

F27 FURNACES; KILNS; OVENS; RETORTS (specially adapted for a purpose covered by a single other class and specifically mentioned in that class, see the class in question, e.g. bakery ovens A21B, glass melting furnaces C03B, coke or gas-making apparatus C10B, C10J, apparatus for cracking hydrocarbons C10G, blast furnaces C21B, converters for making steel C21C, furnaces for heat treatment of metal C21D; furnaces for electroslag or arc remelting of metals C22B 9/00; enamelling ovens C23D; combustion apparatus F23; electric heating H05B) **[4]**

F27D DETAILS OR ACCESSORIES OF FURNACES, KILNS, OVENS, OR RETORTS, IN SO FAR AS THEY ARE OF KINDS OCCURRING IN MORE THAN ONE KIND OF FURNACE (combustion apparatus F23)

Attention is drawn to the references and Notes following the title of class F27 and Note (3) of section H.

CONSTRUCTIONAL FEATURES.....	1/00	ARRANGEMENTS OF ELECTRIC	
HANDLING AND SUPPORTING CHARGE.....	3/00, 5/00, 15/00	HEATING ELEMENTS.....	11/00
PREHEATING CHARGE; COOLING; USING		ARRANGEMENTS OF CONTROL AND	
WASTE HEAT OR GASES.....	13/00; 9/00, 15/02; 17/00	SAFETY DEVICES	19/00, 21/00
		OTHER FEATURES; OTHER DETAILS	7/00; 23/00

1/00 Casings; Linings; Walls; Roofs (refractory materials C04B; firebridges for combustion chambers F23M 3/00)	7/04	. Circulating atmospheres by mechanical means
1/02 . Crowns; Roofs	7/06	. Forming or maintaining special atmospheres or vacuum within heating chambers (F27D 7/02 takes precedence)
1/04 . characterised by the form of the bricks or blocks used		
1/06 . . Composite bricks or blocks	9/00 Cooling of furnaces or of charges therein (F27D 1/00, F27D 3/00 take precedence)	
1/08 . . . Bricks or blocks with internal reinforcement or metal backing	11/00 Arrangement of elements for electric heating in or on furnaces (electric heating <u>per se</u> H05B)	
1/10 . Monolithic linings; Supports therefor	11/02 . Ohmic resistance heating	
1/12 . incorporating cooling arrangements (constructions of tube assemblies in general F28)	11/04 . . with direct passage of current through the material being heated	
1/14 . Supports for linings (F27D 1/10 takes precedence)	11/06 . Induction heating, i.e. in which the material being heated, or its container or elements embodied therein, form the secondary of a transformer	
1/16 . Making or repairing linings	11/08 . Heating by electric discharge, e.g. arc discharge	
1/18 . Door frames; Doors, lids, removable covers	11/10 . . Disposition of electrodes (automatic control of temperature G05D 23/00; electric discharge apparatus H01T; arrangements for feeding or guiding electrodes H05B 7/10; automatic control of power by positioning of electrodes H05B 7/144) [3]	
3/00 Charging; Discharging; Manipulation of charge (conveying systems characterised by their application for specified purposes not otherwise provided for B65G 49/00; moving charge through a furnace F27B 9/14)	11/12 . with electromagnetic fields acting directly on the material being heated	
3/02 . Skids or tracks for heavy objects	13/00 Apparatus for preheating charges; Arrangements for preheating charges	
3/04 . Ram or pusher apparatus	15/00 Handling or treating discharged material; Supports or receiving chambers therefor	
3/06 . Charging or discharging machines on travelling carriages	15/02 . Cooling	
3/08 . Screw feeders; Screw dischargers	17/00 Arrangement for using waste heat (heat-exchangers <u>per se</u> F28); Arrangement for using, or disposing of, waste gases (removing fumes in general B08B 15/00)	
3/10 . Charging directly from hoppers or shoots	19/00 Arrangement of controlling devices	
3/12 . Travelling or movable supports or containers for the charge	21/00 Arrangement of monitoring devices; Arrangements of safety devices	
3/14 . Charging or discharging liquid or molten material	21/02 . Observation or illuminating devices	
3/15 . Tapping equipment; Equipment for removing slag	21/04 . Arrangements of indicators or alarms	
3/16 . Introducing a fluid jet or current into the charge (F27D 3/18 takes precedence) [3]		
3/18 . Charging particulate material using a fluid carrier [3]		
5/00 Supports, screens, or the like for the charge within the furnace (travelling or movable supports F27D 3/12)		
7/00 Forming, maintaining, or circulating atmospheres in heating chambers		
7/02 . Supplying steam, vapour, gases, or liquids		

F27D

- 23/00

Details or accessories not covered by any other group of this subclass
- 23/02

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Devices for removing incrustations
- 23/04

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Stirring devices for molten material (mixing in general B01F) **[3]**