REFERENCE

viledon®

EXTRACTION OF SMELTING FURNACE FUMES IN SMELTER PLANT

For steel manufacturing companies compliance with legal thresholds of emission values is of great importance. Dust removal in smelting furnaces and converter steel mills is usually conducted with filter bag houses which carry a multitude of filter bags. Depending on the respective legislations dust emission levels must remain between 5 to 10 mg/Nm³.

NEXX
MADE WITH EVOLON®

Situation

The existing dust removal system of a Finnish steel manufacturer used traditional polyester needlefelt bags with a specific weight of 550 g/m². The factory was facing an inefficient air flow rate, high pressure loss of more than 2,400 Pa and clean gas concentrations of over 10 mg/Nm³.

Viledon® NEXX bags are now installed since more than 24 months working 24/7. The pressure drop was reduced by almost 75 %. Clean gas values remain below 0.1 mg/Nm³.

The entire system now achieves a significant performance increase and substantial energy cost savings.

Viledon® NEXX filter bag FE 2932

The Viledon® solution

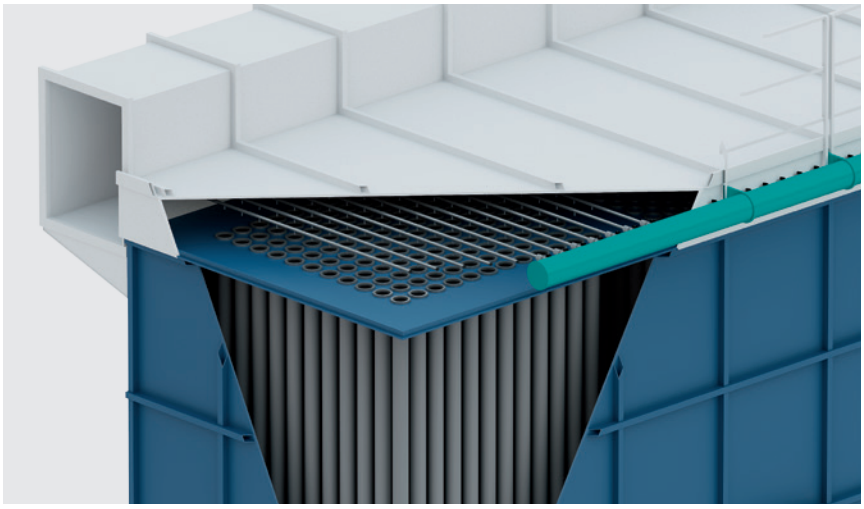
Installation of 1,600 Viledon® NEXX filter bags with the aim to achieve a reduction in pressure drop, stable air volume flow rate throughout the operation and lower emission values.

TECHNICAL DATA	
Filter bags useful lifetime	> 2 years
Volume flow rate	522,500 m³/h
Pressure drop	850 Pa
Emissions	< 0.1 mg/Nm³
Temperature	100 °C (peaks: 130 °C)

Bag filter house of Finnish steel manufacturer equipped with NEXX bags

FREUDENBERG
FILTRATION TECHNOLOGIES

FREUDENBERG
INNOVATING TOGETHER



Typical bag filter house with Viledon® NEXX

KEY DATA	
Volume flow rate	522,500 m^3/h
Dust type	Fine dust from smelter plant / converter steel mill Mean particle size: 5 µm
Filter components fitted	1.600 filter bags LM 127 S-703-AR-32-NEXX made of Viledon NEXX 2932 nonwoven, with snap ring, ø 127 mm, length: 7,030 mm
Air-to-cloth ratio ACR (filtration velocity)	2 $m^3/(m^2 \cdot h)$
Filter area A_{total}	4,480 m^2

Your benefits using Viledon® NEXX bags at a glance

- Original Evolon® quality which gives the material toughness and mechanical stability.
- Constant maximum performance due to the integrated microfiber layer which creates a stable dust cake.
- Continuous operation over long periods at minimum pressure loss.
- Long filtration cycles.
- Low emissions.
- Energy cost savings through stable air flow rate and reduced compressed air consumption.

Freudenberg Filtration Technologies SE & Co. KG
69465 Weinheim, Germany
Phone +49 (0) 6201 80-6264 | Fax +49 (0) 6201 88-6299
viledon@freudenberg-filter.com | www.freudenberg-filter.com

FREUDENBERG
INNOVATING TOGETHER

02-EC-479-April-2016-EN