MÖLLER™ Multi-TURBUFLOW® Transport System
The Multi-TURBUFLOW® ash removal system:

The Multi-TURBUFLOW® ash removal system using the MÖLLER™ Technology is based on the outstanding features of the patented TURBUFLOW® transport system (TTS). Years of experience in operation of the system all over the world have been taken into account. Various facts to increase the operational reliability, efficiency and economical operation of this system are the design of the MÖLLER™ Valve, and the patented ICC Control® (intelligent Cycle Control) philosophy.

TURBUFLOW® Transport System:
- A patented TURBUFLOW® pipe with a secondary pipe on the inside.
- A secondary pipe with special inlet- and outlet openings and an integrated disk makes the dense phase conveyance very slow and blockage free.
- Conveying velocities between 4 m/s at the beginning and 10 m/s at the end of the conveying pipe can be achieved.

MÖLLER™ Valve:
- The MÖLLER™ Valve is used as a shut-off valve on the inlet and also at the point of discharge of the pressure vessel.
- The valve can cut through a static column of bulk material and seals the pressure vessel with an inflatable seal.
- In the open position the semi-spherical segment frees the complete cross-section of the valve.

ICC Control®:
- The ICC Control® ensures that the number of conveying cycles is minimized.
- Based on the conveying pressure and conveying time, the control system itself initiates the next conveying cycle.

Applications:
- Pneumatic pressure vessel conveyance.
- Conveyance of fly ash collected in ESPs or fabric filters in coal-fired power stations.
- Direct conveyance up to the silo station without any intermediate station.

Method of operations:
- Several filter hoppers discharge their ash through pressure vessels below into a common TURBUFLOW® pipe.
- From a process point of view the row of pressure vessels is treated and controlled as single unit.
• The individual vessels do not require a shut-off device at the discharge.
• A Möller™ Valve is used as a shut-off device to isolate the end of a row of vessels.
• Systems have been implemented in which 8 vessels are joined to a single TURBUFLOW® pipe.
• The patented ICC Control® system recognizes current ash production by evaluating the conveyance pressure, conveyance time and pattern of the cycles.
• Using this data the ICC Control® system can calculate which row requires ash removal and activates operation.
• The vessels in a Multi-TTS system therefore do not require level switches.
• The Multi-TTS system automatically adjusts to the actual ash production and therefore operates highly economically.

Profit from the clear advantages of the new generation Multi-TTS ash removal system:
• Slow conveyance with reduced wear.
• No blockages even with a high dust/air ratio.
• Reliable valves.
• Low maintenance and high operational reliability.
• Low power requirements.
• Fully automatic adjustment of the conveying cycle to the boiler load.
• Minimization of conveyance cycles, times and no. of valve operations.
• The Multi-TTS system will give you:
  - low maintenance costs
  - low energy costs
  - low operating costs
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