

Pumps for propane release in cooling circuit from buried tank.



CASE STUDY: #0004

Initial problem:

A Plant in CONGO has a propane cooling circuit, which is condensed into a buried tank and put back in service by vertical pumps immersed in the tank.

Unfortunately these pumps collected a lot of dirt from the tank bottom and were constantly clogged and stopped. Maintenance was very complex, since the pumps had to be removed from the tank, which in turn had to be emptied, with prolonged system stop times.

M PUMPS solution:

Supply of two self-priming pumps with low NPSH side channels type SC-MAG-M40-2S, installed above the buried tank. Their priming capacity enables the use of a pump external to the tank and therefore the option, in case of fault, of intercepting them through valves and disassembling them without stopping the system (or without emptying the buried tank). Additionally, the option of this type of pumps to be able to pump mixed air - gas fluids up to 50%, enable propane to be pumped at a temperature range very close to evaporation, thus saving on all the equipment required to maintain a low temperature of the piping, allowing for a less expensive system.

Fluid Name	COMMERCIAL PROPANE	
Physical State		Liquid
Operating Temp. (Normal/Max)	C°	25
Density	kg/m3	494
Viscosity	cPs	10
Vapour pressure	Bar	9,6
Capacity(Min/Nor/Max)	m ³ /hr	20
Suction Pressure(Min/Norm/Design)	BarA	9,6
Discharge Pressure(Min/Norm/Design)	BarG	11
Diff. pressure	Bar	1,4
Total Head(Min/Norm/Design)	mcl	29
NPSHA	m	1
Design Pressure	Bar	16
Design Temperature	C	60
Solid Content	%	NA
Classification of Hazardous Area		Zone 1



These comparative advantages are the prime reasons for clients to consider mag. drive pumps against mechanical seal fitted pumps.

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