

MAGNETICALLY DRIVEN PUMPS FOR METHANOL APPLICATION



CASE STUDY: #0003

Side channel magnetic drive pump - perfect solution for methanol application

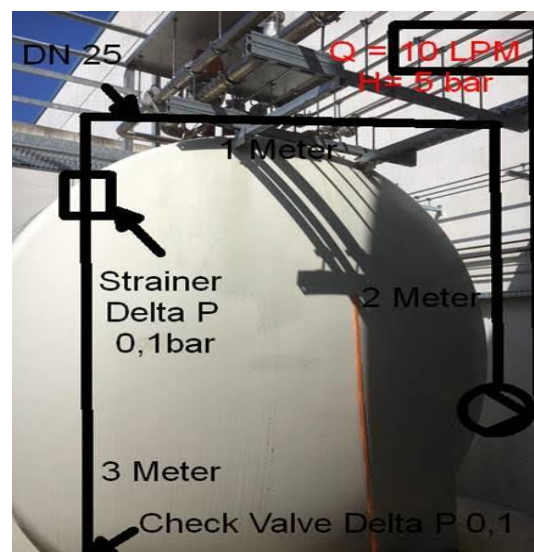
Customer from south Germany contact M PUMPS PROCESS to find solution for low NPSH Methanol application at the plant.

The problem:

Hardening plant used that time 2 Speck pump for pumping methanol for one of the process. Tank where they are keeping methanol is located outside of the plant exposed to all weather changes and yearly seasons. They faced with a problem specially in the summer when outside temperature increase and also sun shining strong. In this time increased temperature in the tank and methanol start to became in the vapor. With this physical process pumps became to the problem because of low NPSH and every summer broke. Customer started looking for solution and finally they found pump manufacturer M PUMPS PROCESS which can give them proper solution

Application specification:

- *Methanol*
- *Differential pressure 5bar*
- *Capacity: 10 l/min*
- *Temperature: 40 °C*



M PUMPS PROCESS application solution:

M Pumps Process has in his product range pump SC MAG M which can handle NPSHa as low as 0,5 m. The particular design of the hydraulic allows to handle liquids close to boiling point. Pump can handle up to 50% of gas in the liquid.

M Pumps Process recommended to customer side channel pump SC MAG M 20 / 4S.

Features	Pump Model	SC MAG-M		20 / 4S		
	Pump Type	Side Channel				
Standard	M PUMPS STD					
Atex		Yes				
Self Priming		Yes				
Rotation		CW				
Construction		Close Coupled				
Capacity	m ³ /h	0,6				
Head	m	70				
Design Pressure	bar	40				
Min. Continuous flow	m ³ /h	NA				
NPSHR	m	0,25				
Hydraulic Efficiency	%	NA				
Rated Power (mag losses include)	kw	1,55				
Impeller Dia Rated/Max/Min	Pm	NA	NA	NA		
Impeller Type		SIDE CHANNEL				
Pump Curve Number.		15161				
Pump Speed	RPM	2900				
Connection		UNIV. (DIN PN.40/ANSI 300#)				
Materials	Class	NA				
	Pump Casing	CF8M				
	Impeller	AISI316/Duplex				
	Rear Casing	HC276				
	Internal Magnet	AISI 316 / NeFeBr				
	External Magnet	NeFeBr				
	Shaft	AISI 420B				
	Sleeve Bearings	Tungsten Carbide				
	Stationary Bearings	EK 305				
	Wear Ring	NA				
	Thrust Bearings	Tungsten Carbide				
	Cartridge / Gears	NA				
	Pump Bracket	WCB CARBON STEEL				
	Gasket	Configuration	Flat Gasket			
		Material	PTFE			
	Jacket	Casing	No			
		Shaft support	No			
		Bracket	No			
	Temperature Sensor		No			
	Other					

Pump Configuration

SC MAG-M pump series are heavy duty side channel pumps, designed specifically for clean chemical process, low boiling and highly volatile, explosive and dangerous liquids.

This pump range puts a milestone on side channel pump history, as it is the first API design made. That this pump range is not a common side channel pump range, is visible at a glance, as the pumps do not respect the outline imposed by EN 734.

Dimensions and working space around suction and discharge nozzles have been designed to allow the best condition for installation and maintenance.

A strong barrel construction has been adopted to increase operative safety in any condition, as these pumps are usually used in ATEX classified areas, for pumping dangerous and aggressive to the environment liquids.

SC MAG-M pumps are applied in the chemical and petrochemical industry, in the surface finishing and hardening, in the pharmaceutical industry, in the plastic and rubber industry, in the air conditioning and refrigeration engineering and in the food, beverage and tobacco industry.



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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For more information, kindly visit our website: www.mpumps.it

