

L23/30H - L28/32H Cooling Water System



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Properties/Characteristic	Properties	Unit
Water type	Distillate or fresh water, free of foreign matter.	-
Total hardness	max. 10	°dH*
pH value	6.5 - 8	-
Chloride ion content	max. 50	mg/l**

Damage to the cooling water system

Corrosion can be avoided by selecting the correct water quality and by carefully handling the cooling water system.

Flow cavitations can occur in areas in which high flow velocities and high turbulence is present. If the steam pressure is reached, steam bubbles form and subsequently collapse in high pressure zones. Causing destruction of materials.

Erosion is a mechanical process accompanied by material abrasion and the destruction of protective films by solids that have been drawn in, particularly in areas with high flow velocities or strong turbulence.

Stress corrosion cracking is a failure mechanism that occurs as a result of simultaneous dynamic and corrosive stress. This may lead to cracking and rapid crack propagation in water-cooled, mechanically-loaded components if the cooling water has not been treated correctly.

Uni-Concept Preheating of Standby GenSet



Operating principle

GenSets in standby position are preheated via the venting pipe (F3), leading to the expansion tank, with HT-water from the operating GenSet engines. One operating GenSet engine is able to preheat maximum two GenSets in standby position.

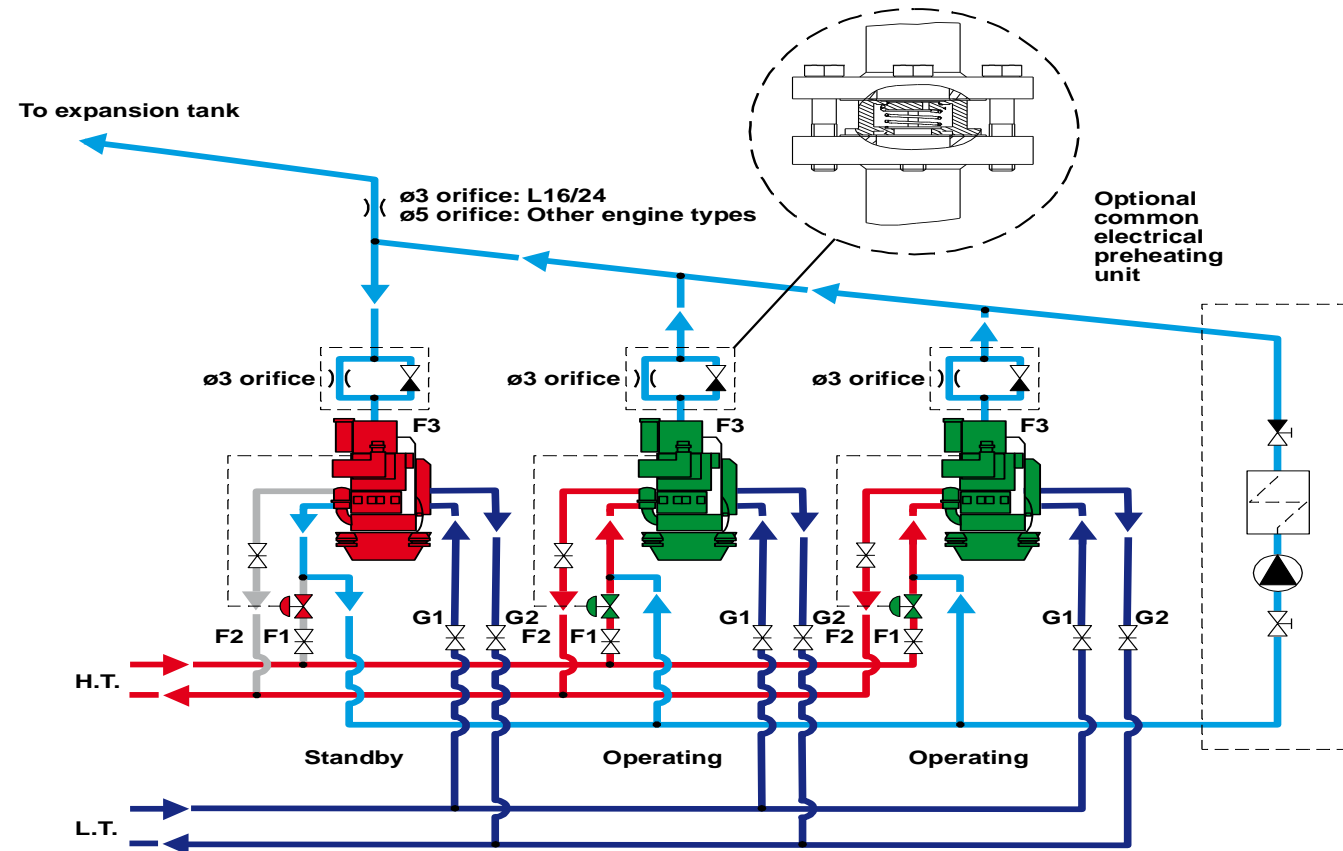
During preheating, the non-return valve on the pre-heated GenSet engine will open, due to the pressure difference. The HT-pumps on the operating GenSet engines, will force the HT-water downwards through the standby GenSet engine, out of the (F1) HT-inlet and back to the operating GenSet engines, via the by-pass manifold, which interconnect all the (F1) HT-inlet lines.

