

# 04 Sheer Leg 300 ton SWL

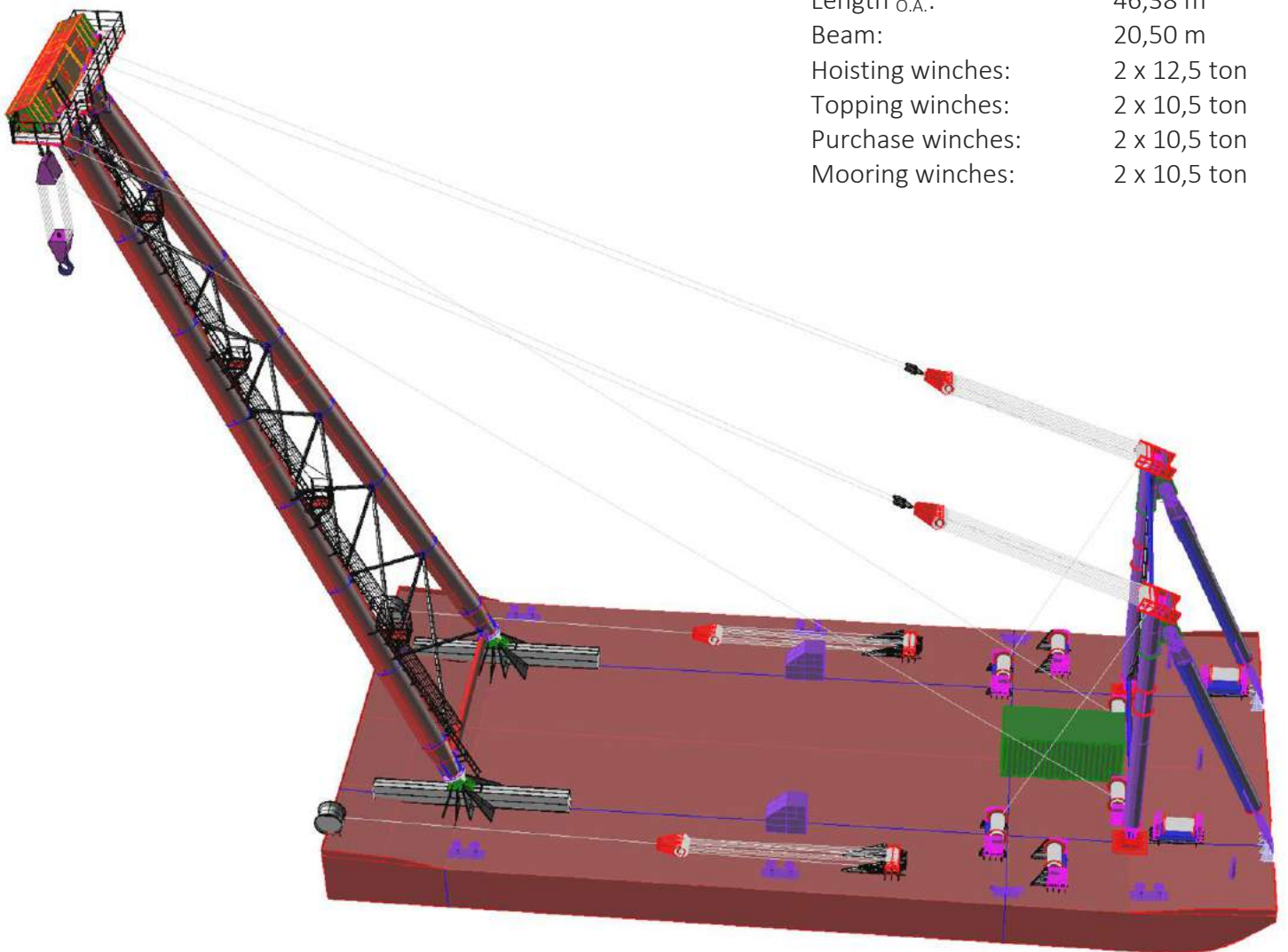
PROJECTS / Cranes



- Project
- Workshop plans

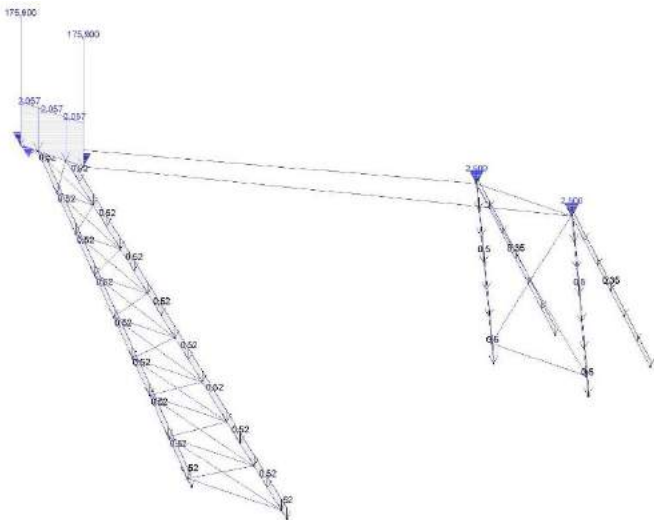
Basic design and contract drawings for this 300t SWL sheer leg. The “A” frame is fitted on an existent barge; the “658”.

The hoisting capacity is distributed in two hooks of 150t each, with an outreach of 10m and when the “A” frame is presented at 66 degrees. Over the head-log, there are two rollers with a capacity of 90t each for handling of deck purchases. The “A” can be operated at 45 and 75 degrees, depending on the needs and conditions.



