

# BERTSCHenergy

Power plants  
Process equipment

95  
YEARS

TRADITION  
QUALITY  
KNOW-HOW  
SINCE 1925

## Process Gas Cooler and Convection Bank for Ammonia Production

Reference Sheet



**BERTSCH**

TRADITION, QUALITY, KNOW-HOW. SINCE 1925

## »Process Gas Cooler and Convection Bank for Ammonia Production in Linz - Commissioning end of 2012/beginning of 2013«

Ammonia is the basis material for producing the most important industrial nitrogen compounds: ammonium salts (fertilizer), polyurea (adhesives), nitric acids (explosive materials, etchants).

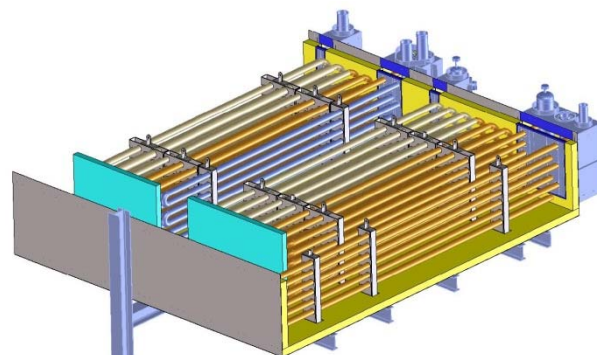
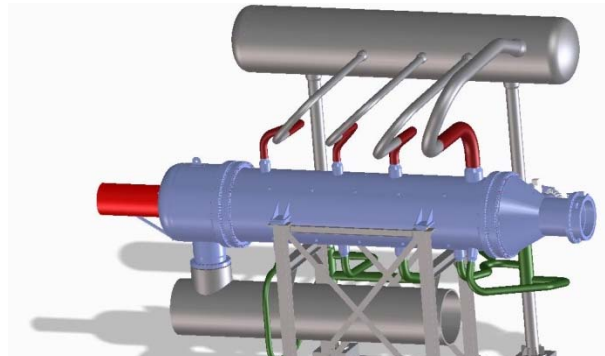
Ammonia is made almost exclusively through the Haber-Bosch procedure (direct synthesis from nitrogen and hydrogen).

The process gas from the primary and secondary reformers – with peak temperatures of up to 1100°C and pressures of around 40 bar – has to be cooled in a controlled manner, in order to be further utilized in additional reactions steps.

Parallel to this, heat should also be recovered from the waste heat output of the reformer in order to heat up steam, combustion air and diverse gas-steam mixtures.

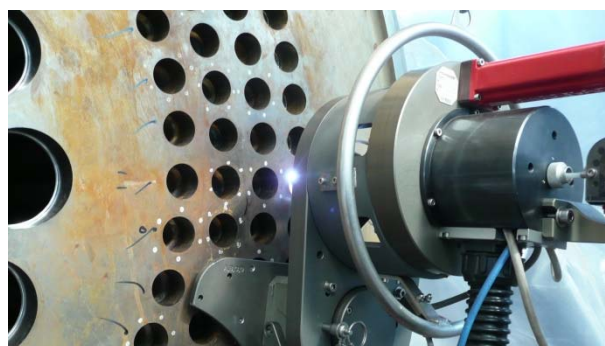
Our **thermotechnical, static and finite element calculations** as well as **3D and 2D-constructions** lead to optimal building components.

Through **highly specialized manufacturing (e.g. internal bore welding)** an optimal quality for building



### TECHNICAL DATA

» Design-code	AD 2000
» Main materials	13CrMo45, WB36, P91
	Alloy-materials
» Flue gas flow	205.000 m <sup>3</sup> n/h
» Thermal power all systems	87,5 MW
» Steam output	165 resp. 96 t/h
» Design Pressure of high pressure process gas cooler	135 barg
» Heaviest component	95 t



### SCOPE OF SUPPLY

» Pressure parts
» Refractory lining
» Bypass control valves