The on/off valve in the (F1) HT-inlet line is open, when the GenSet engine is operating, and closed when the GenSet engine is in standby position. The on/off valve is controlled by "engine run" signal or engine lubricating oil pressure.

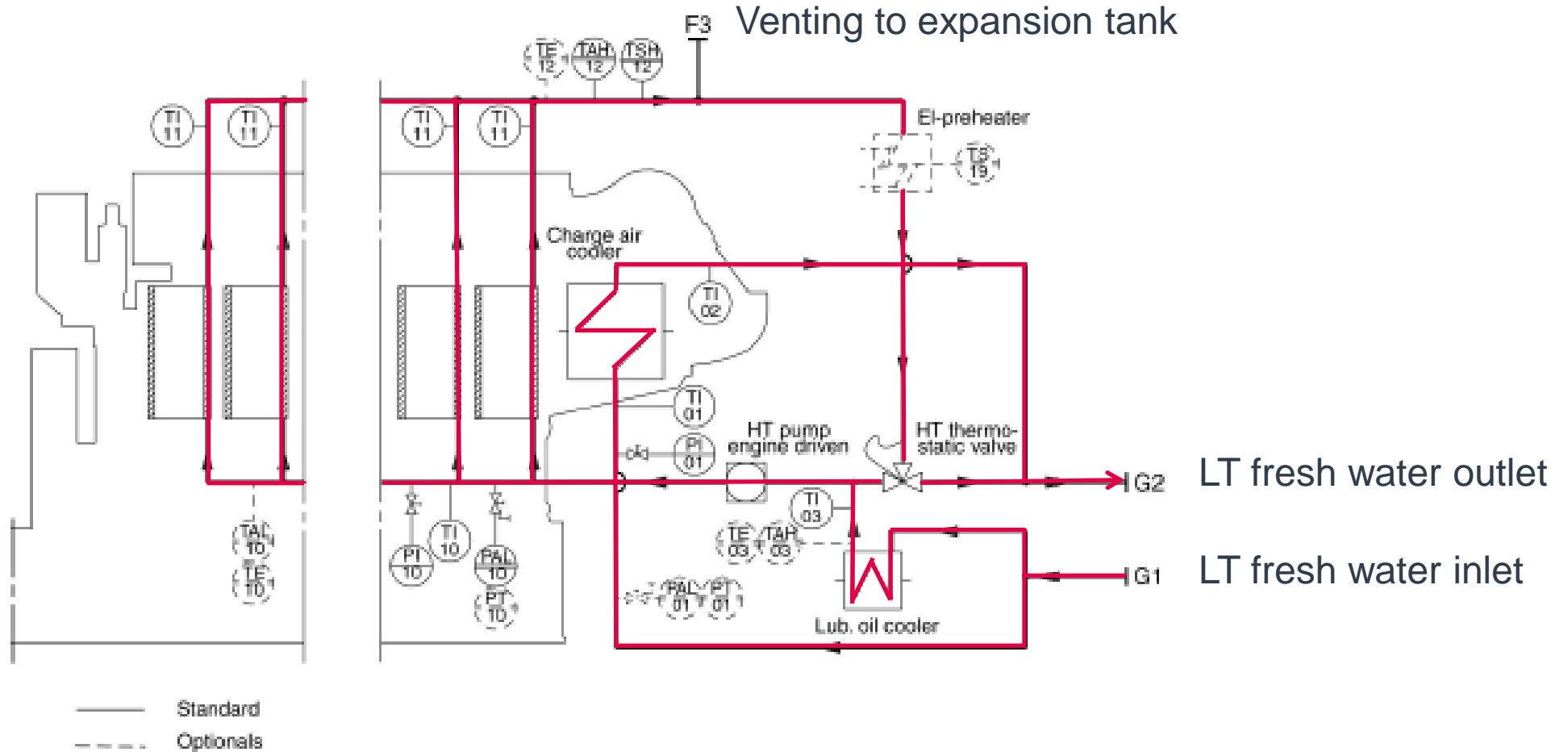
The nonreturn valve in the venting pipe (F3) is closed when the GenSet engine is operating, and de-aerating to the expansion tank flows through the small $\varnothing 3$ bore, in the non-return valve disc.

The small $\varnothing 3$ bore in the non-return valve disc will also enable the GenSet engine to keep the recommended cooling water temperature in the HT-system during low load operation, which is essential for the combustion of HFO.

