

HALDOR TOPSØE A/S DENMARK

CALCULATION, ENGINEERING, PRODUCTION, CHEMICAL CLEANING AND NITROGEN FILLING OF A "WASTE HEAT BOILER".



Haldor Topsøe based in Denmark supplies high-performance catalysts, proprietary technologies, process design, engineering, and services for use in the chemical and oil & gas industries, and they are at the forefront of developing sustainable technologies.



Project features/ scope of supply:

Calculation, engineering, manufacturing, chemical cleaning, seaworthy packaging, documentation and delivery.

Main materials:

ASME Materials: SA-387 G.22 Cl.2, SA-533 Gr.B, SA-213 Gr.T22, Tp.310S and Alloy-625, 6mm weld overlay on the tube sheet made of Alloy-625.

Special features of the project:

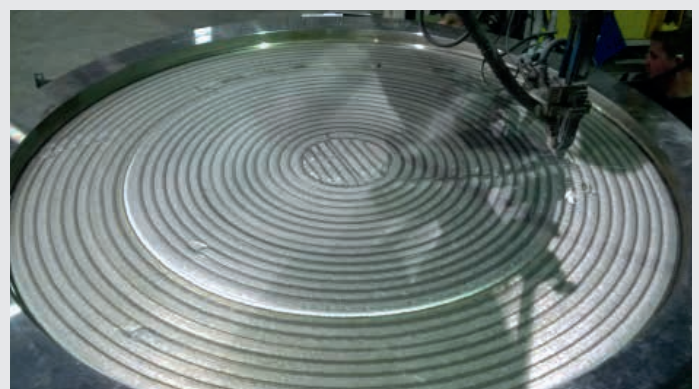
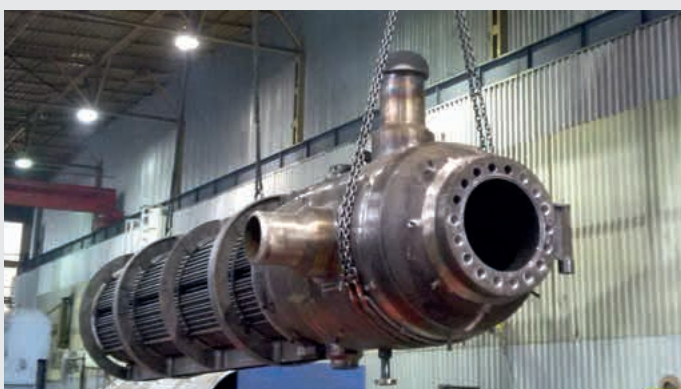
Heat exchanger vessel with internal U-tube bundle (475 pieces of U-tubes) was manufactured in two heating units according to the ASME Code Section VIII Div.2. After heat treatment the SA-387 part, including tube-bundle, was welded to the SA-533 jacket which was separately heat-treated at lower temperature and subsequently locally heat treated and tested (incl. phased array ultrasonic examination).

The tube to tube sheet welding of the heat exchanger tubes was carried out by means of automated GTAW welding with constant preheating to 150° C. A cladding at all welding ends of the nozzles was necessary in order to be able to weld the site welds completely without local heat treatment. Another cladding of the entire area of the tube sheet with Alloy 625 material was requested by the customer. The air and helium leakage tests performed during the production and the final water pressure test proved the accuracy of the apparatus.

The painting of the vessel, the chemical cleaning of the inner side of the jacket including the complete tube-bundle and the nitrogen filling through to the ship transport ensure a perfect provision of the boiler to Argentina.

Outcome:

The successful (in terms of time and costs) execution of this order was made possible thanks to our extensive experience in the field of vessels and apparatus engineering (pressure vessels, tube bundle heat exchanger, columns, etc.) for the chemical and petrochemical industry and thanks to our experienced project team. This allowed for the heat exchanger to be handed over and/or accepted to the complete satisfaction of our customers and sent to the construction site in a timely manner.



Other Operations

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