

### SAL ENGINEERING





### WHO WE ARE



We bring +35 years of experience to your project.

SAL Engineering provides the most comprehensive marine engineering services in the industry.

We offer you:

- → Engineering Solutions
- → Consultancy Services
- → Survey & Site Support



### SAL ENGINEERING IN BRIEF

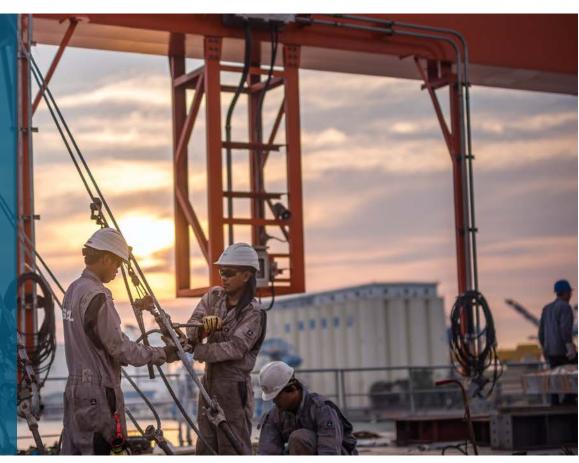
With SAL Engineering you get an independent Engineering house, born from one of the world's leading technical project carriers – SAL Heavy Lift.

SAL Engineering does not only develop concepts

– we implement our solutions. Essentially conduct plans ready for execution.

We have a track record of thousands of successful projects behind us. For more than 35 years we have developed marine heavy lift and installation solutions. We are able to provide you with our knowhow.

Our expert team of 30 experts is ready to tackle your challenges.





### WHY SAL ENGINEERING?



State-of-the-art marine engineering and technology



A team consisting of naval architects, master mariners, structural and welding engineers and hydrodynamic experts



Thousands of successfully executed projects



Know-how developed from +35 years of deployed engineering in heavy lift shipping and offshore work



We cover all disciplines of heavy lift engineering – from A to Z



We offer you independent and fully customized solutions



# OUR SERVICES



### **OUR SERVICES**



- → Heavy Lift Transport Engineering

  Lo/Lo Flo/Flo Ro/Ro door-to-door skidding sliding installation and decommissioning
- → Structural design & calculations

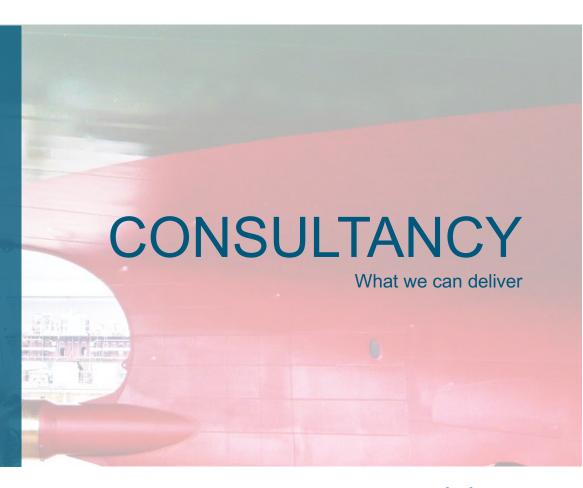
  Sea fastening temporary structures vessel structures
- → Hydrodynamic / Hydrostatic calculations

  Route specific analyses dynamic forces mooring designs
   motions analyses stability analyses loss of load dynamic positioning
- → Industry partner for technology development
  Lifting appliances software solutions
- → Technical visualisations & animations
  3D animations of designs and solutions



### **OUR SERVICES**

- → Logistics Concepts
- → Transport Engineering
- → Installation & Decommissioning Concepts
- → Salvage Solutions
- → Front End Engineering Design (FEED) Studies
- → Dockyard Planning
- → Repairs & Vessels Modifications
- → Failure Mode & Effects Analysis (FMEA)
- → Failure Mode Effects & Critical Analysis (FMECA)





### **OUR SERVICES: SURVEY & SITE SUPPORT**









### **OUR TEAM**

- → Naval architects
- → Fluid, structural and welding engineers
- → Master mariners, seafarers and super cargo experts

