TECHNOLOGY OF SELECTIVE OXIDATION OF **HYDROGEN SULFIDE TO SULFUR**

The technologies using the catalyst AOK-75-44 are based on the reaction of hydrogen sulfide selective oxidation to sulfur.

 $H_2S + \frac{1}{2}O_2 = \frac{1}{nSn} + H_2O$ at temperatures 200-280°C

For gases with hydrogen sulfide content up to 2% vol, one-stage processing is possible - in the fixed-bed catalytic reactor. Gases with hydrogen sulfide content higher 2 % vol are treated in reactors in-series or in one multiple-section reactor with batch oxygen feeding to each reactor.

Technologies using catalyst AOK-75-44 are applied for Claus tail gas treatment at Russian refineries. Alternative application is the treatment of sweet natural gases, associated gases, chemical industry emissions and biogases.



OUR SOLUTIONS FOR SULFUR REMOVAL

SELECTIVE OXIDATION OF HYDROGEN SULFIDE TO ELEMENTAL SULFUR



Katalizator JSC 1 Tikhaya St, Novosibirsk 630058, Russia Tel: +7 (383) 306-62-76 | Fax: +7 (383) 306-62-72

info@katcom.ru | www.katcom.ru



CHARACTERISTICS

Parameter	Standard
Appearance -Geometry - Color	Cylinders of red and brown color
Size, mm: - Diameter - Lenath	4-10 4-15

FEATURES & BENEFITS

- High catalytic activity and selectivity of hydrogen sulfide conversion to sulfur at the range of 220-280°;
- Resistance to catalytic poisons;
- Thermal stability;
- Low sensitivity to excess oxygen and water vapor content in the processed gas;
- High operation stability during long-term lifetime;
- Non-reactivity towards deep oxidation of hydrocarbons, carbon monoxide and hydrogen ensures using in hydrogen sulfide removal processes without any special recovery of H2S and resulting in slowing of deactivation caused by coking;
- Due to high resistance to hydrothermal aging the catalyst can be used in all types of reactors at sulfur recovery units;
- More than 12 years of manufacturing experience.





APPLICATION

Catalyst AOK-75-44 is intended for purification of various gases containing 0.3-15 % vol hydrogen sulfide in hydrogen sulfide oxidation processes.

FIELDS OF APPLICATIONS

- Refining industry
- Oil-producing industry
- Gas processing industry
- Gas production industry
- Metal manufacturing