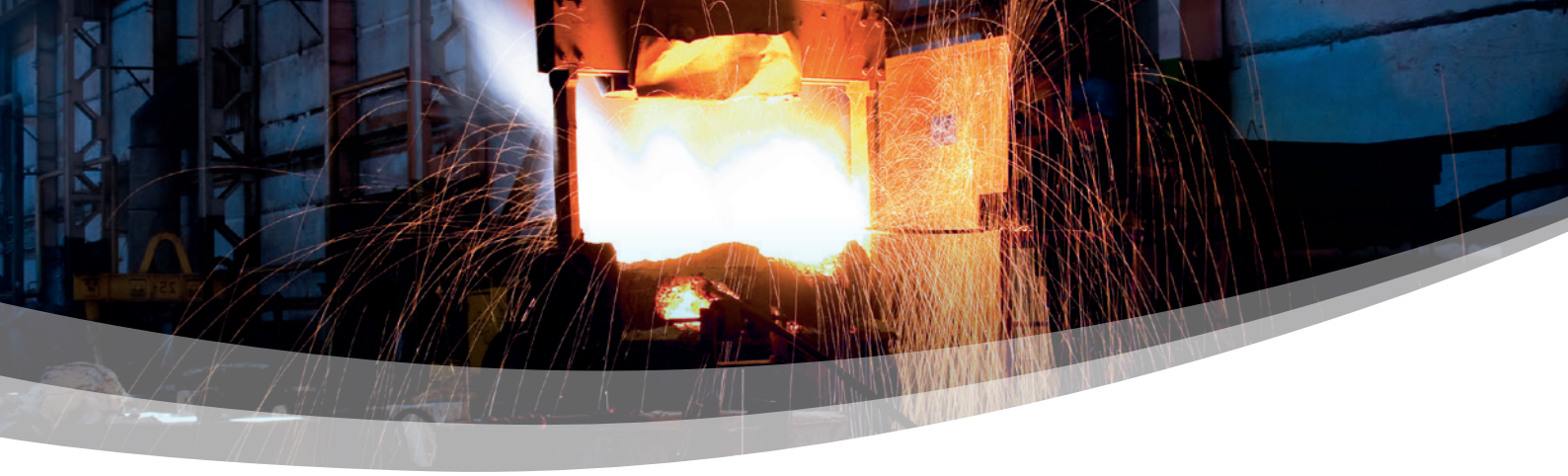

REFERENCE

viledon®

VILEDON NEXX FILTER BAGS USED FOR MAGNESIUM TREATMENT IN A FOUNDRY

The NEXX filter bags installed in a foundry's magnesium treatment system involved a joint, closely coordinated project conducted by the dust removal specialists Entstaubungstechnik Schwarzenberg (ETS) and Freudenberg. ETS is an extremely capable firm, which can draw upon more than 40 years of experience in planning and producing complex systems for dust removal. Today, ETS plans, manufactures and installs customized systems for all applications in which dusts have to be filtered out of the air.

Viledon® NEXX filter bags

The process

Magnesium treatment in foundries is a process in which a magnesium compound is injected into the melt. In this process, ultra-fine dusts comprising magnesium oxide (MgO) and iron oxide (FeO), which in our reference case exhibit a mean particle size of x_{50} = 1 µm, and have to be extracted.

Starting situation

The manufacturer was planning to install a new dust removal system, which is meanwhile being operated at a volume flow of 15,000 m³/h on 5 days a week in 3 shifts. The operational pressure drop stipulated is < 1,400 Pa.

