

Sulfax

Structure:

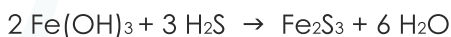
Biogas desulphurization Sulfax is designed to reduce the hydrogen sulfide from digestion gas created in the process of stabilization led into anaerobic chambers / fermentation reactors. H₂S absorption process occurs in the bed of granulated material Sulfax 210.

Process:

Biogas containing H₂S is fed into reactor. Scrubbing material (contains mainly a special iron oxide) is loaded inside stainless steel reactor. The hydrogen sulfide is chemically bonded by pelletised, highly porous material. In this process the scrubbing compound is consumed naturally. To keep the consumption of the scrubbing compound at the low level, some amount of air is continuously injected to the raw biogas.

Added oxygen regenerates scrubbing material.

The following chemical reaction equations describe this process:



Process bed is movable type - must be induced periodically. The fresh scrubbing material is feed into the reactor from top charging sluice. The corresponding amount of used material is removed from the reactor through bottom sluice.

Basic equipment:

Reactor:

- insulated reactor with process pipelines, access top platforms, top access DN600 manholes, manually operated butterfly valves, air distribution system, biogas flow detection, manometers (2 units).

Process and electrical boxes:

- air supply system, temp. and O₂ conc. measurement, local PLC unit, electrical switch box, Ex. heater.

- dry process on stable bed;
- chemisorbtion and surface adsorbtion;
- continuous regeneration with oxygen;
- granulated, porous material;
- non-hazardous materials and wastes;
- H₂S concentration < 15 000ppm;
- biogas flow up to 1 500m³/h;
- min. bed life time 180d.



Options:

- inlet/ outlet pressure monitoring system;
- inlet/ outlet H₂S measurement system;
- frost protection;
- motor operated valves;
- flow meter.

Standard type of series:

SRP type	Number of reactors	Gas flow rate max. [m ³ /h]	Granulate quantity [t/ m ³]
SFA m1	1	50	1.1/1.7
SFA m2	1	100	2.5/3.8
SFA 00	1	200	4.4/6.8
SFA 01	1	400	8.8/13.6
SFA 02	1	600	13.3/20.4
SFA 03	1	800	17.7/27.2
SFA 04	1	1000	22.1/34.0

More options are available on request