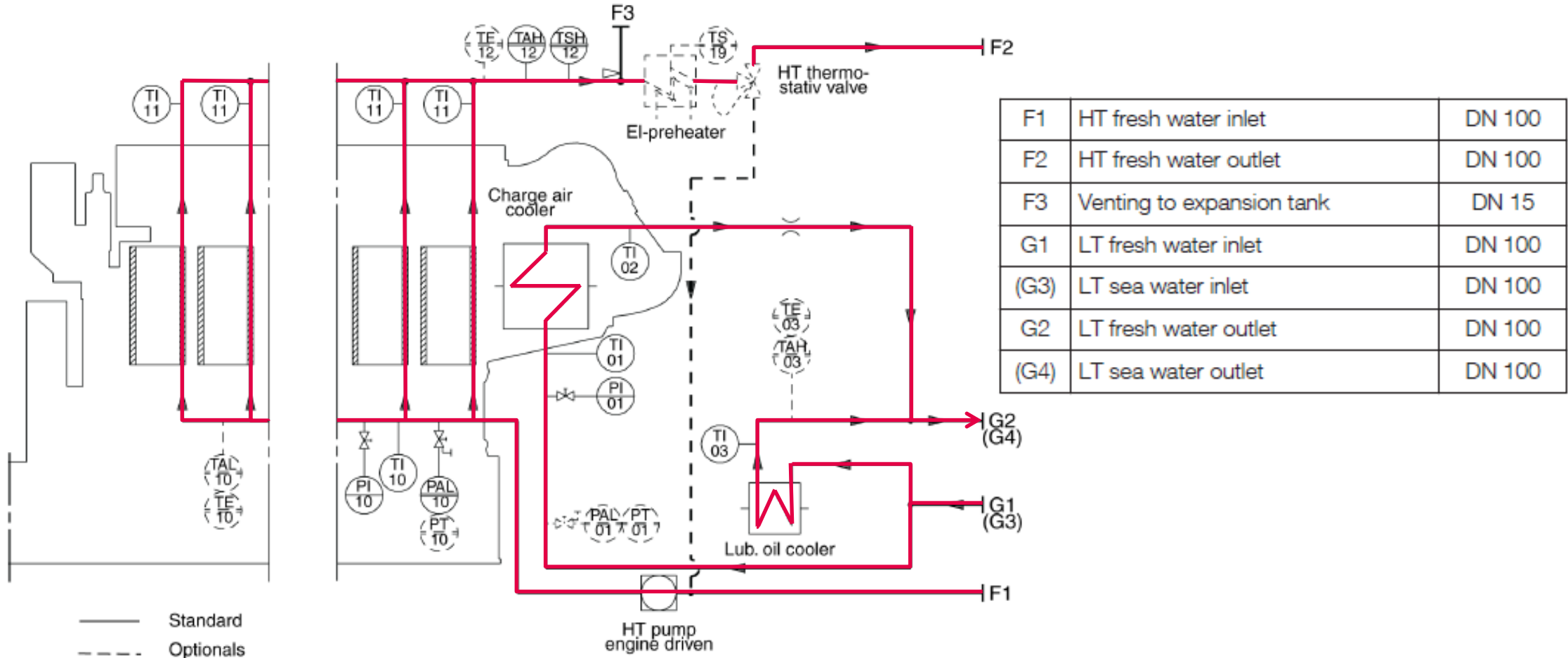
Two string system



