

EUROPOORT IN NETHERLANDS



CASE STUDY: #0039

End Customer:

The Europort is the third largest port in the world in terms of the quantity of goods exchanged, It covers an area of approximately 3,600 hectares which extends into the Netherlands, on the shores of the North Sea, and includes the complex formed by port area of Rotterdam and the adjacent industrial area.

One Tank farm in Europort inquired M Pumps for two nitric acid units, with self-priming and gas handling ability.

Initial problem:

S/No	NA				
Tag No.	NA				
Service Name	Unloading tank truck into tank				
Unit Req'd	2				
Oper. Condition					
Fluid Name *	Nitric acid (max. 69%)				
Physical State	NA				
Operating Temp. (Norm/Max/Min) *	°C	NA	50	NA	
SG (Norm/Max/Min) *	g/cm ³	1,42	NA	NA	
Viscosity *	cP	ass 1			
Vapour pressure	bar	NA			
Fluid Character	NA				
Capacity (Norm/Max/Min) *	m ³ /h	30	NA	NA	
Suction Pressure (Norm/Max/Min) *	bar	NA	NA	NA	
Discharge Pressure (Norm/Max/Min)	bar	NA	NA	NA	
Diff. pressure	bar	2,5			
Total Head (Norm/Max/Min) *	m	18	NA	NA	
NPSHA *	m	ass AMPLE			
Design Pressure *	kg/cm ²	NA			
Design Temperature	°C	NA			
Solid Content *	%	NA			
Classification of Hazardous Area	SAFE				
Noise Level	NA				
Painting	NA				
Operation	NA				
Installation Location	NA				

Other information:

- 3" suction pipe as close as possible to the tank truck
- 4" discharge pipe, 120m horizontal and 14m vertical
- Operating point 30m³/h @ 2,5 bar (≈ 17,6m) → with freq. drive at approx. 60Hz
- Customer experienced corrosion attack to some of their Hastelloy instruments, for this they required a careful evaluation

M PUMPS solution:

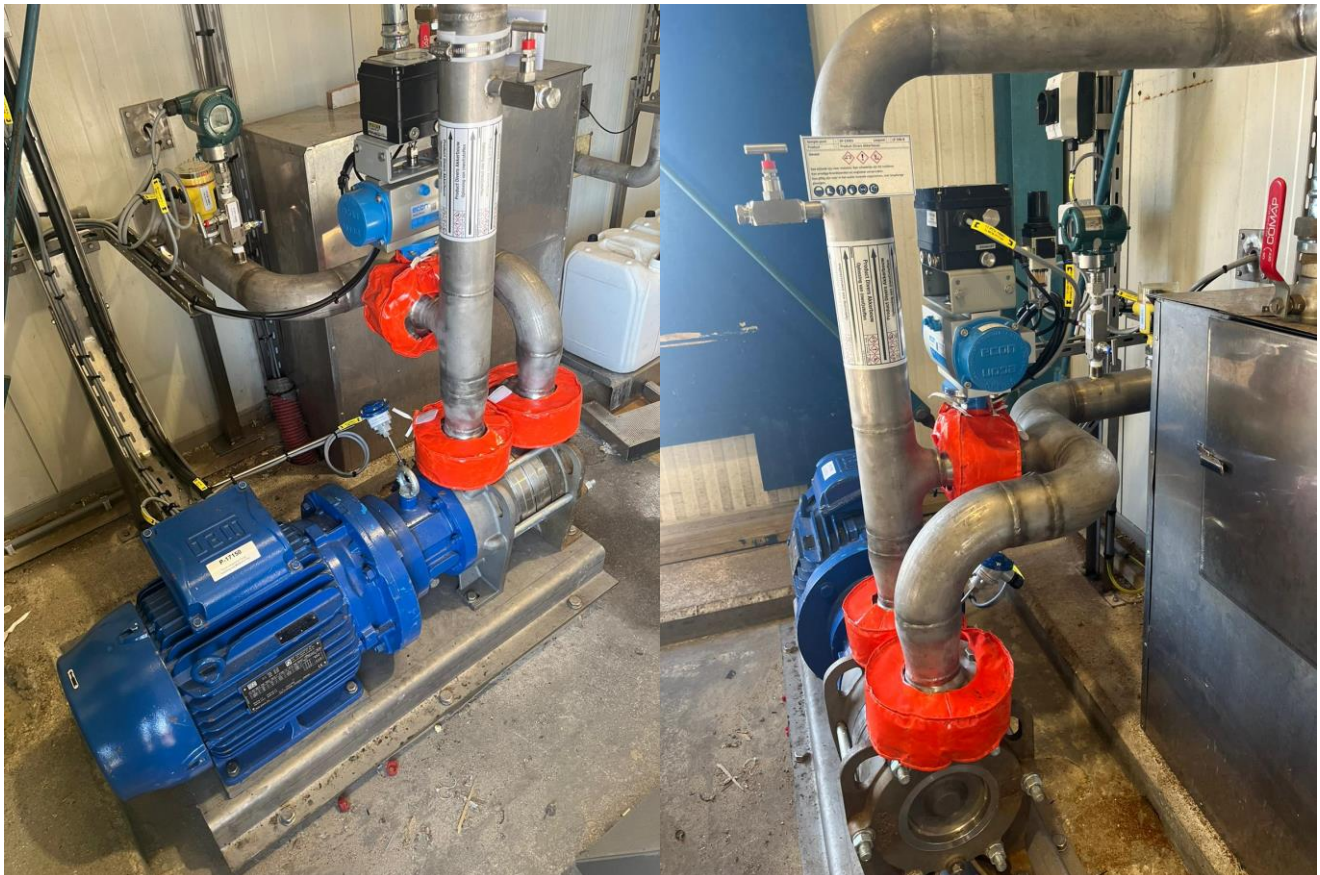
M Pumps has chosen and manufactured the SCE MAG-M6/1 for this request: This pump is a modern trouble free, hermetic, low speed-high efficiency side channel pump range, engineered and manufactured in M Pumps for the application which requires zero leakage-safe operation.

Materials			
	Pump Casing		CF8M
	Impeller		DUPLEX 22% Cr
	Rear Casing		ZIRCONIUM OXIDE
	Internal Magnet		AISI 316 / NdFeB
	External Magnet		NdFeB
	Shaft		DUPLEX 25% Cr
	Sleeve Bearings		SSIC
	Stationary Bearings		VESPEL (PFA+30%FC)
	Thrust Bearings		AISI 316L
	Pump Bracket		WCB CARBON STEEL
	Gasket	Configuration	Flat Gasket
		Material	PTFE
	Jacket	Casing	No
		Shaft support	No
		Bracket	No
	Temperature Sensor		No

Pumps before shipment:



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.

M PUMPS S.r.l.

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