



# Bharti FerroSorp® S

# Pelletis ed hydrogen sulfide filter media for external desulfurization of landfill gas

Landfill gas contains many pollutants. Among them is  $H_2S$  which is known to be extremely toxic, highly corrosive, and foul-smelling. Maximum concentration thresholds for  $H_2S$  vary from site-to-site and are limited either for technical reasons (to protect downstream equipment and machinery such as CHP's, turbines, gas-upgrading equipment, etc.) and/or for regulatory reasons mandated by government agencies (i.e. airquality standards,  $SO_2$  emissions, etc.).

To consistently achieve technical and regulatory compliance, a robust, economical and effective solution, such as FerroSorp® S – a high quality product **Made in Germany** – is required. 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.** 



Landfill gas application, Quebec, Canada	
Gas Flow	1,200 m³/h
H₂S concentration	1,250 ppm
Relative Humidity	30 %

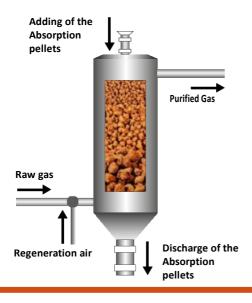






### The process

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:  $2 \text{ Fe(OH)}_3 + 3 \text{ H,S} \longrightarrow \text{Fe,S}_3 + 6 \text{ H,O}$ 

Regeneration:

 $Fe_2S_3 + 1.5 O_2 + 3 H_2O \rightarrow 2 Fe(OH)_3 + 3 S$ 

## **Advantages**

- Used and tested for more than 20 years
- High purification performance
- High economic value
- High loading rates for H2S
- 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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