

BERTSCHenergy

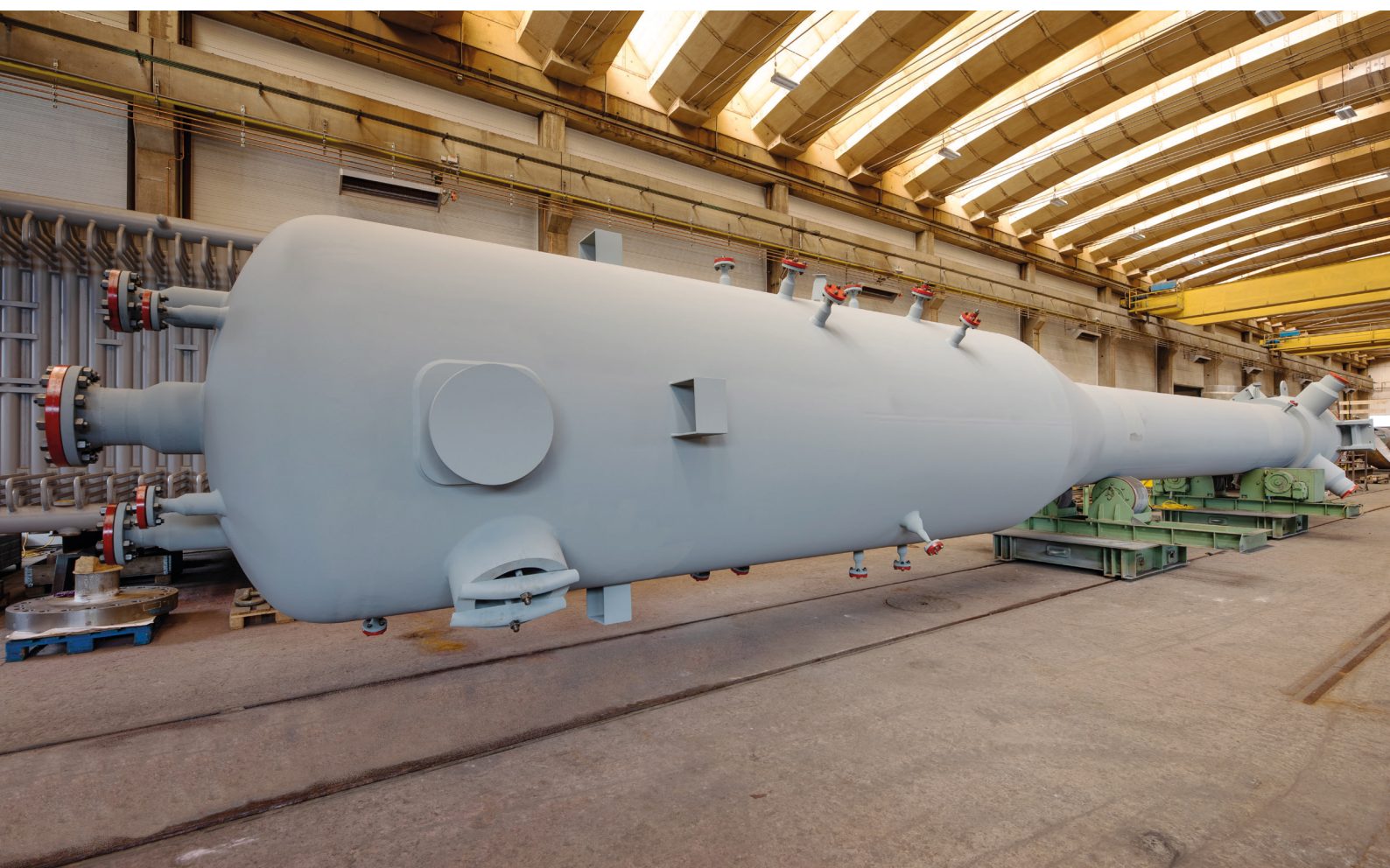
Power Plants
Process Equipment

95
YEARS

TRADITION
QUALITY
KNOW-HOW
SINCE 1925

Waste heat boiler (E-1014) and BFW preheater (E-1003)

Reference Sheet



BERTSCH

TRADITION, QUALITY, KNOW-HOW. SINCE 1925.

» Waste heat boiler E-1014 with integrated steam chamber and BFW preheater E-1003 - Full REVAMP «

Poland | Commissioning date: 08/2019, Coolers are part of AMMONIA PLANT

This bottom-heated vertical U-tube evaporators/economisers with 314 (!) barg design pressure on gas side are most challenging vessel types. The tubesheet-to-tubes-weldings as well as the parts itself have to withstand high gas temperatures, this enormous pressure and a H₂/CO rich process gas. Client faced terrible problems with existing equipment (various damages but due to blocked inspection openings no possibility to repair) and asked BERTSCH for improved solutions.

FEM calculated construction details, material upgrades and modern "Superbolt" connections for inspection openings created BERTSCH vessels that ended clients suffering.

TECHNICAL DATA

» Process gas flow max.	900,000 m ³ n/h
» Max. gas inlet temperature	395 °C
» Max. gas inlet pressure	314 barg
» Max. heat duty	58 MW
» Max steam pressure	47 barg
» Max. steam production	88.90 t/h

VESSEL WEIGHTS

» E-1014 / E-1003 empty	~ 63 / 32 t
» E-1014 / E-1003 in operation	~ 81 / 37 t
» E-1014 / E-1003 filled with water	~ 90 / 37 t

SCOPE OF SUPPLY

- » Full REVAMP of vertical U-tube process gas coolers (E-1014 with integrated steam chamber)
- » Dismantling of the old and erection of the new equipment. System is based on Haldor Topsoe Licence.

