DISTILLATION COLUMN PERFORMANCE

CASE STUDY: #0040

End Customer:

The client, a leading player in the chemical processing industry, required a reliable and efficient pump to handle the demanding distillation column service. The pump needed to operate continuously, 24/7, making it a critical component of the unit's operations.

Initial problem:

S/No			NA		
Tag No.			NA		
Service Name			Distillation Column Service		
Unit Req'd			1		
Oper. Condition					
	Fluid Name *	Organic compounds			
	Physical State		NA		
	Operating Temp. (Norm/Max/Min) *	°C	NA	180	NA
	SG (Norm/Max/Min) *	g/cm³	0,85	NA	NA
	Viscosity *	cP	5		
	Vapour pressure	bar	NA		
	Fluid Character		NA		
	Capacity (Norm/Max/Min) *	m³/h	60	NA	NA
	Suction Pressure (Norm/Max/Min) *	bar	0.3	NA	NA
	Discharge Pressure (Norm/Max/Min)	bar	NA	NA	NA
	Diff. pressure	bar	NA		
	Total Head (Norm/Max/Min) *	m	45	NA	NA
	NPSHA *	m	3.7		
	Design Pressure *	kg/cm²	NA		
	Design Temperature	°C	NA		
	Solid Content *	%	NA		
	Classification of Hazardous Area		NA		
	Noise Level		NA		
	Painting		NA		
	Operation		NA		
	Installation Location		NA		

M PUMPS solution:

After thorough evaluation, our team selected the CN MAG M 65 200 pump, equipped with an 18.5 kW motor. This robust pump was specifically designed to meet the challenging requirements of the distillation process.

Robust Design for Continuous Operation: The CN MAG M 65 200 pump is engineered to withstand the 24/7 operation, ensuring uninterrupted performance in the distillation column.

Optimized for Organic Compounds: With a specific gravity of 0.85 and viscosity of 5 cSt, the pump is tailored to handle organic compounds efficiently, maintaining product integrity throughout the process.

High Temperature Resistance: Capable of handling liquids at temperatures up to 180°C, the pump maintains stability even in particular thermal environments.

Flow and Head Capabilities: With a flow rate of 60 m³/h and a head of 45 m, the CN MAG M 65 200 pump delivers exceptional performance, meeting the precise requirements of the distillation column service.

Suction Performance: Operating at a suction pressure of 0.3 bar g and with an NPSH available of 3.7 m, the pump ensures reliable suction, minimizing the risk of cavitation.

Pumps in operation at customer site:

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

M Pumps deliver world-leading expertise in the design, application and manufacture of Magnetically Driven Pumps and associated equipment to API 685, ISO 2858, ANSI B73.3 and ASME for the Oil and Gas, Offshore, Petrochemical, Chemicals, Nuclear, Research Institutes, Pharmaceutical, Electronic and the General industry.

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