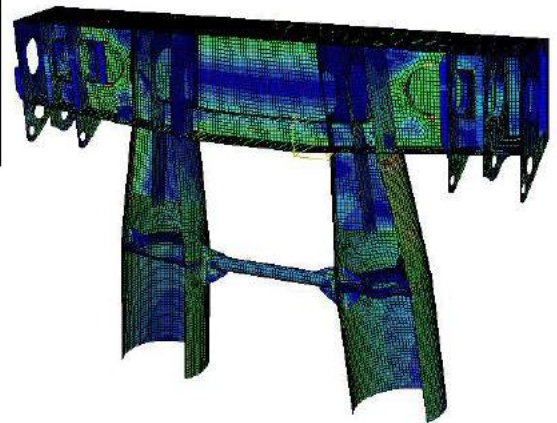
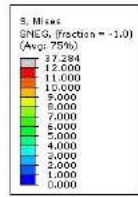
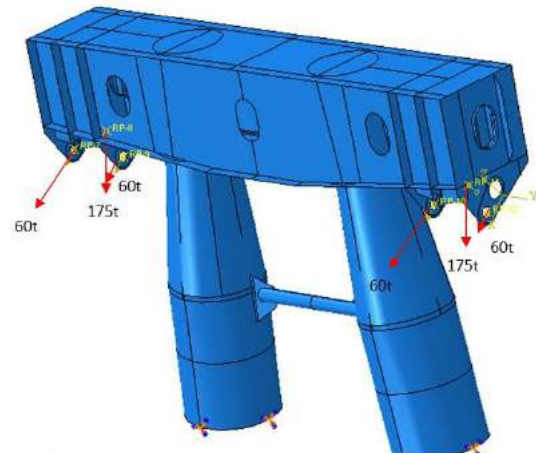
Length o.A.:	46,38 m
Beam:	20,50 m
Hoisting winches:	2 x 12,5 ton
Topping winches:	2 x 10,5 ton
Purchase winches:	2 x 10,5 ton
Mooring winches:	2 x 10,5 ton

The main challenge was to adapt the existent structure to the very demanding and extreme loads impose by the “A” fram while keeping the weight of steel to be added to an absolute minimum. The characteristics of the existent deck barge, impositability required that required a very thorough evaluation under strict compliance with the most demanding rules.



