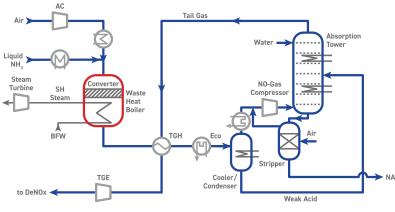
PLANT SIMULATION SERVICES - PROSIM PLUS HNO₃







LEGEND

AC Air Compressor
BFW Boiler Feed Water
NA Nitric Acid

TGE Tail Gas Expander
TGH Tail Gas Heater
WHB Waste Heat Boiler

ProSim Plus HNO₃ is a tailor made tool to model and simulate nitric acid production plants and nitrous vapours absorption units.

Thanks to a reliable modelling of the steady-state behaviour of the installation, it helps to generate significant improvements in efficiency and profitability as well as to increase reactivity when facing new regulations.

Steinmüller Engineering (SE) provides detailed know how on engineering and supply of key components for Nitric Acid plants (Ammonia Burner, Waste Heat Boiler, Heat Exchangers).

For simulation of boilers and heat exchangers we use our in house tool DimBo. It is applied for recalculation and design of steam generators and other complex heat exchanger systems.



By combining ProSim process models for the complete plant and SE's in-house tool DimBo, SE provides a broad field of process analysis for your plant.

APPLICATION

Monitorina

 Analyzing plant performance continuously to increase profitability and reduce shutdown periods

De-bottlenecking

 Identification of bottlenecks on the existing plant to extend production capacities

Optimize

 Simulation of "what-if" scenarios and sensitivity analysis

BENEFITS

- Our engineers combine know-how on overall process simulation and detail design of key components
- Steinmüller Engineering acts independently from any licensor's technology and proprietary equipment
- Your data will be kept confidential



REFERENCE PROJECT

The following reference describes a project to increase plant capacity by recalculating the boiler and its related equipment which was successfully carried out by SE. Combining these tasks with ProSim, the scope can be extended on the overall plant.

OCI Nitrogen located in Geleen, The Netherlands, operates a Nitric Acid Plant SZF6 which was commissioned in 1987. OCI intended to increase the plant load by approx. 20 % and assigned Steinmüller to investigate the impact of such a load change on the process conditions of the waste heat system.

Based on operating conditions SE re – calculated the Waste Heat Boiler in order to receive information on the efficiency of the heat exchangers installed. Afterwards the obtained results were used to simulate the planned load increase.

Recalculating of current load cases identified a poor efficiency of the economizer bundle compared to other heating surfaces. In fact the economizer turned out to be the bottleneck for the intended load increase. Therefore, SE re-designed the eco for consideration of increased load and supplied the new designed eco to OCI.

After successful installation the plant runs with an increased load providing a high thermal efficiency.

ABOUT US

Founded in 2003 in Gummersbach, Steinmüller Engineering has rapidly grown to become a major international player for engineering and consulting services.

Focusing on the power industry and thermal processes the company is well positioned to manage complex and challenging new builds or modernization projects.

We are a company of international engineers, with broad experience and passion for technology and we love new challenges.

This wealth of experience is benefitting our customer and adds value to their processes.

TURN OUR EXPERIENCE INTO YOUR ADVANTAGE!

CONTACT

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