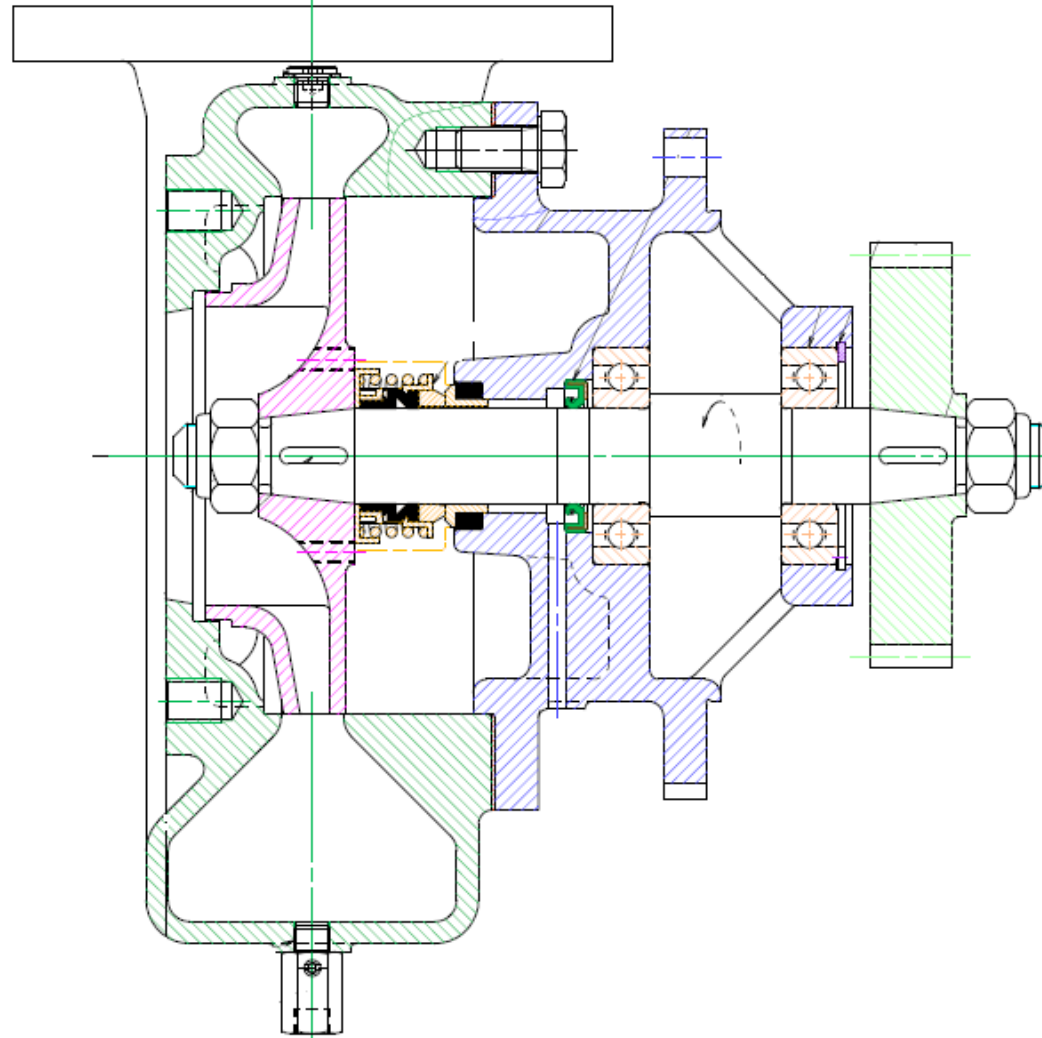
L23/30H - L28/32H Internal cooling water system 1



