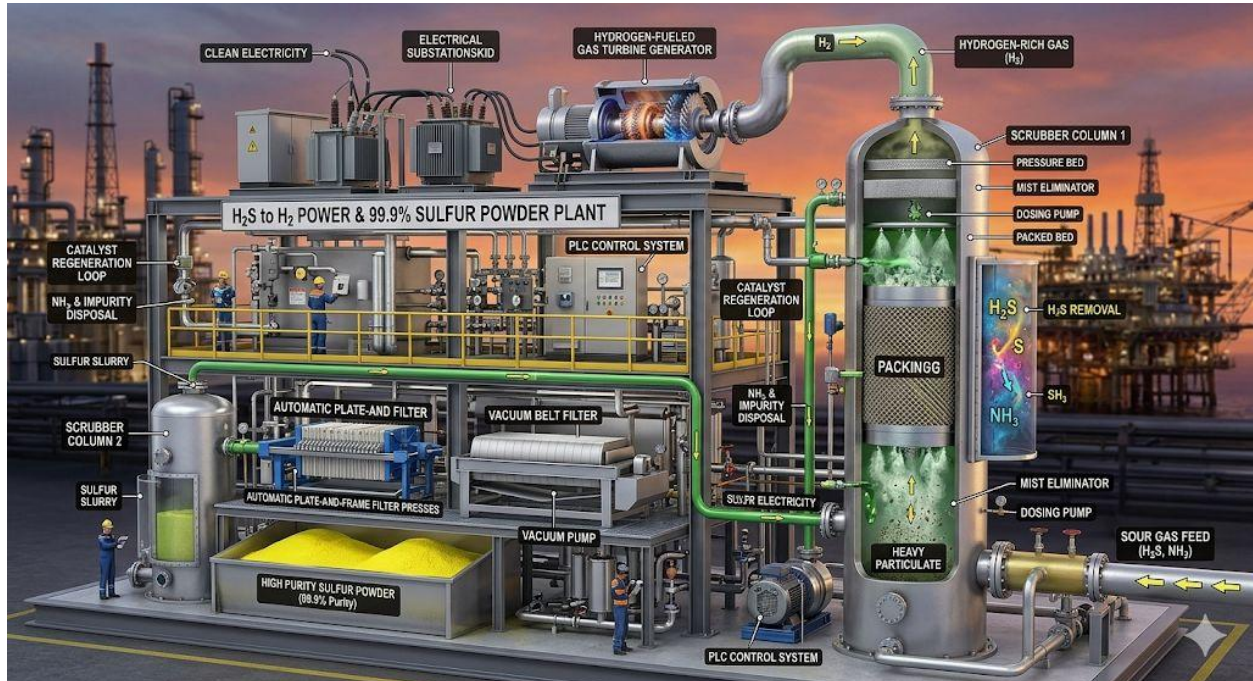


H2S Technology



video



H2S TECHNOLOGY.mp4

Product Description

This system is an advanced and integrated solution for treating hydrogen sulfide (H₂S) gas and converting it into high-value products, such as high-purity sulfur and energy. The process involves separating sulfur from hydrogen, then injecting the hydrogen into a turbine to generate electrical power. The unit is designed to meet the requirements of oil, petrochemical, and other industries that produce toxic gases, while achieving the highest levels of operational efficiency and environmental safety.

Process Description

The treatment process is carried out through several interconnected stages:

1. Sour Gas Feed

Gas containing hydrogen sulfide (H₂S), along with other gases such as ammonia (NH₃), is fed into the system. This gas is typically produced from oil and gas operations.

2. Scrubber Column

The gas passes through a scrubber column where the following occur:

- Separation of hydrogen from other components
- Removal of impurities and heavy particles
- Absorption of sulfur compounds
- Separation of mist and unwanted materials

3. Reaction and Conversion Stage

Hydrogen sulfide (H₂S) is converted using catalysts and specialized treatment processes.

4. Sulfur Separation and Filtration

The produced sulfur is collected in slurry form, then processed through:

- Filter press units
- Vacuum filtration systems
to obtain high-purity sulfur (up to 99.9%).

5. Power Generation

The resulting hydrogen-rich gas is used to operate:

- Gas turbines
- Power generators
enabling the production of clean electricity within the system.

6. Recycling and Secondary Treatment

- Catalyst regeneration
- Removal of remaining impurities
- Continuous system efficiency optimization

Key Features

- Highly efficient removal of H₂S gas
- Production of sulfur with purity up to 99.9%
- Conversion of by-product gases into usable energy
- Reduced emissions and improved environmental performance
- Integrated system combining separation, treatment, and recycling
- Continuous operation with high reliability
- Advanced industrial design suitable for harsh environments
- Lower energy consumption compared to conventional systems

Applications

The system is widely used in various industrial sectors, including:

- Oil & Gas industry
- Refineries
- Associated gas treatment

- Petrochemical industries
- Fuel quality improvement and sulfur reduction
- Environmental compliance and emission reduction
- Sulfur recovery for commercial use
- Increasing economic returns from oil and gas operations

Video



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