



## Bharti FerroSorp® S

# Pelletised hydrogen sulfide filter media in industrial applications such as CO<sub>2</sub>-gas and synthesis gas

Industrial gases such as synthesis gas (syngas) and CO<sub>2</sub>-rich gas for CO<sub>2</sub>-production usually contain hydrogen sulfide, especially when produced from coal, decaying biomass or other sulfur-rich raw materials. The toxic, corrosive effects of H<sub>2</sub>S are well-documented and contribute to decreased gas quality. In some cases, H<sub>2</sub>S may also result in the production of dangerous SO<sub>2</sub> emissions. Because industrial applications operate under such broad varieties of conditions as far as pressure, temperature, H<sub>2</sub>S freight, humidity are concerned, it is critical for plant operators to utilize technology that is proven, versatile, and economically feasible for their applications. Our FerroSorp® S media pellets are specifically designed to easily overcome even the most challenging industrial conditions.

FerroSorp® S — a high quality product **Made in Germany** — is a pelletized and highly effective media based on iron hydroxide. For over 20 years FerroSorp® S has proven itself to be **the best product for the job**, even under some of the harshest, most-challenging gas conditions. The result is, that each year more and more sites around the globe opt for using FerroSorp® S as their **solution to the H<sub>2</sub>S problem**.



Applicable for H<sub>2</sub>S-containing gases such as syngas, CO<sub>2</sub>-gas, geothermal fields and oil & gas-industry

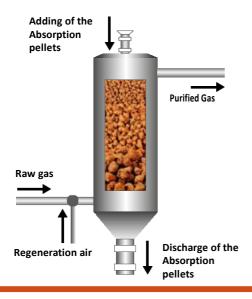






### The process

Gas containing H<sub>2</sub>S is passed through a filter vessel filled with FerroSorp® S media pellets. Two chemical reactions occur: First, H<sub>2</sub>S and iron hydroxide react to form solid iron sulphide. Second – either simultaneously or in a parallel vessel – oxygen converts the pellets back into iron hydroxide in a process called regeneration. Elemental sulphur is formed and accumulates within the pores of the media pellets, which results in high loading rates, long media lifecycles, and minimised clumping.



Absorption: 2 Fe(OH)<sub>3</sub> + 3 H<sub>2</sub>S  $\longrightarrow$  Fe<sub>2</sub>S<sub>3</sub> + 6 H<sub>2</sub>O Regeneration:  $Fe_2S_3 + 1.5 O_2 + 3 H_2 O \rightarrow 2 Fe(OH)_3 + 3 S$ 

#### **Advantages**

- Used and tested for more than 20 years
- High purification performance
- High economic value
- High loading rates for H<sub>2</sub>S
- Minimised losses in pressure drop due to optimized pellet shape
- Achieves 0 ppm H<sub>2</sub>S at the outlet

#### You can choose from our broad selection:



FerroSorp® S 2 - 4 mm

We would gladly advise you regarding your customized Plant needs!

#### **Bharti Waters Private Limited**



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