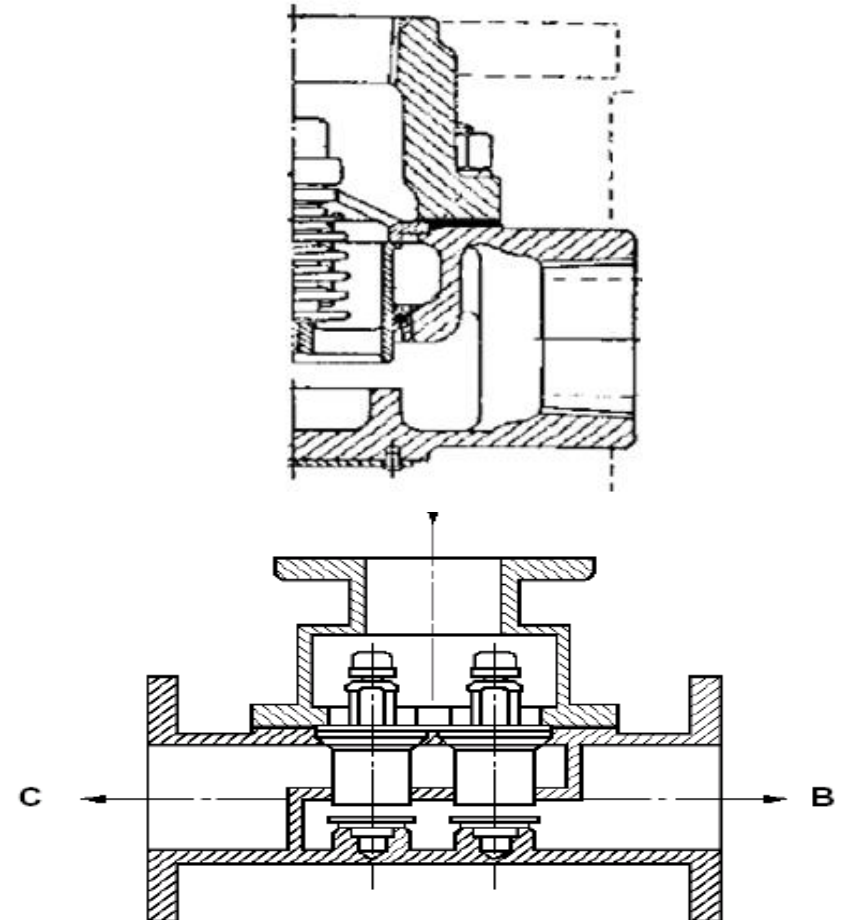
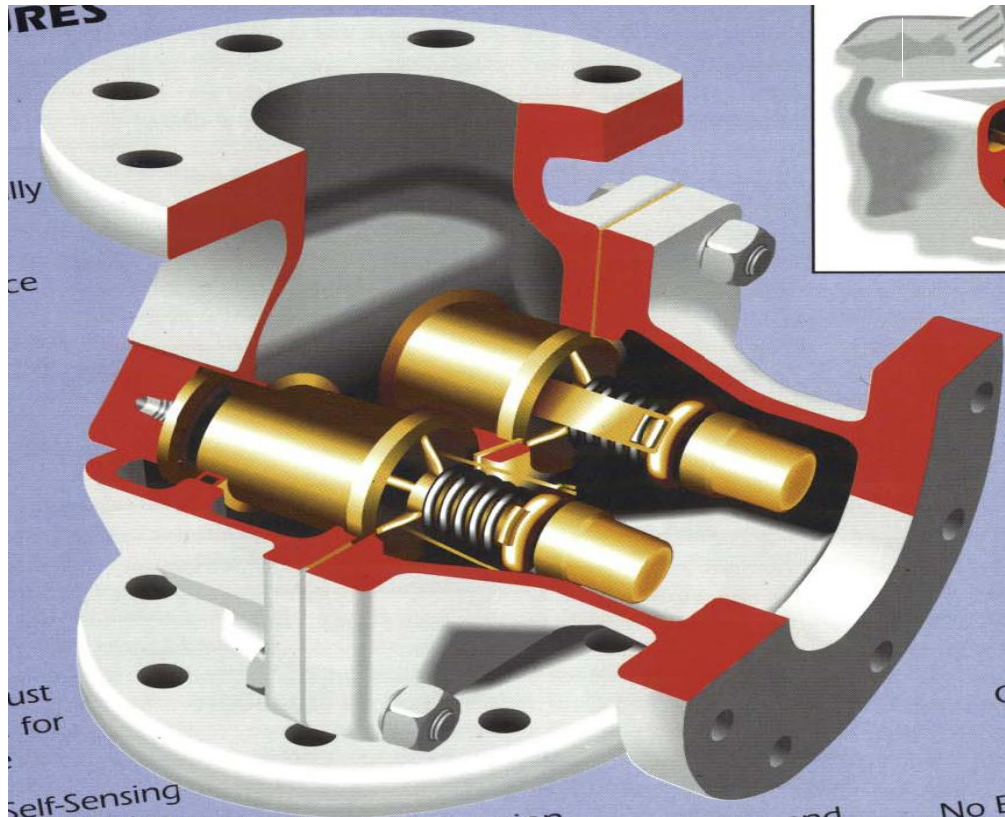
L28/32H Internal cooling water system 2