"Our team consists of 30 employed experts"



### **OUR TEAM**



- → Our experts provide you with thoroughly engineered and well documented solutions
- → We seek the most practical and cost-effective solutions in close cooperation with crews onboard, clients and warranty surveyors



### **OUR TEAM**

- Our experts are involved in all project stages from inception and planning to on-site realisation
- Our in-house expertise allows us to master the most technically challenging projects

"All our engineers have hands-on experience"







# OUR TRACK RECORD

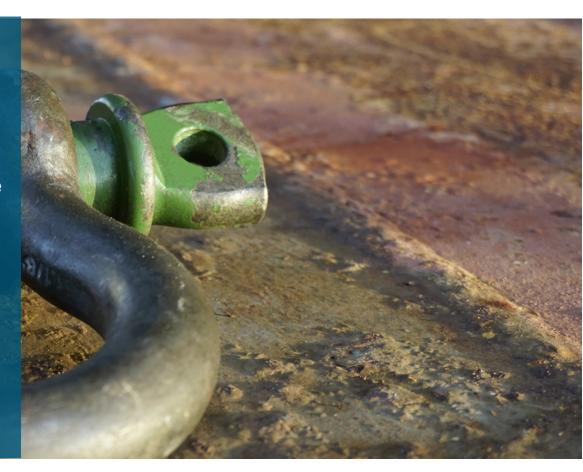




### **OUR TRACK RECORD**

Our experience comes from a long track record of executed projects. As we originate from a world-wide leading heavy lift carrier – SAL Heavy Lift –, we have put concepts to the test and delivered the unimaginable.

The clients we have served through thousands of projects by SAL Heavy Lift account for world leading oil & gas, renewables and engineering consortiums.





	BURJ AL ARAB TERRACE	
	Vessel	MV Svenja
	Weight	Up to 740 t
	Dimensions	Up to 79 x 35 x 4 m
	POL	Rauma, Finland
F	POD	Dubai, UAE
A	Specials	<ul> <li>8 pieces of cargo, total weight: 3252 t</li> <li>Heaviest piece: 740 t, 55 x 44 x 4 m</li> <li>Biggest piece: 640 t, 79 x 35 x 4 m</li> <li>Overhang of 16.2 m (aft), 15.0 m (starboard), 9.1 m (portside)</li> </ul>





