SMOKELESS STEAM ASSISTED FLARE TIP

The TCD Italia's steam-assisted tip is a smokeless flare burner suitable for use with a wide range of gases.

Steam is injected directly into the root of the flame by means of numerous nozzles positioned around the top of the flare tip, so that the jetting effect also draws air in the surrounding to produce more rapid and cleaner combustion.

The special high efficiency steam nozzles are designed to inspirate a greater proportion of air and to have a greater punch effect to inject further steam and air into the flame.

The location and orientation of these high efficiency steam nozzles ensures a very effective mixing of entrained air and flaring gases.
Steam also acts to cool the flame, thus preventing thermal cracking of hydrocarbons and consequent smoke production.

A centre steam nozzle can be utilized to break-up the core of the flaring gas and to prevent burn-back.
Centre steam nozzles can be derived from steam riser feeding steam to the upper steam manifold or with an independent steam supply line.

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The flare tip is fabricated from heat resistant stainless steel (usually 310S) selected to avoid the requirement for an internal refractory lining.

Also all the critical items such as flame retention plates, pilot heads and all welded attachments in the heat critical zones are fabricated from high nickel alloy (310S) and they are subjected to rigorous inspections during construction.

To further enhance the flare tip operating life and to maximize the performance of steam nozzles, an external slatted windshield is attach.

The special design of the windshield eliminates flame impingement caused by the formation of low press. zones on the downwind side of the flare.

Also the windshield is manufactured in heat resistant stainless steel (310S).

Each flare burner is equipped with pilot burners that provide a constant and reliable source of ignition.

The pilot flame is constantly proved via thermocouple.

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