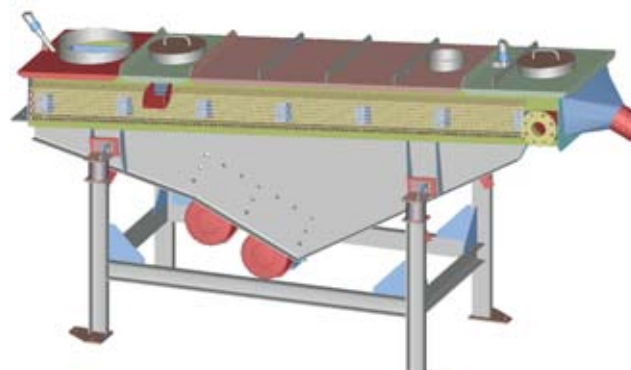


BED ASH COOLING IN FBC PLANT ELBERFELD



APPLICATION AND MODE OF OPERATION:

Bed ash in FBC plants (FBC = Fluidised Bed Combustion) is predominantly cooled by means of cooling screws. Faults can easily arise in complicated conditions of use and the inspections and repairs are often extensive and time-consuming.

The particular advantages of our system are particularly the simple, adaptable construction and easy accessibility during inspections. In the year 2002 a bed ash removal system with cooling vibrator channels and hot ash metering valves was installed at an FBC operator in Germany (WSW - Wuppertaler Stadtwerke AG). Another operator installed several bed ash removal systems to extend his existing bed ash removal system in 2004.

A device for screening coarse ash was integrated into both plants. The hot ash metering valve is connected to the ash chute and is therefore involved in the boiler expansion. The other components are set up on the ground. There is a difference in movement between the hot ash metering valve and the cooling vibrator channel. This spot is sealed by means of a heatresistant fabric expansion joint.

The installation shown here consists of 2 lines per boiler, each with a hot ash metering valve, cooling vibrator channel and a water-cooled spiral elevator for both lines together for cooling to the final temperature and for simultaneous vertical conveyin

SPECIFICATIONS:

| | |
|----------------------|------------------------------|
| Machine type: | FUFK 600 x 3000 |
| Length: | 3.000 mm |
| Width: | 600 mm |
| Cooling area: | 5.3 m ² |
| Drives: | 2 x JV 156-330, each 0.95 kW |
| Product: | Bed ash from FBC plants |
| Mesh size: | 0.2 - 1.0 mm |
| Feed quantity: | 2.500 kg/h |
| Input temperature: | 750°, a maximum of 850° |
| Output temperature: | < 300° after the FUFK |
| (Output temperature: | < 130° after WUFW) |

YOUR BENEFIT:

- Simple modular construction
- Quick replacement of the cooling element
- Integrated coarse ash sifting
- High cooling performance with low spatial requirements
- Reliable operation even for different ash compositions
- Flexible machine version for varying throughput and cooling capacities, can also be combined with other vibratory machines e.g. water-cooled spiral elevators
- Easy integration into existing plants