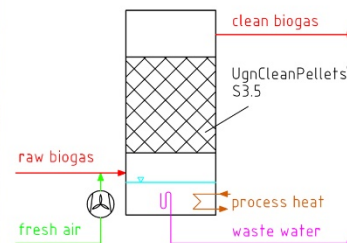


Gas Desulphurisation

UGN® BEKOM-H process



UGN
UMWELTECHNIK



SCOPE OF APPLICATION

Raw biogas treatment for later use in CHP applications

SYSTEM COMPONENTS

- UgnCleanPellets® S 3.5 filtering material
- Biogas module(s) made of plastic material or stainless steel

THEORY OF OPERATION

The BEKOM H gas desulphurisation system is based on the UgnCleanPellets® S 3.5 filtering material and combines chemical and biological reactions. The untreated, warm and humid biogas flows through the filter module that is filled with UgnCleanPellets®. The hydrogen sulphide is targeted and completely removed from the raw gas and transformed to elemental sulphur.

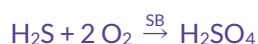
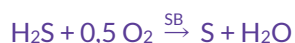
Atmospheric oxygen is fed in to allow the filtering material to self-regenerate, while the desulphurisation process is running at the same time. This ensures that the desulphurising capacity of the material is maintained for a long time. When the pellets reach their maximum take-up capacity, the hydrogen sulphide content in the clean gas increases gradually.

THE DESULPHURISATION PROCESS WITH UgnCleanPellets® S 3.5

The main process of biogas desulphurization is a chemical reaction of the hydrogen sulphide with trivalent iron contained in the filter material. In the form of iron sulphide, the sulphur is bound in the filter material.



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At the same time, the residual oxygen regenerates the originating FeS.

