

## PLANT PORTRAIT

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### Technical Plant Sea Water – FGD ( Flue Gas Desulfurization Plant )

#### Lentjes GmbH, Germany, Ratingen

The plant serves to obtain the process parameters for the absorptive separation of sulfur dioxide ( $\text{SO}_2$ ) from the waste gases of power plants with sea water. The plant includes a section for artificial production of sea water, a reactive column for the specified and calculated oxidation of primary formation of sulfites for the secondary end product sulfates, a regulated flow of oxidizing air and the necessary periphery control devices and measuring instruments.

The technical plant serves for the construction and lay out of industrial waste gas cleaning devices.



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- From a container the demineralized water is pumped in a heated storage tank and through the addition of different salts an artificial sea water is produced. This tank is equipped with agitator.
- This artificial sea water from the storage tank is diverted in a reaction tank, in which the main oxidation reactions can take place. The sea water can be circulated through a circulating pump. The water level in the reaction tank is variable. Depending on the water level the samples in the system could be taken and the exact development of oxidation reaction could be determined.
- The addition of oxidation air is achieved with pressure and volume control, through special aeration system with air distribution which is installed at the bottom of the reaction tank.

### Plant Data :

Storage Tank : 2,5 m<sup>3</sup> Storage Capacity  
Water Level Indicator  
3 Agitator  
3 Electrical Heater each 9 kW  
Heating time from approx. 20°C to 50°C within 3 Hours

Reaction Tank : Material Plexiglas  
Diameter 0,8m, Height (Reactor Sump) 1,7m  
Total Height 3 m

Delivery First Plant 2000  
Modification 2006