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V-Boom

Reduce heat radiation and fire risk from burners

APPLICATIONS

- Operations in the North Sea
- Support for and access to the burner and piping

BENEFITS

- Reduce heat radiation and fire risks for increased rig personnel safety

FEATURES

- Modular triangular design
- H_2S service suitability
- Two or three sections
- Piping for oil, water with filter, air with check valve, and pilot light lines, in addition to one gas flare line
- Peacock-tail water screen

A triangular modular boom design for North Sea flaring operations

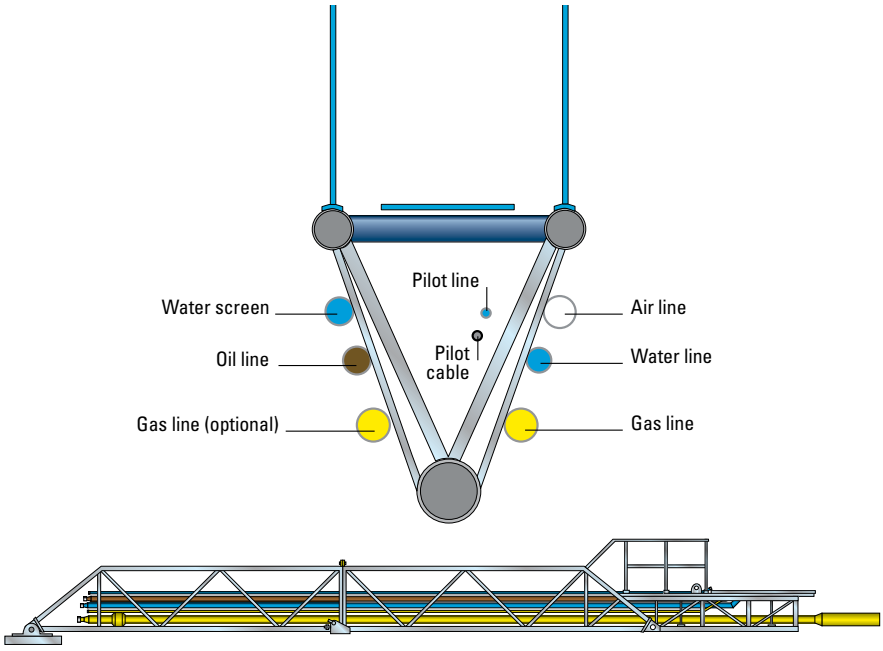
Burners are designed to dispose of oil produced at the surface during offshore well tests, but the flares must be kept at a safe distance from the rig. To limit the heat radiation onto an offshore platform or drillship and to protect rig personnel, the burners are supported by long booms.

The V-boom, designed for use in the North Sea, is a heavy-duty triangular modular design. A two-section V-boom measures approximately 60 ft [18 m] in length. Adding an intermediate section increases the boom length to about 85 ft [26 m].

The heavy-duty design allows the V-boom to withstand winds to 100 mi/h [161 km/h] and an ice thickness to 2 in [5 cm]. The piping is positioned laterally below the gangway.

The V-boom is mounted on the rig with a rotating base plate and guy lines. Horizontal guy lines are used to orient the boom; vertical guy lines fixed to the rig's main structure support the boom. The rotating base enables horizontal and vertical positioning of the boom and burner. When the boom axis is positioned slightly above horizontal, oil left in the piping after flaring operations will not leak out and cause pollution.

To ensure nonhazardous burning in changing wind directions, two V-booms are typically installed on opposite sides of the drilling platform or drillship.



V-Boom.

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Specifications		
Model	**UBB-A**	**UBB-B**
Service	H_2S	H_2S
Length, ft [m]	85 [26]	60 [18]
Width, ft [m]	3.6 [1.1]	3.6 [1.1]
Weight, lbm [kg]	16,980 [7,700]	11,680 [5,300]
Working temperature, degF [degC]	–4 to 212 [–20 to 100]	–4 to 212 [–20 to 100]
Dynamic conditions		
Lateral wind velocity, mi/h [km/h]	100 [161]	100 [161]
Ice thickness, in [cm]	2 [5]	2 [5]
Connections, Fig. 602 female/male		
Air, in [mm]	4 [101.6]	4 [101.6]
Oil, in [mm]	3 [76.2]	3 [76.2]
Gas†, in [mm]	4 [101.6]	4 [101.6]
Water, in [mm]	3 [76.2]	3 [76.2]
Applicable codes	ASME‡, B31.3, DNV§ NPD††	ASME B31.3, DNV, NPD

† Optional 4-in [101.6-mm] and 6-in [152.4-mm] gas line connections are available.

‡ American Society of Mechanical Engineers

§ Det Norske Veritas

†† Norwegian Petroleum Directorate

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