Designed with Dlubal Software

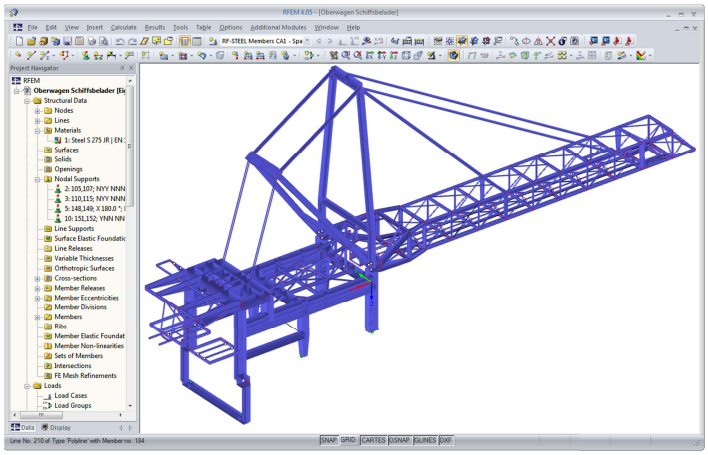
In the following three projects are presented that have been designed by Dlubal's long-standing customer Ehlenz engineering office in Beckingen, Germany. All structures are steel constructions calculated with RFEM.

Revolving Superstructure for Shiploader

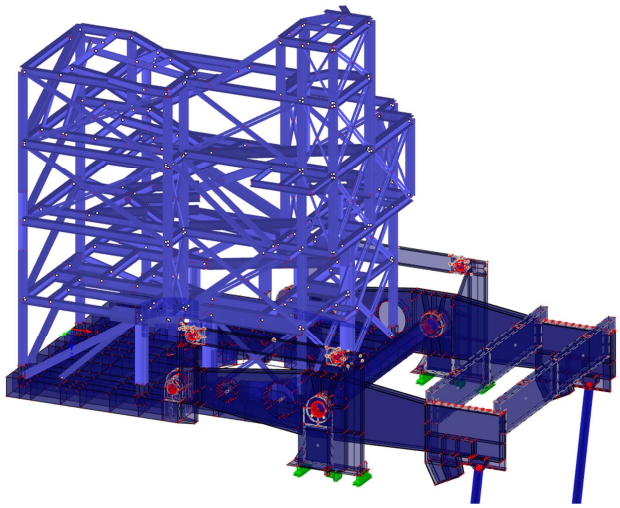
The revolving superstructure that can be moved in horizontal direction is used to load ships.
The jib can be lifted and lowered and has a total length of approx. 38 m.
The construction has the following dimensions:

Length: 60.0 m
Width: 12.0 m
Height: 30.0 m

The calculated structure consists of 799 members including 113 different cross-sections. Most of the cross-sections have been determined in the add-on module SHAPE-THIN.



Model of revolving superstructure in RFEM



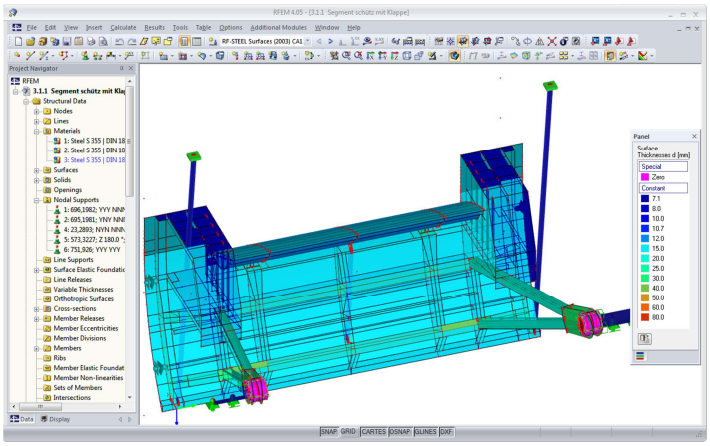
Structure of lift table

Lift Table

The designed lift table can be moved vertically and is balanced by a counterweight. Due to the parallelogram the table keeps its horizontal position even if the position is changed. The structure has a length of approx. 18.6 m, a width of 11.4 m and a height of 21.9 m. The steel construction applied to the table includes the installation of different types of equipment.
The calculated object consists of 6,980 nodes, 182 solids, 2,845 surfaces and 1,703 members including 67 different cross-sections. For the most part of the structure Russian cross-sections in accordance with the GOST standard were used and selected from the RFEM cross-section library.
The design was additionally performed in the RFEM add-on module RF-STEEL. The total weight of the construction including counterweight is approx. 1,000 tons.

Sluice with Flap Gate

The third object is a sluice gate based on pressure used to control the water level of a weir.
The flap's width is 7 m, the total width of the construction is 10.4 m. It is possible to dam up water to a maximum height of 5.6 m.
The calculated structure consists of 3,244 nodes, 6 solids, 607 surfaces and 187 members with 7 different cross-sections.
The object has a total weight of approx. 20 tons and is made of steel S 355.



Sluice with flap gate

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