PRESSURE REDUCING VALVE IN THE CALCINATION PROCESS

Pressure under control with certainty!

Calcination is a process used in the steel industry. During calcination, hard coal is heated to high temperatures in the absence of air or with a controlled supply of air heated to 1,000 °C, which thermally decomposes the organic substances contained in the coal.

This process leads to the formation of volatile compounds such as hydrocarbons, water and gases such as carbon dioxide and carbon monoxide. These gases can be used as fuel in other steelmaking processes, reducing dependence on external energy sources.

The solid residue produced during the calcination of hard coal is coke, which consists mainly of carbon and ash. Coke is then used as fuel in the blast furnace to produce pig iron.

During coke production, compressed air is injected into the calcination process to promote the controlled oxidation of the material. Pressure reducing valves are used to ensure that the air supply is always at the correct pressure and does not exceed the permissible limit.

Goetze is also your partner in terms of safety here and offers safety in the usual Goetze quality with the pressure reducing valves.

During the calcination process, temperature, pressure and compressed air flow are carefully controlled to ensure the efficiency of the process and the safety of the operator. The pressure reducing valve is an important component to prevent compressed air leaks. This is because compressed air leaks can lead to a loss of process efficiency and in some cases pose a safety risk to operators.

It is important to ensure that pressure reducing valves are correctly sized and installed in accordance with applicable standards to prevent leaks and minimise the associated risks. Regular maintenance of pressure reducing valves is necessary to prevent the accumulation of particles that can affect the performance of the pressure reducing valves.

Briefly explained: Calcination

In technical chemistry, calcination is the heating (burning) of a material with the destination of dehydrating or chemically converting it. Calcination takes place during lime burning, as part of the technical lime cycle. The decomposition products are water, calcium oxide and escaping carbon dioxide (CO2).

SERIES 484

Materials

Temperatures
from -40°C to +120 °C

Inlet pressure up to 60 bar
Outlet pressure adjustable
from 0,5 bar to 50 bar

Threaded connections
from ¼“ to 2“

» Loose flanges – Maximum flexibility during assembly «

ADVANTAGES AT A GLANCE

Precise Regulation
Precise actuation to maintain constant outlet pressure regardless of fluctuations in the inlet. Ensures reliable and accurate pressure regulation.

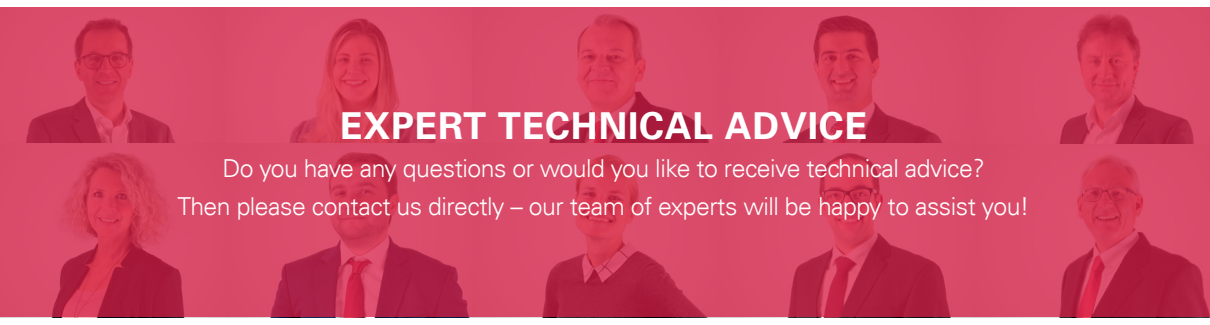
High Quality Materials
Manufactured from durable, corrosion-resistant materials, ensuring long service life and minimising frequent replacements.

Simplified Maintenance
Design that facilitates maintenance and repairs. Affordable wear parts in Brazil and easy replacement reduce downtime and maintenance costs.

Certifications and Compliance
Compliance with industry standards and certifications, emphasising reliability and safety, such as ASME and PED 2014/68/EU.

Extensive Expertise
With decades of experience in developing and manufacturing pressure reducing valves, we are a trusted partner globally. We are a supplier to the world‘s second largest alumina refinery located in Brazil.

Customer Support and Training
We offer comprehensive support, training and technical advice for our customers online or face-to-face.



EXPERT TECHNICAL ADVICE

Do you have any questions or would you like to receive technical advice?
Then please contact us directly – our team of experts will be happy to assist you!

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