

The ideal concept for high capacity deck boilers

Aalborg Industries' top selling product for today's large FPSOs and FSOs is the MISSION™ D-type boiler. Since the new version for an operation pressure of 40 bar with built-in superheater was introduced to the market, the concept has been developed even further. Aalborg Industries can now also offer the boilers with complete accessories installed on skids including piping, wiring, platforms and walkways.

The MISSION™ D-type

MISSION D-type is a compact and very sturdy boiler designed for rough seas and high g-forces and is manufactured with the best techniques available today. Thanks to the extended surface in the convection part, the boiler gets compact but still with a larger furnace compared to other boilers of similar type. The result is a low level of thermal stresses and a long life.



MISSION™ D-type boilers

The standard MISSION D-type is designed for capacities up to 120 t/h saturated steam. It is a vertical two-drum boiler with square configuration. Large external downcomers secure good natural circulation at all loads. The furnace consists of membrane walls forming a fully water-cooled and gas-tight furnace. The boiler is designed for one, two or three burners depending on the required steam capacity. The burners are located on top of the furnace, which provides a long and natural flame path with a complete combustion. The boiler is designed with a minimum of refractory.

The D-type boiler can also be delivered for an operation pressure of 40 bar and with a built-in superheater for 400°C. The pressure is sufficiently high

to yield a good power production from a turbine and low enough not to require the more extreme water qualities or advanced materials in valves, pipes and in the boiler itself. The cost is also considerably lower for the 40 bar D-type compared to a 60 bar boiler, not only for the boiler, but also for the total steam system with turbines, pumps, valves, pipes, etc.

Our MISSION™ D-type for 40 bar is a result of decades of experience from industrial boilers in combination with marine main propulsion boilers and auxiliary boilers. We have taken the best from the various fields of our product range and have combined it into this boiler - probably the best FPSO boiler in the market.

The two versions of our D-type boiler have been selected for several prestigious projects and have already today reached a cumulated steam capacity of around 1500 t/h for the offshore industry alone.

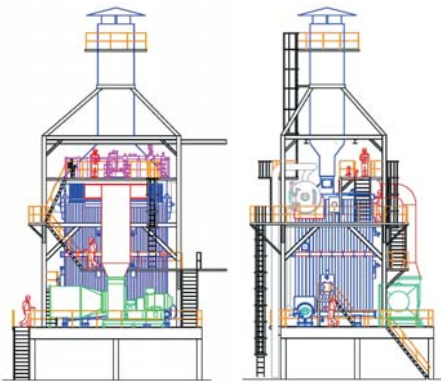
Complete solution

In order to meet market demands, Aalborg Industries have developed a concept where the boilers and all their accessories are assembled on skids. This reduces the time for installation at the yard by several months, at the same time as the quality of the entire process unit is secured.

The skid concept was selected by Prosafe - one of the leading offshore players - for their Tui FPSO. The concept is also being evaluated by other FPSO owners and operators.

The Prosafe order includes two MISSION™ D-type boilers for 90 t/h saturated steam at 22 bar, the very same

boiler as for their Espoir Ivoirien FPSO and Abo FPSO. The boilers will be fired with gas as the leading fuel and with diesel as back-up.



Front and side view of the skid.

Each boiler will be installed on one skid with the burners, FD fan, fuel skids, local control panel, etc and with the complete piping and wiring up to the termination points at the skid edge. To ensure a short delivery time the skids are pre-fabricated with platforms, walkways and most of the piping before the boilers and combustion systems arrive for installation at the skid contractor's premises.

Solutions for the future

The MISSION™ D-type boiler is by far the leading boiler for FPSOs. With the new concept including skid assembly we take a strategic step in the right direction and we secure our position as today's market leader in boilers for the international FPS market. With several ongoing discussions with leading oil majors, owners and operators, we feel confident that there is a good future for our MISSION™ D-type boiler - with or without skids - as well as for all our other products.