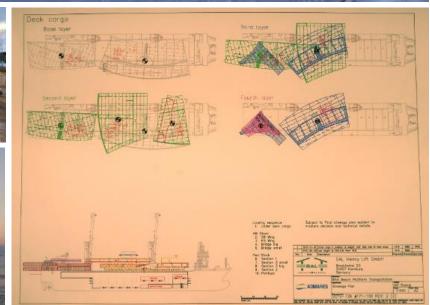




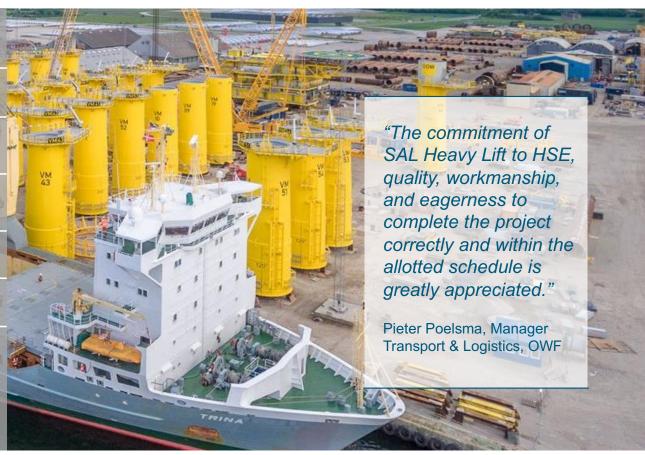






















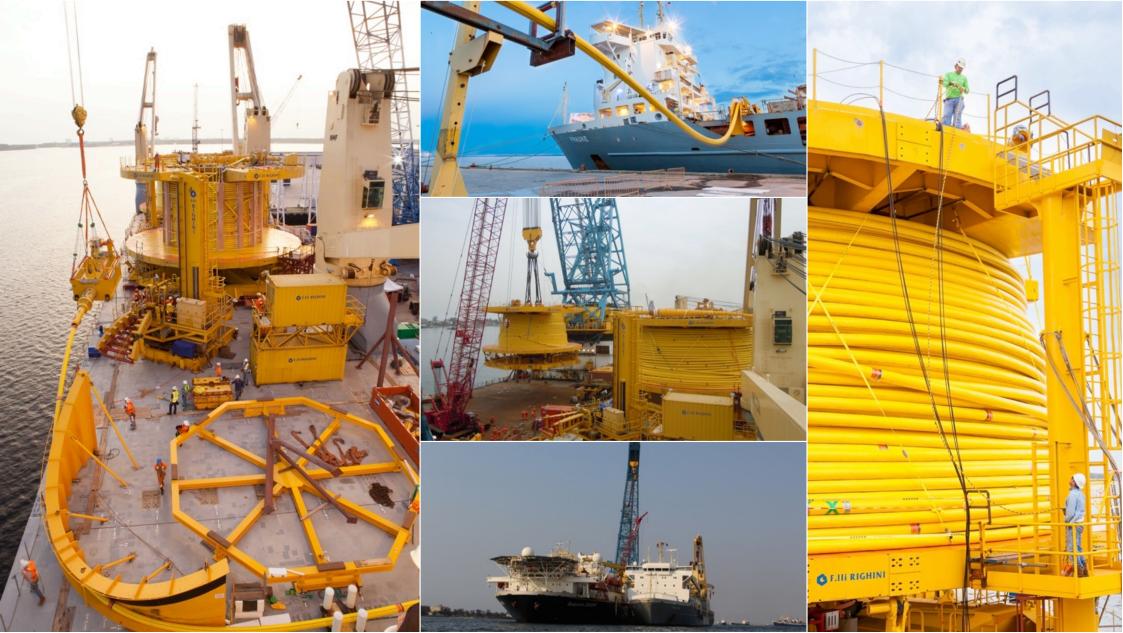




CAROUSELS	
Vessel	MV Frauke
Weight	Empty: 620 t Fully spooled: 1475 t respectively 1875 t
Dimensions	12 m high, diameter 26 m
POL	Rotterdam, Netherlands
POD	Project site offshore West Africa
Specials	<ul> <li>Spooling of over 2000 t of umbilicals in Panama City, US</li> <li>On-site support for installation vessel over 2 months</li> <li>Precise weight spreading on hatch covers with tailor made steel supports</li> </ul>







### PROJECT PLATFORM INSTALLATION

Project scope

- Lift and installation of Monopod in 45m water depth
- Piling
- Lift and positioning of connection pipe
- Lift and installation of Project Platform and Helideck

Client Crowley Marine Solutions

Client-provided item (CPI)

Monopod (1100 t), Project Platform and Helideck

Location Cook Inlet, Alaska

















### WANT TO LEARN MORE?

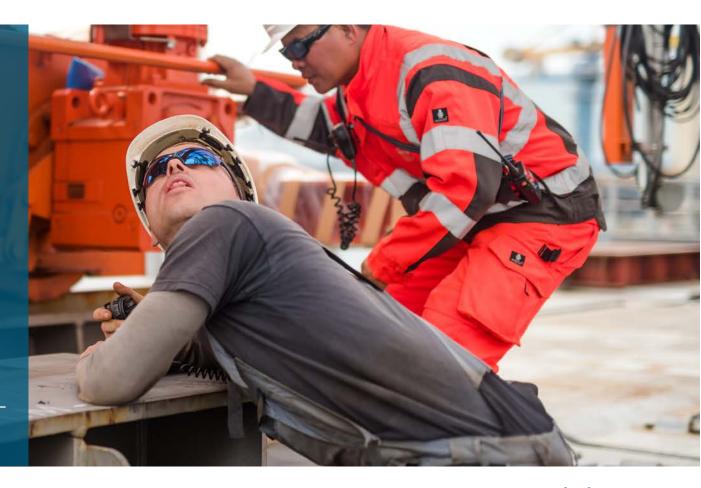
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## WE INNOVATE SOLUTIONS