

Development of a numerical simulation tool

Objective

- furnace capacity increase
- ammonia destruction

Oxygen boosting using burner technology

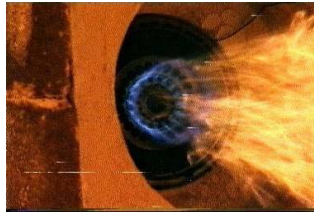
- refractory temperature
- residence time in post-flame
- $\text{H}_2\text{S}/\text{SO}_2$ conversion ratio

Numerical simulation

- burner design
- burner/furnace scale-up/sizing

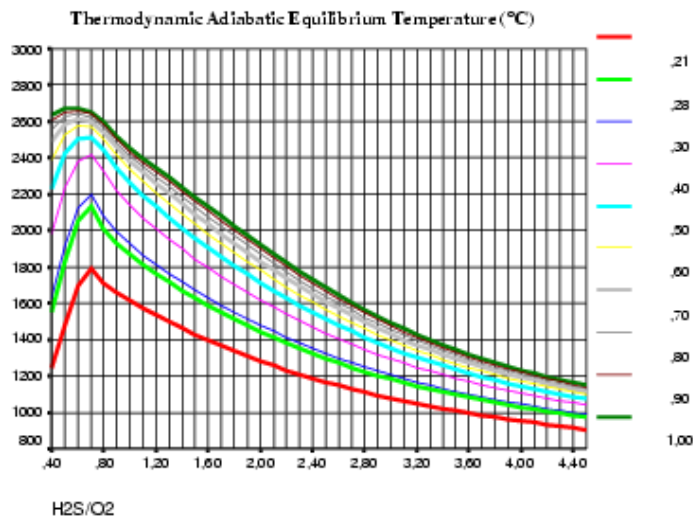
Modeling

- Radiative heat transfer
- H_2S chemical kinetics (pyrolysis and oxidation)
- Turbulent partial oxidation of H_2S



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Oxygen enrichment level limited by refractory wall maximal temperature



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