

CORE-FGD™ (Cooled Oxidation Reactor – Flue Gas Desulphurization) provides removal of SO₂ stack emissions while producing only saleable byproducts (sulphuric acid and excess power/steam).

KEY BENEFITS

- Reliable emission control down to <20 ppmv SO₂
- 99.9% of SO₂ emissions converted to 98.5% sulphuric acid able to be used in chemical or fertilizer plants
- Process is a net producer of energy and/or steam with zero use of supplementary fuel – less than zero OPEX
- Robust well proven plant designs achieve desired emissions reliably
- Virtually zero solid or liquid waste effluent produced – effluent is easily saleable products
- Flue gas pretreatment can provide NO_x reduction and/or capture of heavy metals
- Lower CAPEX than alternative SO₂ emissions control systems
- Sulphuric acid plant minimized in size and cost via use of a concentrated SO₂ stream from the regenerative scrubber

ABOUT US

Sustaining our world for generations to come through technological and environmental innovation, Worley delivers Chemetics® sulphuric acid solutions around the globe with a focus on site reliability, plant economics and workforce development.

Over the past 60 years, Worley Chemetics' full lifecycle solutions and equipment have enabled more than 800 plants to achieve higher capacities and availability, lower costs of operation, reduced emissions and greater safety. Leveraging our R&D lab and custom-built fabrication facility in Canada, global logistics management capabilities, specialized project teams and worldwide network of trusted suppliers, we deliver optimal solutions and equipment for your sulphuric acid facility, from greenfield projects to maintenance and turnarounds.



GET IN TOUCH

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CORE-FGD™ System

FEATURES & BENEFITS

CORE-FGD™ is a combination of Flue Gas Cleaning, a SO₂ Regenerative Scrubber and a Sulphuric Acid Plant.

Flue Gas Cleaning – The pretreatment cleaning system removes dust, fly ash and other impurities such as chlorides, fluorides, NO_x, heavy metals and other species as required for the flue gas. Energy is recovered from the hot flue gas.

Regenerative Scrubber – Selectively captures SO₂ from the flue gas using a solvent that is regenerated in the process to minimize solvent consumption/costs. Concentrated clean SO₂ stream is sent to the Sulphuric Acid Plant.

Sulphuric Acid – Worley Chemetics patented CORE™ technology is implemented for conversion of SO₂ to Sulphuric Acid instead of conventional wet or dry Sulphuric Acid technology. The system accepts concentrated SO₂ stream without needing dilution to control catalyst temperatures. The steam produced in the CORE™ acid plant is greater than the quantity of steam needed in the regenerative scrubber, thus allowing the CORE-FGD™ system to be a net power or steam producer with no use of supplementary fuel.

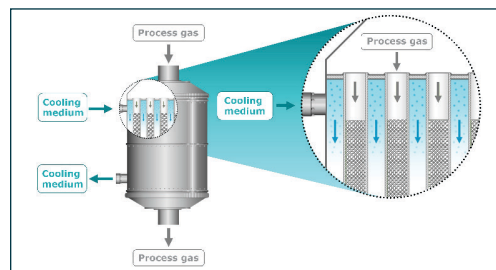
Key Value to Customers

CORE-FGD™ allows **virtual elimination of SO₂ emissions** from your stack while producing virtually **no waste product**.

The SO₂ is converted to saleable fertilizer grade 98.5% (or other desired %) sulphuric acid and/or concentrated SO₂. Heavy metal and/or NO_x emissions are captured and metal oxides can be sold. CAPEX is minimized when compared to competitive technologies.

Industrial Applications

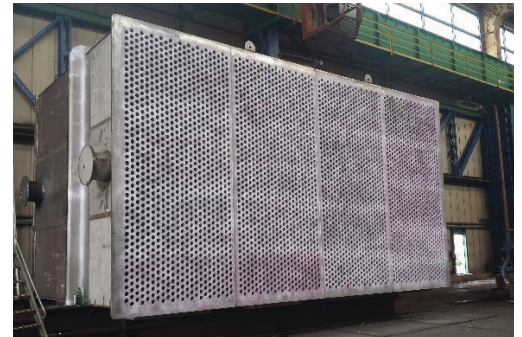
- Electric power generation plants (coal, petcoke, oil)
- Gasification plants
- Non ferrous metal smelters
- Carbon black plants
- Sour gas treatment
- Any other industrial plant with SO₂ stack emissions greater than 20 MTPD



CORE™ Converter Details



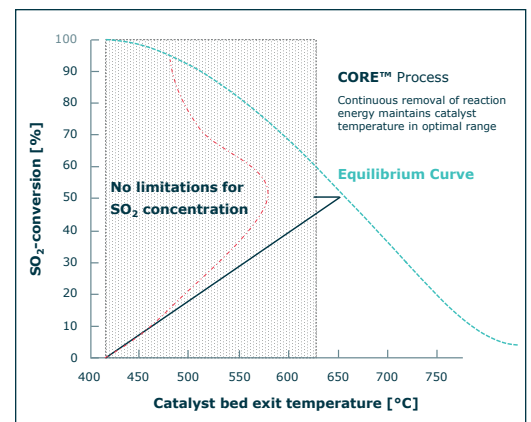
CORE-FGD™ installation, South East Asia



CORE™ Tube Bundle ready for shipment



CORE™ Converter with catalyst installed
(5 year inspection)



Continuous active cooling of catalyst in CORE™ ensures optimal conversion