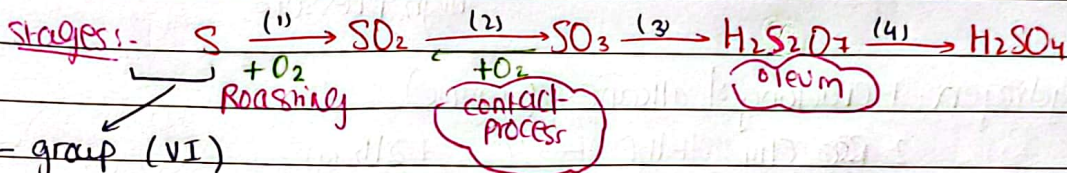


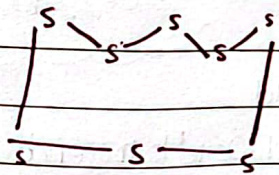
Uses of ammonia:-

- 1- Fertilizers.
- 2- Cleaning detergents.
- 3- Smelling salts

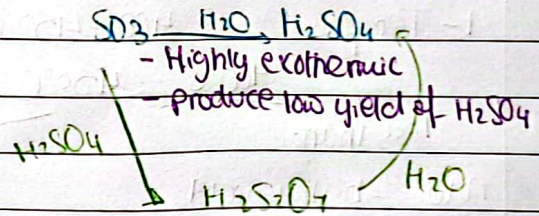
\* Industry of H<sub>2</sub>SO<sub>4</sub> Contact Process



- group (VI)
- valency 2
- yellow solid
- S<sub>8</sub>



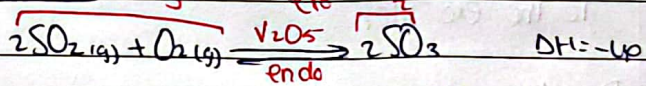
- \* SO<sub>2</sub> cause acid rain
- \* uses SO<sub>2</sub>



- Uses: medicale  
 match  
 rubber

- ore: \* zinc blende ZnS  
 \* from fossil fuel

contact:-



Essential conditions:

- 1- Temp 400-450°C
- 2- Pressure 2 atm "high pressure favour the forward rxn" (fewer gas moles)  
 2 atm gives max. yield of SO<sub>3</sub>
- 3- Catalyst: V<sub>2</sub>O<sub>5</sub> vanadium(V)oxide

→ Roasting

