Thermoplastic Materials in New Fields of Application

## Flue Gas Desulphurisation Plants (FGD)

Instead of the normal procedure of protecting the spray levels against the high chemical, thermal and mechanical stresses Steuler produces these large dimensioned components totally out of polypropylene.

The advantage of using polypropylene is that this material does not require additional protection since the smooth, nonporous surface prevents the formation of caking deposits or incrustations. The service life of this material is virtually unlimited. Damages caused by media absorption, the formation of deposits or a chemically induced alteration of the surface can be effectively ruled out.

Steuler makes use of the advantages of this material combined with its exceptionally high resistance to abrasion in corrosion protection systems for concrete scrubber assemblies. The conversion of these processengineering plants to concrete construction eliminates the elaborate prefabrication procedure as well as the costly and time-consuming substrate preparation for the large-scale absorption towers. Even complex constructions can be executed with great speed and reliability.

Steuler utilises its proven Bekaplast<sup>TM</sup> System for these thermoplastic linings. Since the concrete construction and the lining are executed in one operation, this method offers substantial advantages in terms of time alone. The finished structure is operational without delay and may be exposed to loads immediately.

Absorber building Switching equipment building

Spray levels and sieve boxes made of Polypropylene

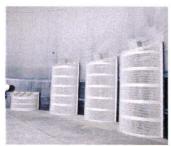
Mechanically anchored polypropylene lining in concrete scrubber constructions



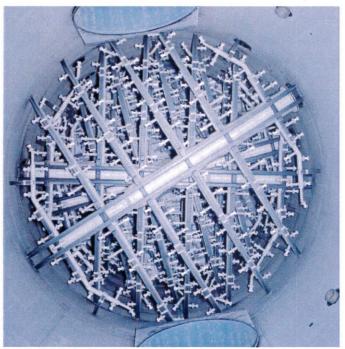
Large-scale thermoplastic sheets are anchored into the concrete during the construction.



Concrete design of a scrubber in a flue gas desulphurisation plant with a mechanically anchored thermoplastic lining system



Sieve boxes made of polypropylene.



Flue gas desulphurisation plant with spray levels manufactured of polypropylene.



Large-scale sealing and ceramic tile lining system in a flue gas desulphurisation plant

Thermoplastic channel anchored into the foundation with special details for connection them to the tiled industrial floor.

Crack-bridging floor coating system in an absorber tower, glass fiber reinforced plastic pipelines, trench systems and grids.

Floor surfaces in the absorber areas or in the gypsum dewatering area must be thoroughly and reliably protected against chemical attack by gypsum suspensions, acids, alkaline solutions, demineralised water and electrolytes. Floor surfaces that are executed with a slight incline will prevent the formation of incrustations and bridging of viscous gypsum paste.

Fluctuations in temperature, vehicular traffic with heavy loads, scratching/scraping with sharp-edged metal components either during operations or maintenance works — industrial flooring systems supplied by Steuler will withstand these and other loads safely and reliably. Special surface properties such as exceptional levelness and slip-resistance improve operating conditions and contribute to work safety.

When highly concentrated chemicals or other aggressive substances, for example in pits, trenches, in the direct vicinity of the works or in other critical areas, cannot be removed continuously, acid-proof ceramic tile linings by Steuler provide long lasting protection.

System solutions matched to all process conditions

## Raw gas ducts, chimneys, heat exchangers, process tanks

A wide range of requirements need to be met by the corrosion protection products in the gas transporting equipment dependant on the type of system and fuel used. For stresses occurring due to extreme temperatures, high diffusion potential, hot sulphuric acid

concentrate or strong abrasion Steuler offer the appropriate corrosion protection system.

Coatings are applied either spray or trowel applied, MFA sheet linings are fixed at pre-determined points and welded together. Out of the wide range of products the technically and commercially correct solution can be selected for each application.

Flake coatings on the basis of vinyl ester- or epoxy resins,

MFA-sheet linings