SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING

F22 STEAM GENERATION

F22G **SUPERHEATING OF STEAM** (steam-separating arrangements in boilers F22B 37/26; removal of combustion products or residues, e.g. cleaning of the combustion contaminated surfaces of tubes of boilers, F23J 3/00)

1/00 **Steam superheating characterised by heating method** (exothermal chemical reactions not involving a supply of free oxygen gas, apparatus or devices for using the heat therefrom F24J) **[1, 2006.01]**

1/02 • with heat supply by hot flue gases from the furnace of the steam boiler **[1, 2006.01]**

1/04 • • by diverting flow or hot flue gases to separate superheaters operating in reheating cycle, e.g. for reheating steam between a high-pressure turbine stage and an intermediate turbine stage **[1, 2006.01]**

1/06 • with heat supply predominantly by radiation **[1, 2006.01]**

1/08 • • from heated brickwork or the like **[1, 2006.01]**

1/10 • with provision for superheating by throttling **[1, 2006.01]**

1/12 • by mixing steam with furnace gases or other combustion products **[1, 2006.01]**

1/14 • using heat generated by chemical reactions **[1, 2006.01]**

1/16 • by using a separate heat source independent from heat supply of the steam boiler, e.g. by electricity, by auxiliary combustion of fuel oil **[1, 2006.01]**

3/00 **Steam superheaters characterised by constructional features; Details or component parts thereof** (general aspects of enclosed heat-exchangers F28D) **[1, 2006.01]**

5/00 **Controlling superheat temperature** (control systems for steam boilers F22B; regulating or controlling in general G05) **[1, 2006.01]**

5/02 • Applications of combustion-control devices, e.g. tangential-firing burners, tilting burners **[1, 2006.01]**

5/04 • by regulating flue gas flow, e.g. by proportioning or diverting **[1, 2006.01]**

5/06 • by recirculating flue gases **[1, 2006.01]**

5/08 • • preventing furnace gas backflow through recirculating fan **[1, 2006.01]**

5/10 • by displacing superheater sections **[1, 2006.01]**

5/12 • by attemperating the superheated steam, e.g. by injected water sprays (spray-mixers B01F 5/18) **[1, 2006.01]**

5/14 • • by live steam **[1, 2006.01]**

5/16 • by indirectly cooling or heating the superheated steam in auxiliary enclosed heat-exchanger **[1, 2006.01]**

5/18 • by by-passing steam around superheater sections **[1, 2006.01]**

5/20 • by combined controlling procedures **[1, 2006.01]**

7/00 **Steam superheaters characterised by location, arrangement, or disposition [1, 2006.01]**

7/02 • in fire tubes **[1, 2006.01]**

7/04 • in jackets around fire tubes **[1, 2006.01]**

7/06 • in furnace tubes **[1, 2006.01]**

7/08 • in fire-boxes **[1, 2006.01]**

7/10 • in smoke-boxes **[1, 2006.01]**

7/12 • in flues **[1, 2006.01]**

7/14 • in water-tube boilers, e.g. between banks of water tubes **[1, 2006.01]**