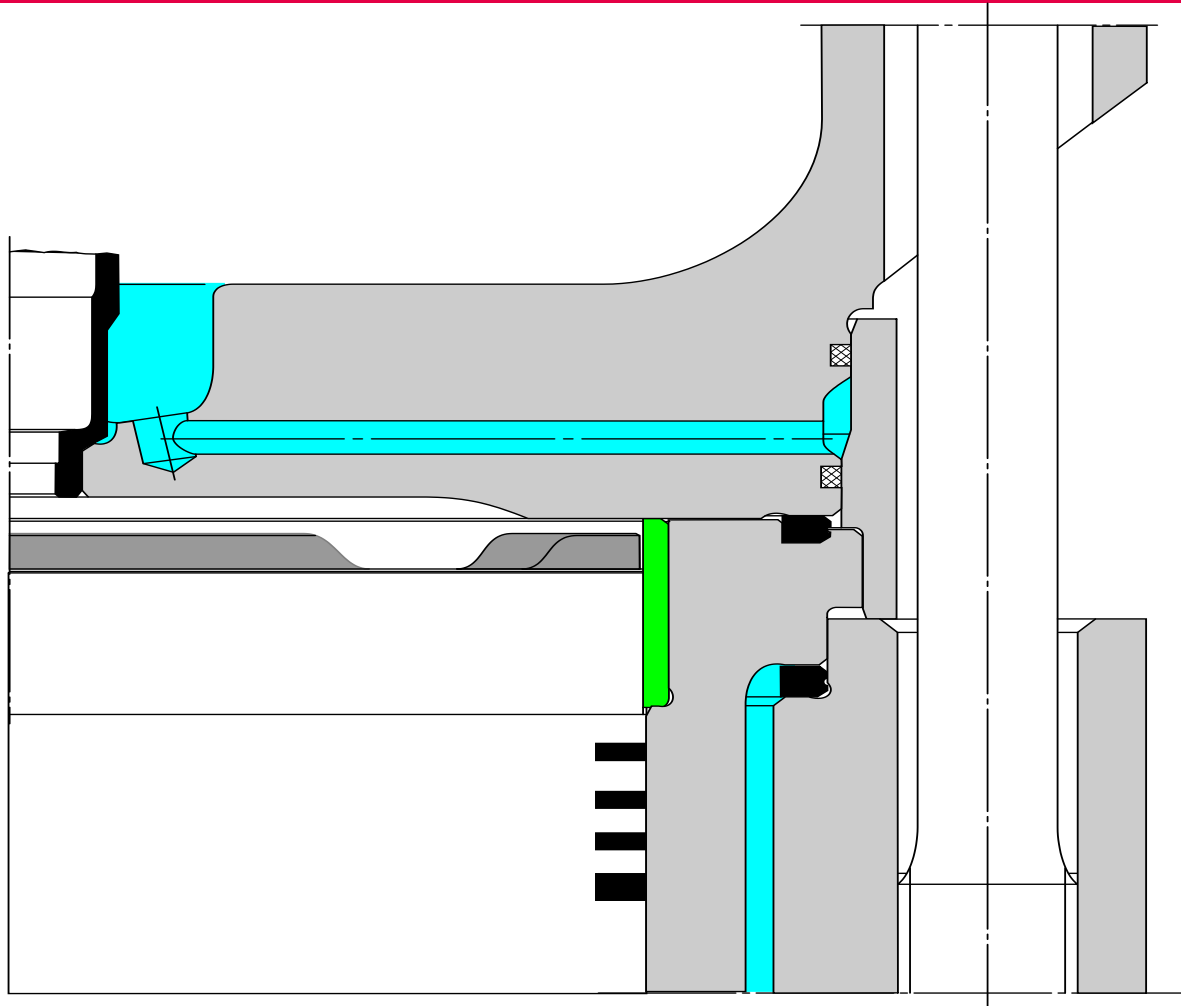
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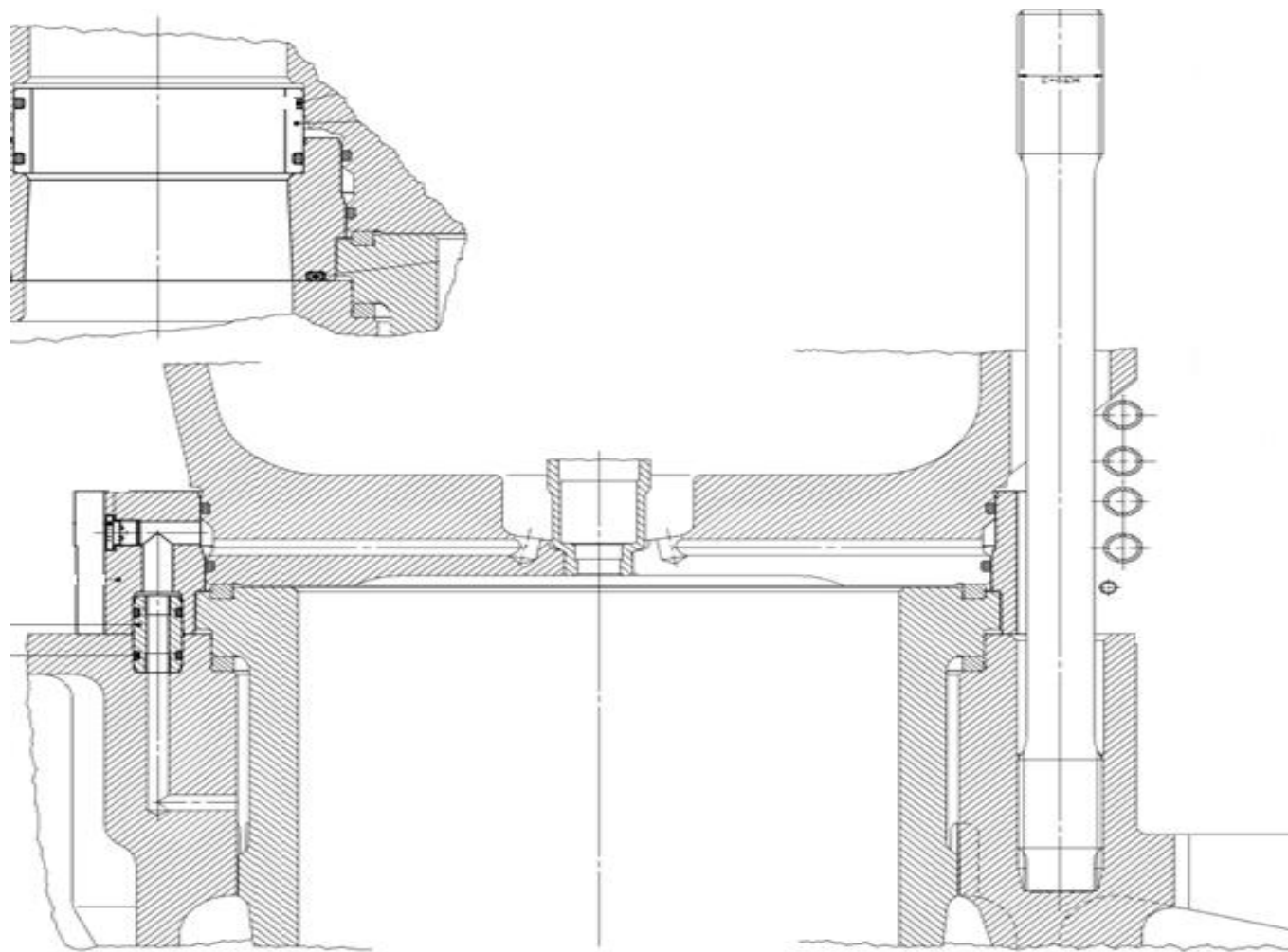
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