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

F28 HEAT EXCHANGE IN GENERAL

F28G CLEANING OF INTERNAL OR EXTERNAL SURFACES OF HEAT-EXCHANGE OR HEAT-TRANSFER CONDUITS, e.g. WATER TUBES OF BOILERS (cleaning pipes or tubes in general B08B 9/02; devices or arrangements for removing water, minerals, or sludge from boilers while the boiler is in operation, or which remain in position while the boiler is in operation, or are specifically adapted to boilers without any other utility F22B 37/48; removal or treatment of combustion products or combustion residues F23J; removing ice from heat-exchange apparatus F28F 17/00)

Subclass index

APPLIANCES FOR CLEANING: NON-ROTARY; ROTARY; OTHERS; DETAILS.....1/00, 3/00, 13/00, 15/00
CLEANING PROCESSES BY: DISTORTION; VIBRATION; FLUSHING OR WASHING;
COMBUSTION; OTHERS.....5/00, 7/00, 9/00, 11/00, 13/00
COMBINATION OF PROCESSES.....13/00

1/00 **Non-rotary, e.g. reciprocated, appliances** (F28G 3/00 takes precedence) **[1, 2006.01]**
1/02 • having brushes (brushes A46B) **[1, 2006.01]**
1/04 • having articulated tools, e.g. assembled in chain manner **[1, 2006.01]**
1/06 • having coiled wire tools, i.e. basket type **[1, 2006.01]**
1/08 • having scrapers, hammers, or cutters, e.g. rigidly mounted **[1, 2006.01]**
1/10 • • resiliently mounted **[1, 2006.01]**
1/12 • Fluid-propelled scrapers, bullets, or like solid bodies **[1, 2006.01]**
1/14 • Pull-through rods **[1, 2006.01]**
1/16 • using jets of fluid for removing debris (F28G 1/12 takes precedence) **[1, 2006.01]**

3/00 **Rotary appliances [1, 2006.01]**
3/02 • having abrasive tools **[1, 2006.01]**
3/04 • having brushes (brushes A46B) **[1, 2006.01]**
3/06 • having articulated tools, e.g. assembled in chain manner **[1, 2006.01]**
3/08 • having coiled wire tools, i.e. basket type **[1, 2006.01]**
3/10 • having scrapers, hammers, or cutters, e.g. rigidly mounted **[1, 2006.01]**
3/12 • • resiliently mounted **[1, 2006.01]**
3/14 • • thrown into working position by centrifugal force **[1, 2006.01]**
3/16 • using jets of fluid for removing debris **[1, 2006.01]**

5/00 **Cleaning by distortion** (by vibration F28G 7/00) **[1, 2006.01]**

7/00 **Cleaning by vibration [1, 2006.01]**

9/00 **Cleaning by flushing or washing, e.g. with chemical solvents** (appliances using jets of fluid for removing debris F28G 1/16, F28G 3/16) **[1, 2006.01]**

11/00 **Cleaning by combustion processes, e.g. using squibs, using travelling burners [1, 2006.01]**

13/00 **Appliances or processes not covered by groups F28G 1/00-F28G 11/00; Combinations of appliances or processes covered by groups F28G 1/00-F28G 11/00 [1, 2006.01]**

15/00 **Details** (measuring thickness of deposit G01B) **[1, 2006.01]**
15/02 • Supports for cleaning appliances, e.g. frames **[1, 2006.01]**
15/04 • Feeding or driving arrangements, e.g. power operation **[1, 2006.01]**
15/06 • • Automatic reversing devices **[1, 2006.01]**
15/08 • Locating position of cleaning appliances within conduits **[1, 2006.01]**
15/10 • Masks for delimiting area to be cleaned **[1, 2006.01]**