The Viledon® solution

The system featured 198 NEXX filter bags LM 130 S-303-AR-NEXX made of Viledon® FE 2932 nonwoven material, with a diameter of 130 mm, a length of 3,030 mm and a filtration velocity of 61 m³/(m²·h). A filtering aid comprising 0.3 g/m³ of limestone powder was admixed continuously, so as to keep the pressure drop at a low, stable level, and to improve the cleaning characteristics of the filter bags. For the NEXX bags, we have guaranteed a useful lifetime of 2 years.

energy efficiency performance

BLUeCOMPETENCE Alliance Member
Partner of the Engineering Industry Sustainability Initiative

Bag filter system from Entstaubungstechnik Schwarzenberg for arresting foundry dusts

TECHNICAL DATA	
Filter bags useful lifetime	4 years
Volume flow	15,000 m³/h
Emissions	< 10 mg/m³
Pressure drop in operation	< 1,400 Pa

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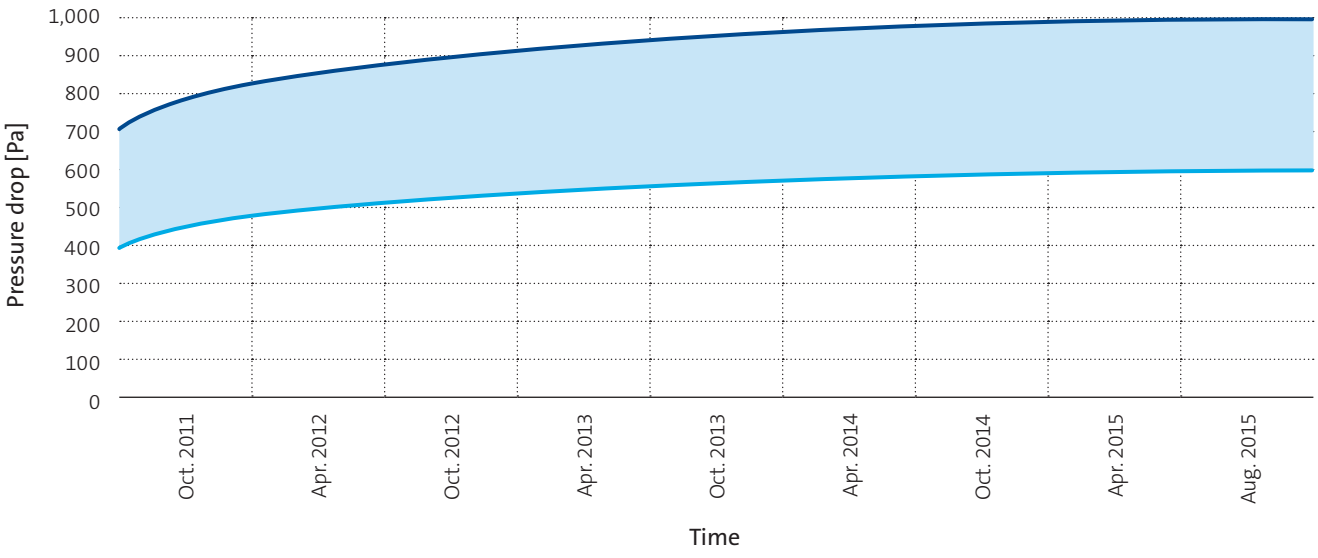
Long-term operating characteristics of Viledon® NEXX



Your benefits at a glance

Since October 2011, the dust removal system featuring the Viledon® filter bags has been running smoothly at a stable pressure drop of 600 Pa. The regular cleaning routines are performed at 1,000 Pa. There is no measurable dust penetration. Thanks to the efficient, trouble-free filtration over a period of four years, the customer is very satisfied.

KEY DATA	
Volume flow	15,000 m^3/h
Dust type	Magnesium oxide (MgO), iron oxide (FeO)
Filter components fitted	198 filter bags LM 130 S-303-AR-NEXX made of Viledon® NEXX 2932 nonwoven, with double snap-ring, ø 130 mm; length: 3,030 mm
Filtering aid (permanent)	0.3 g / m^3 limestone
Air-to-cloth ratio ACR (filtration velocity)	61 $m^3/(m^2 \cdot h)$
Filter area A_{Total}	245 m^2
Ascending velocity v_{asc}	0.6 m / s

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