

Feeding Systems for Demanding Fuels

Feedingmaster

Valmet has developed a unique solution called the Feedingmaster system. It ensures even, accurately-controlled fuel flow for combustion of demanding waste fuels in fluidized bed boilers. Our unique Feedingmaster system is essential for efficient combustion of difficult fuels like sorted household waste, industrial waste, demolition waste, plastic and paper, etc.



Dosing feeder (DF)

The dosing feeder is specially designed to maintain full dosing accuracy when handling difficult fuels. It is a volumetric feeder that produces an even layer of fuel of predetermined thickness. In the dosing bin the fuel level is measured by means of microwave monitoring and there is a level roller that prevents the fuel from packing or bridging. At the discharge end of the dosing feeder there is a scalping roller with rubber wings that peel off an even layer of fuel for perfectly consistent flow.

Rotary valve

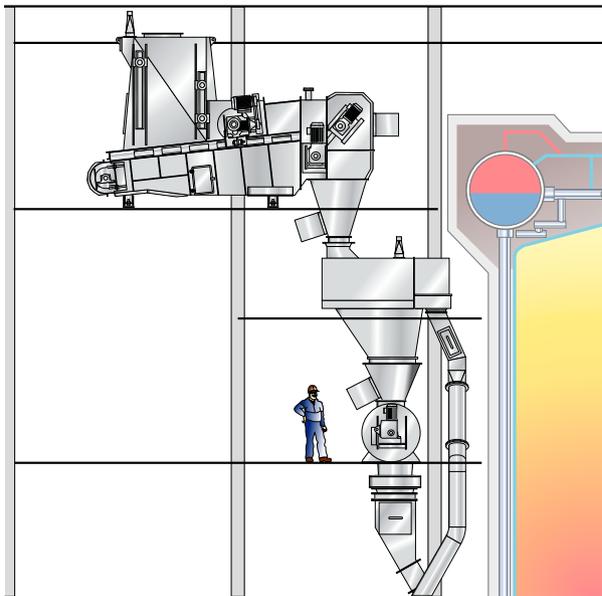
The fuel is fed to a robustly dimensioned rotary valve that is designed to provide the ideal outgoing angle of fuel input. The rotary valve is equipped with rubber wings that bend aside for large particles. It has a heavy-duty drive system designed to avoid damage from uncrushable particles during normal operation. The rotary valve isolates the dosing feeder from furnace pressure, preventing air leakage into the furnace and working as a shield against backfire.

Our system gives you:

- The best conditions for efficient combustion in the furnace
- Low emissions, with few CO peaks
- Minimal pressure variation in the furnace
- Superior availability
- A non-compacted fuel of even density fed to the boiler
- Easy maintenance thanks to the plug-in system of the level roller
- An adjustable scalping roller with an easy-to-use system for changing wings

Excellent references

- 48 installed units
- First delivery 1994
- Boilers in the range 12 – 150 MW_{th}



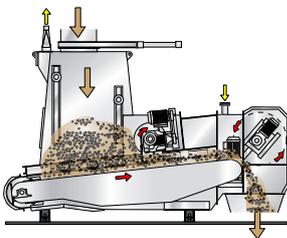
Fuel chute with gas spout

The fuel chute is located below the rotary valve and slide gate. It has a specially designed gas spout that spreads the fuel evenly over the furnace bed. A separate duct supplies cooling air to the casing around the fuel chute.

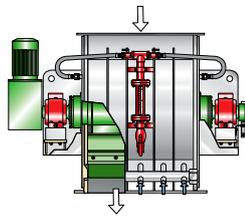
For stringent environmental requirements

The Feedingmaster system is controlled by actual boiler load, flue gas O₂ content, and actual heat value. The dosing accuracy of the dosing feeder system, combined with the superior spreading function of the fuel chute, ensure optimum conditions for meeting the toughest environmental requirements. We have excellent references from our many installations of complete Feedingmaster systems.

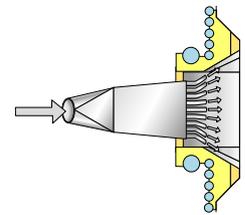
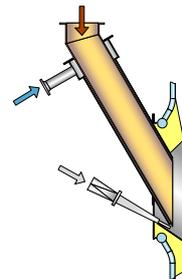
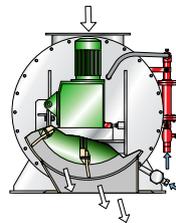
The Feedingmaster system consists of three main units: dosing feeder, rotary valve and fuel chute with gas spout.



Dosing feeder



Rotary valve



The fuel chute with gas spout spreads the fuel evenly over the furnace bed.

For more information, contact your local Valmet office. www.valmet.com

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