Conveyor Belt Powder Reduction Plant

The conveyor belt powder reduction plant is used to achieve the necessary purity of iron powders by heat-treating the Fe-PM-powder in a reducing atmosphere.

The metal powder is produced by atomization in iron melt with gas or water. The resulting powder contains too much oxygen and, depending on the process, carbon. In order to achieve the necessary purity the powder is fed into a charging or filling bunker. It is then carefully charged onto the conveyor belt. The thickness of the powder on the conveyor belt is an important parameter as it must be taken into account when defining many of the process parameters. The powder is reduced in the furnace and further decarburized. In the cooling zone the powder is cooled in a controlled furnace atmosphere so that it can emerge into the air at the end of the conveyor belt without the danger of oxidation. At the end of the conveyor belt an initial powder crusher is located.

Specifications

Technical Features	
Effective width:	200-1000 mm
Throughput:	700 - 1000 kg/h
Heating:	Electric or gas
Atmosphere:	NH3 – 75/25 or N2 + H2 mixture of gases
Temperatures:	1100 °C

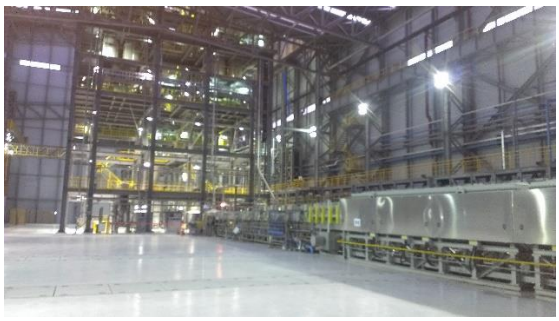
Applications

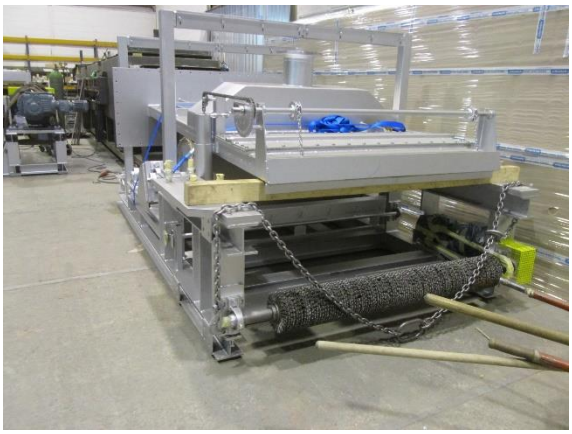
The most typical application is the reduction of iron powder or iron alloy powders with the aim of obtaining the required purity.

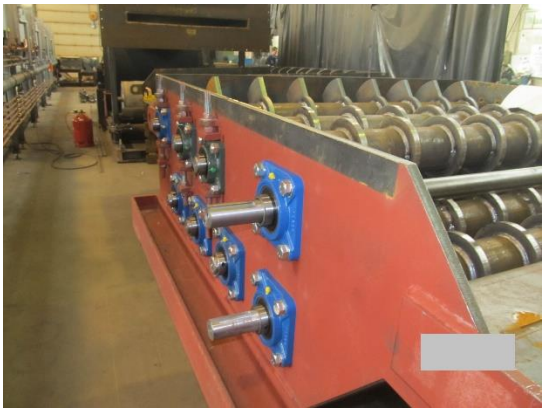
Additional Equipment Modules

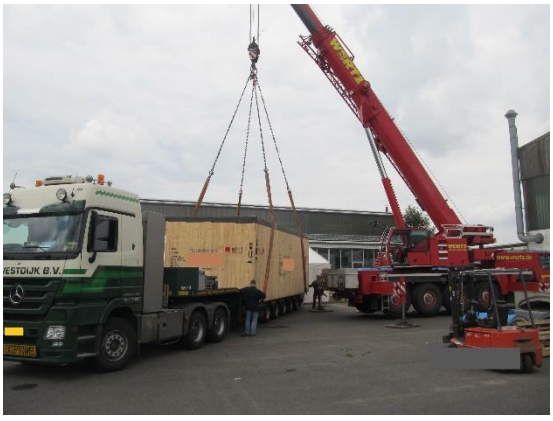
+ Powder cake breaking device + Ceramic or steel muffle (HT zone) + Gas analyzing unit + Rapid cooling installation	+ Air convection cooling + Automation (Total Process Control (TPC) System)

Foto Gallery









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