



HIGH EFFICIENCY STEAM / AIR SMOKELESS FLARE TIP Mod. HES

The TCD Italia's HES Flare Burner is designed to provide maximum smokeless burning at reduced noise levels in a more efficient manner than a traditional smokeless steam assisted flare tip.

Smokeless combustion is achieved with the TCD Italia's HES Flare Tip through a lower steam manifold, an upper steam manifold and centre steam nozzle.

The lower steam manifold supplies a number of special steam ejectors which use the steam pressure to inspire atmospheric air into the internal mixing tube.

The resulting steam/air mixture is ejected from the tubes into the core of the flaring gas just at the top exit of the flare burner creating a turbulent smokeless flame.

In addition, the upper steam manifold incorporates special steam nozzles that increase the smokeless capacity of the flare tip.

The combined operation of lower steam manifold and upper steam nozzles results in a greater smokeless capacity than other flare burners.

This method of steam injection is not only more efficient than other traditional smokeless flare burners but it generates inherently less noise of source and it also permits the use of an integral or individual noise muffler which attenuates noise levels still further.



Centre steam nozzle is always required in this flare burner in order to inject steam into the centre of the flaring gas and as cooling medium for the tip internals.

It is preferable to use primarily the lower and centre steam nozzles, therefore steam control system is often arranged so that the lower manifold valve is opened first, and the upper steam manifold valve only opened on demand.

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HE 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 device, 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 an external slatted windshield is provided. The special design of the windshield eliminates flame impingement caused by the formation of low pressure zones on the downwind side of the flare.

Also, the windshield is fabricated 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.

