The cooler only removes seal face-generated heat plus heat soak from the process.

Recirculation from the seal chamber back to the pump suction to provide cooling and to vent air from the seal chamber.

The solids are delivered to pump suction line.

Recirculation from discharge through a cyclone separator delivering the clean fluid to seal chamber for heat removal and solids removal.

The solids are delivered to pump suction line.

Clean flush is injected into the seal chamber from external source.

This is chosen to improve the margin to vapour formation , to meet secondary sealing element temperature limits , or to improve lubricity.

Commonly used on vertical pumps and/or LPG application.

Plan12.

Commonly used for hot oil services such as the residue oil.

Pre-pressurized bladder accumulator provides pressure to the circulation system.

Plan12.

Plan12.

PLAN74 or 76 to help sweep leakage into a closed collection system.

A quench stream is brought from an external source to atmospheric side of the seal faces.

To prevent solids build-up on the atmospheric side of the seal.

A quench stream is brought from an external source to atmospheric side of the seal faces.

A quench pot.

A large quantity of leaks of the inner seal detect it in LSH or PSH of the Flare line.

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