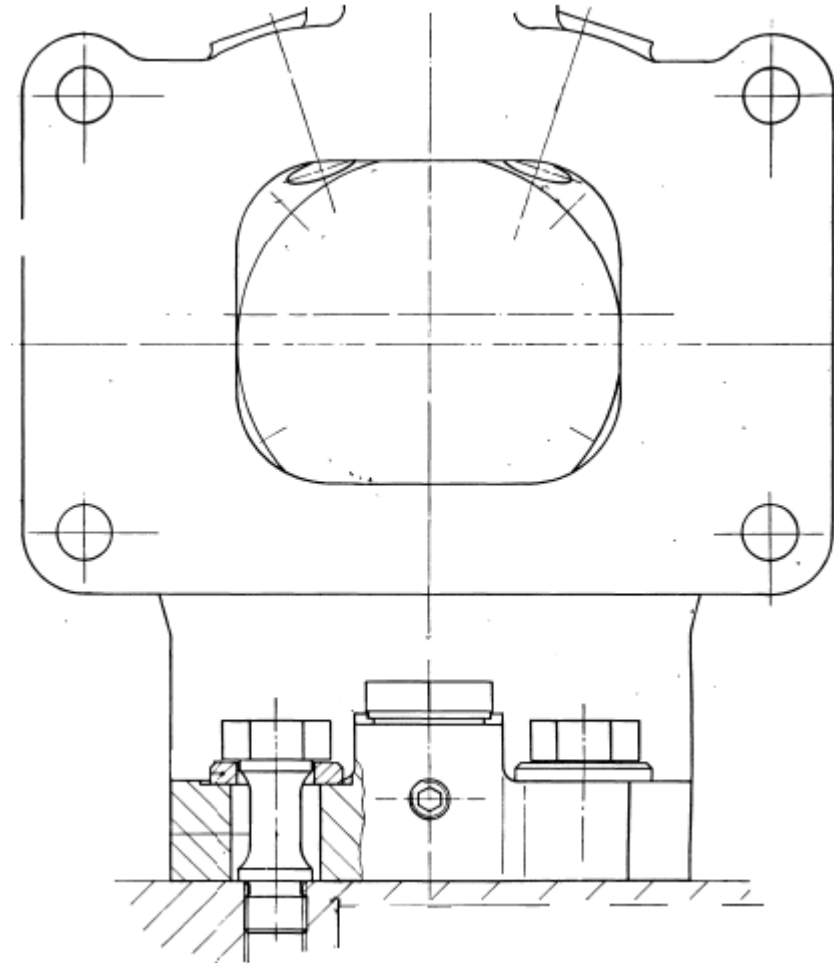
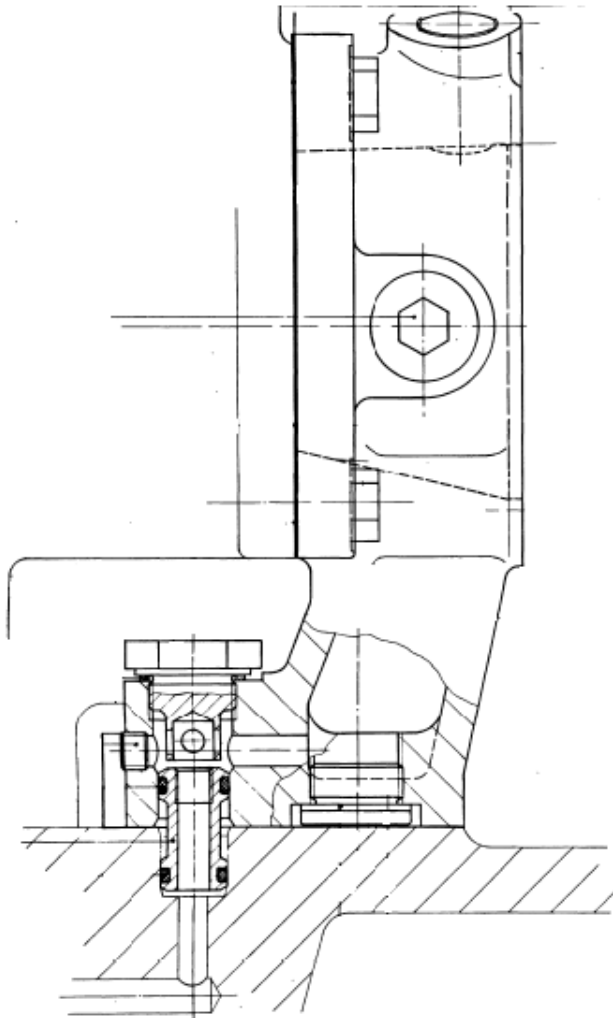
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