ECLA EUROPEAN CLASSIFICATION

F22G SUPERHEATING OF STEAM (steam separating arrangements in boilers F22B37/26)

F22G1/00 **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)**

F22G1/00B . [N: the heat being supplied by steam]

F22G1/02 . with heat supply by hot flue gases from the furnace of the steam boiler

F22G1/04 . . 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

F22G1/06 . with heat supply predominantly by radiation

F22G1/08 . . from heated brickwork or the like

F22G1/10 . with provision for superheating by throttling

F22G1/12 . by mixing steam with furnace gases or other combustion products

F22G1/14 . using heat generated by chemical reactions

F22G1/16 . by using a separate heat source independent from heat supply of the steam boiler, e.g. by electricity, by auxiliary combustion of fuel oil

F22G1/16B . . [N: by electricity (steam generation in boilers heated electrically, in general, F22B1/28)]

F22G3/00 **Steam superheaters characterised by constructional features; Details of component parts thereof** (general aspects of enclosed heat-exchangers F28D)

F22G3/00B . [N: Steam tube arrangements not dependent of location (characterised by location F22G7/00)]

F22G3/00B2 . . [N: with helical steam tubes]

F22G3/00D . [N: Superheater drain arrangements]

F22G3/00F . [N: Steam tubes with steam flowing in opposite directions in one pipe, e.g. Field tubes (F22G3/00G takes precedence)]

F22G3/00G . [N: Annular steam tubes, i.e. the steam being heated between concentric tubes with the heating fluid flowing in inner and around outer tube]

F22G3/00H . [N: Steam superheaters with heating tubes (F22G3/00G takes precedence)]

F22G3/00L . [N: Headers; Collectors, e.g. for mixing]

F22G3/00P . [N: Protection of superheater elements, e.g. cooling superheater tubes during starting-up periods, water tube screens]

F22G3/00R . [N: Connecting or sealing of superheater or reheater tubes with collectors or distributors] [N9909]

F22G5/00 Controlling superheat temperature (control systems for steam boilers F22B; regulating or controlling in general G05)

F22G5/02 . Applications of combustion-control devices, e.g. tangetial-firing burners, tilting burners

F22G5/04 . by regulating flue gas flow, e.g. by proportioning or diverting

F22G5/06 . by recirculating flue gases

F22G5/08 . . preventing furnace gas backflow through recirculating fan

F22G5/10 . by displacing superheater sections

F22G5/12 . by attemperating the superheated steam, e.g. by injected water sprays (spray mixers B01F5/18)

F22G5/12B . . [N: Water injection apparatus]

F22G5/12B2 . . . [N: in combination with steam-pressure reducing valves]

F22G5/14 . . by live steam

F22G5/16 . by indirectly cooling or heating the superheated steam in auxiliary enclosed heat-exchanger

F22G5/18 . by by-passing steam around superheater sections

F22G5/20 . by combined controlling procedures

F22G7/00 Steam superheaters characterised by location, arrangement, or disposition

F22G7/00L . [N: for locomotive boilers (F22G7/06L, F22G7/10L take precedence)] [N9909]

F22G7/02 . in fire tubes

F22G7/04 . in jackets around fire tubes

F22G7/06 . in furnace tubes

F22G7/06L . . [N: for locomotive boilers] [N9909]

F22G7/08 . in fire-boxes

F22G7/10 . in smoke-boxes

F22G7/10L . . [N: for locomotive boilers] [N9909]

F22G7/12 . in flues

F22G7/14 . in water-tube boilers, e.g. between banks of water tubes

F22G7/14C . . [N: of inclined type, i.e. the water-tube sets being inclined with respect to the horizontal plane]