



The dust removal (coal dust) of different hand-over points of conveyor belts before feeding the blast furnaces is carried out with **filter systems type Infa-Lamellen-Jet AJL** which are, depending on the size, designed for volume flows from 5,000 to 32,000 m³/h. The separated coal dust is returned to production via rotary valves and screw conveyors. The necessary electric heating of the filter housing including thermal insulation was mounted on site. Design temperatures of down to -40°C made this measure necessary.

The filters were designed according to the existing explosion protection zones. In the raw gas area of the filters a usual ATEX zone 20 was identified, because the separated coal dust is present constantly in an explosive dust/air mixture. ATEX zone 22 was identified for the clean gas side and around the filters. As explosion protection strategy constructive explosion design was determined, i.e. all aggregates are made for pressure shock resistant construction with pressure relief via rupture discs. The additional necessary explosion decoupling prevents spreading out a possible explosion into connected aggregates.

The jet pulse cleaning of the pleated element filters is controlled by differential pressure. Thus, a continuous operating of the entire plant is assured during conveying process.

Technical data

Filter type		Pleated element filter Infa-Lamellen-Jet AJL
Volume flow	[m ³ /h]	5,000 to 32,000
Raw gas dust content	[g/m ³]	< 5
Clean gas dust content	[mg/m ³]	< 20
Temperature	[°C]	-40 - +40

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