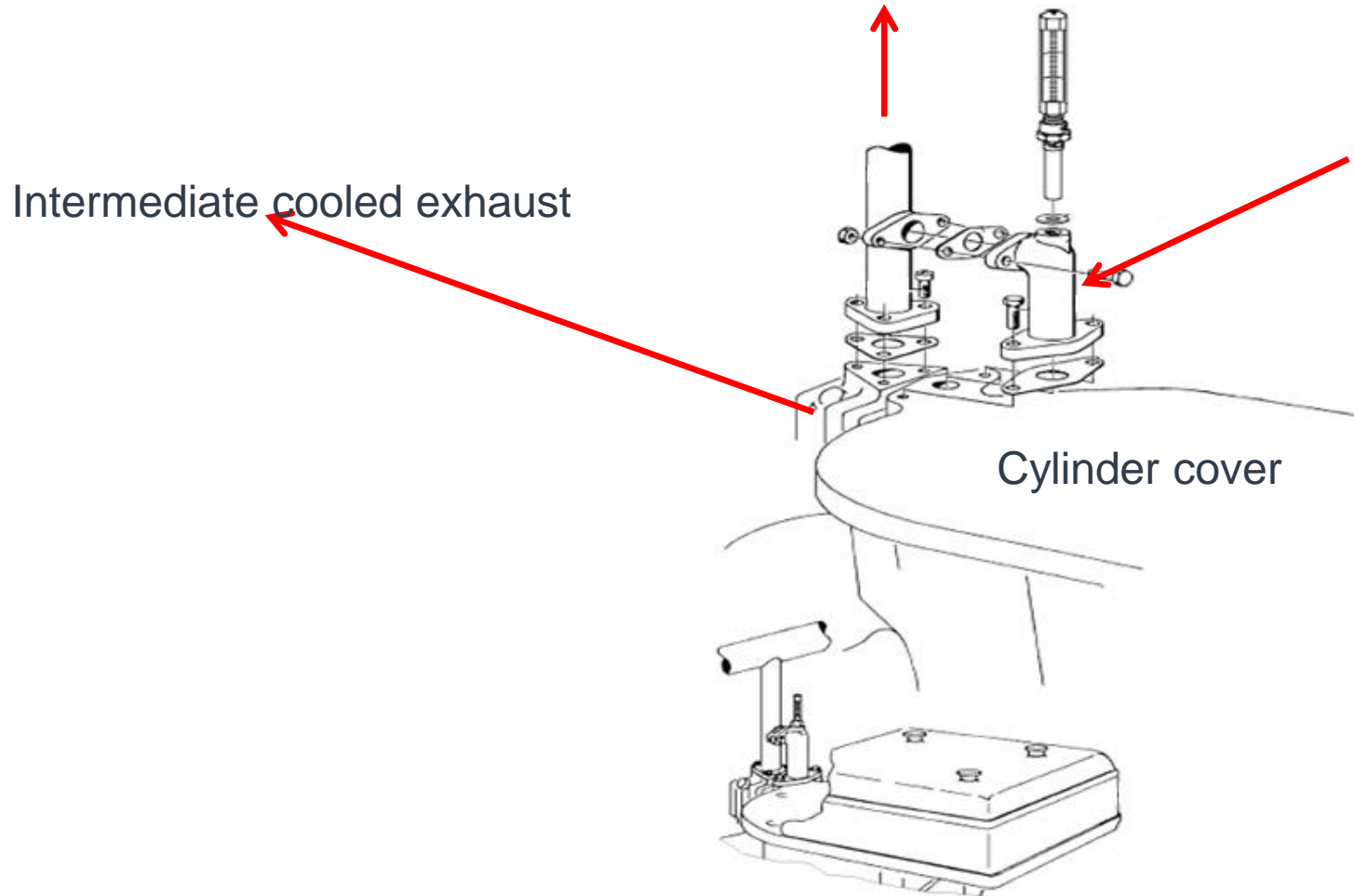
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Do you have any more questions?



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