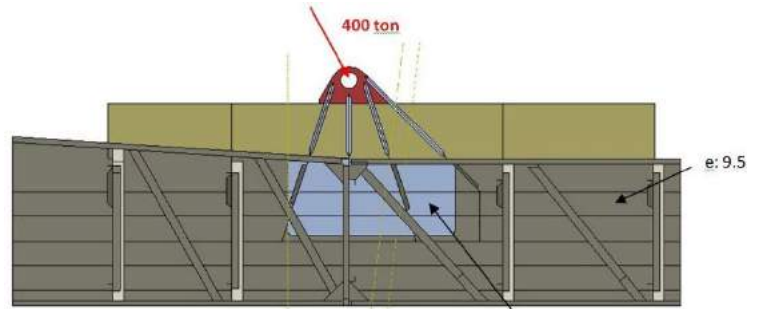
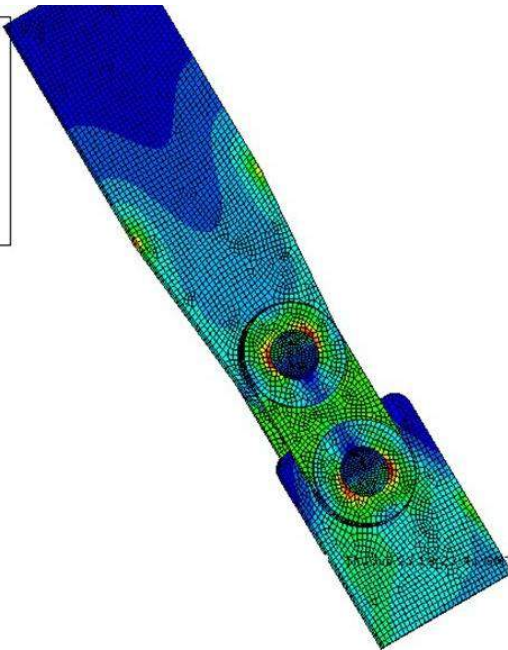
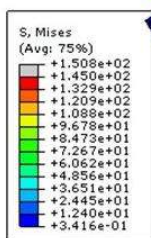
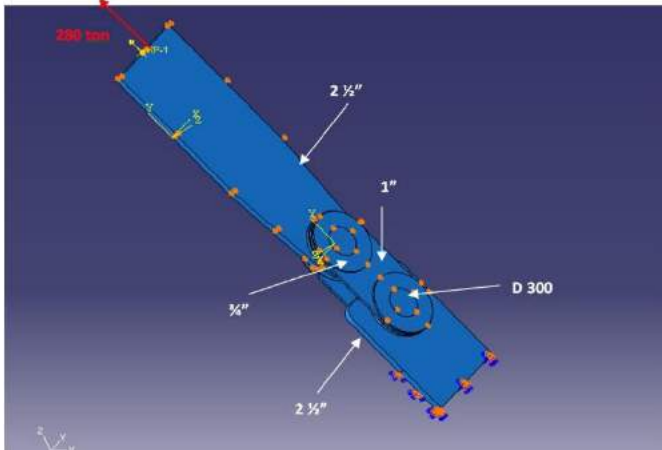
**Global model for the "A" Frame**

Analysis by means of beam elements (one-dimensional) of the overall behaviour under different loading conditions.

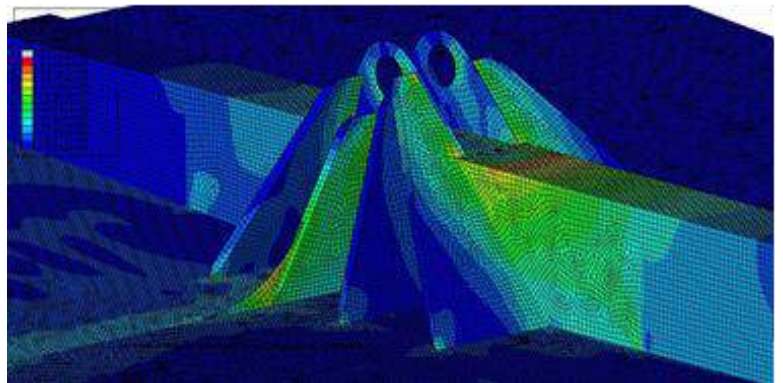


**Local model for the frame head**

F.E.M. analysis (thin shell, bi-dimensional).  
Detailed design of the structure and eye pads



Vista de perfil. Mamparo longitudinal.



**Local model, Frame foundation**

F.E.M. analysis (thin shell, and solids combined).  
Design and check of the foundation.

**Local model, stay connection**

F.E.M. analysis (solids, 3D).  
Design of the stays and links.

