F23K FEEDING FUEL TO COMBUSTION APPARATUS (fuel feeders specially adapted for fluidised-bed combustion apparatus F23C 10/22; regulating or controlling combustion F23N)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 Preparation of lump or pulverulent fuel in readiness for delivery to combustion apparatus (filtration B01D; mixing B01F; pulverising B02C; drying B02G)
1/02 . Mixing solid fuel with a liquid, e.g. preparing slurries
1/04 . Heating fuel prior to delivery to combustion apparatus
3/00 Feeding or distributing of lump or pulverulent fuel to combustion apparatus (conveying in general B65G)
3/02 . Pneumatic feeding arrangements, i.e. by air blast
3/04 . for locomotive boiler furnaces
3/06 . for shaft-type furnaces
3/08 . for furnaces having movable grate bars
3/10 . Under-feed arrangements
3/12 . feeding by piston
3/14 . feeding by screw
3/16 . Over-feed arrangements
3/18 . Spreaders stokers
3/20 . with moving hoppers
3/22 . Controlling thickness of fuel bed
5/00 Feeding or distributing other fuel to combustion apparatus
5/002 . [Gaseous fuel]
5/005 . . [from a central source to a plurality of burners]
5/007 . . [Details]
5/02 . Liquid fuel
5/04 . . Feeding or distributing systems using pumps (F23K 5/06 takes precedence)
5/06 . . from a central source to a plurality of burners
5/08 . . Preparation of fuel
5/10 . . Mixing with other fluids
5/12 . . . Preparing emulsions (spraying an emulsion of water and fuel into the combustion space of burners F23D 11/16)
5/14 . . Details thereof
5/142 . . . [Fuel pumps (pumps in general F04)]
5/145 . . . . [combined with fans]
5/147 . . . . [Valves]
5/16 . . . Safety devices (F23K 5/18 takes precedence; safety arrangements for combustion chambers F23M 11/00)
5/18 . . . Cleaning or purging devices, e.g. filters
5/20 . . . Preheating devices (in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space F23D 11/44)
5/22 . . . Vaporising devices (in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space F23D 11/44)

2200/00 Pretreatment and supply of solid fuel
2201/00 Pretreatment of solid fuel
2201/10 . Pulverizing
2201/1003 . . Processes to make pulverulent fuels
2201/1006 . . Mills adapted for use with furnaces
2201/101 . . to a specific particle size
2201/103 . . with hot gas supply
2201/20 . Drying
2201/30 . Separating
2201/50 . Blending
2201/501 . . with other fuels or combustible waste
2201/503 . . with non-combustible liquids to prepare slurries
2201/505 . . with additives

2203/00 Feeding arrangements
2203/002 . . Feeding devices for steam boilers, e.g. in locomotives
2203/004 . . Feeding devices with reciprocating members
2203/006 . . Fuel distribution and transport systems for pulverulent fuel
2203/008 . . Feeding devices for pulverulent fuel
2203/10 . Supply line fittings
2203/101 . . Wear protection devices
2203/102 . . Flashback safety, e.g. inertizing devices
2203/103 . . Storage devices
2203/104 . . Metering devices
2203/105 . . Flow splitting devices to feed a plurality of burners
2203/20 . Feeding/conveying devices
2203/201 . . using pneumatic means
2203/202 . . using screws
using pistons or rams

Pretreatment and supply of liquid fuel
- Pretreatment
  - Application of magnetism or electricity
  - Mixing with other fluids
- Supply line arrangements
  - Pumps
  - Filtering
  - Purging
  - Preheating
  - Vaporising
- Control devices

Pretreatment and supply of gaseous fuel
- Pretreatment
- Supply line arrangements
- Control devices

Special features of, or arrangements for fuel supplies
- Treating the fuel, either liquid or gaseous, with sound waves to enhance fuel properties
- Treating the fuel, either liquid or gaseous, with far-infrared radiations [FIR] to enhance fuel properties
- Cleaning solid fuel before combustion to achieve reduced emissions
- Treating solid fuel with electromagnetic fields before combustion
- Pulverizing solid fuel in vacuum or a reduced pressure environment
- Heating by using exhaust gas heat
- Airlock sections in solid fuel supply lines
- Control or safety devices in gaseous or liquid fuel supply lines
- Valves for gaseous fuel supply lines
- Non-continuous fluid supply
- Mixing two or more fluid fuels
- Treating the fuel with catalyst to enhance combustion
- Removing gaseous substances from liquid fuel line, e.g. oxygen
- Separating watery fractions from liquid fuel
- Creating a combustible foam of liquid fuels and air
- Control or safety devices in liquid fuel supply line
- Special materials for liquid fuel supply lines