air in order to complete their combustion. The term "secondary air" covers "tertiary air" etc.
Ash	means any solid combustion residues, for example remaining in the fuel bed or suspended in the flue gases
Burner	a device by which fluid fuel or solid fuel suspended in air is passed to a combustion space where it burns to produce a self-supporting flame
Combustion	means the direct combination of oxygen gas, e.g. in air, and a burnable substance

Combustion chamber	a chamber in which fuel is burned to establish a self-supporting fire or flame and which surrounds that fire or flame
Combustion zone	the part of the apparatus where the reaction takes place between air and fuel
Firebridge	a low wall separating the fuel bed from adjacent flue gas passages in apparatus for combustion of solid fuel, for example in reverberatory furnaces or fire-tube boilers
Flue gases	any gaseous products of combustion
Grate	a perforated surface, e.g. a grid, which supports or delimits a bed of burning fuel and serves to supply primary air

Synonyms and Keywords

In patent documents, the following words/expressions are often used with the meaning indicated:

"boiler"	"combustion apparatus".
"burner"	"combustion apparatus".

F23M 3/00

Firebridges

References

Informative references

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

Firebridges modified for circulation of fluids, e.g. air, steam, water	F23M 3/02
Baffles not confining the fire	F23M 9/06

F23M 5/00

Casings; Linings; Walls

References

Informative references

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

Casings characterised by the shape of the bricks or blocks used	F23M 5/02
Support for linings	F23M 5/04
Ceramic materials	C04B 33/00 , C04B 35/00
Construction or support of tube walls for steam boilers	F22B
Casings, linings, or walls of heat-treatment chambers of ovens, kilns, or retorts	F27D

F23M 5/02

characterised by the shape of the bricks or blocks used

References

Informative references

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

Ceramic materials	C04B 33/00 , C04B 35/00
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F23M 7/00

Doors

References

Informative references

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

Doors in general	E06B
Doors for flues or smoke-boxes	F23J 13/08

F23M 9/00

Baffles or deflectors for air or combustion products (baffles or deflectors for air or combustion products structurally associated with burners [F23D](#)); Flame shields

References

Limiting references

This place does not cover:

Baffles or deflectors for air or combustion products structurally associated with burners	F23D
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Informative references

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

Interconnection of water-tubes in boilers for fluid flow	F22B 37/00
Controlling combustion using gas detectors	F23N 5/003
Safety arrangements obtained by means of controlling combustion	F23N 5/24
Alarm systems	G08B

F23M 9/10**Baffles or deflectors formed as tubes, e.g. in water-tube boilers****References****Informative references**

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

Interconnection of such tubes in boilers for fluid flow	F22
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F23M 11/00**Safety arrangements****References****Informative references**

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

Safety arrangement structurally associated with burners	F23D
Safety arrangements for liquid fuel feeding	F23K 5/16
Safety arrangement involving control of combustion	F23N 5/24
Safety arrangements structurally associated with igniters	F23Q

F23M 11/04**Means for supervising combustion, e.g. windows****References****Informative references**

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

Alarm systems in general	G08B
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F23M 2900/09062**Tube-shaped baffles confining the flame****References****Informative references**

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

Flame surrounding tubes in front of burner nozzle	F23D 2900/11403
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