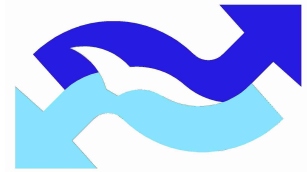


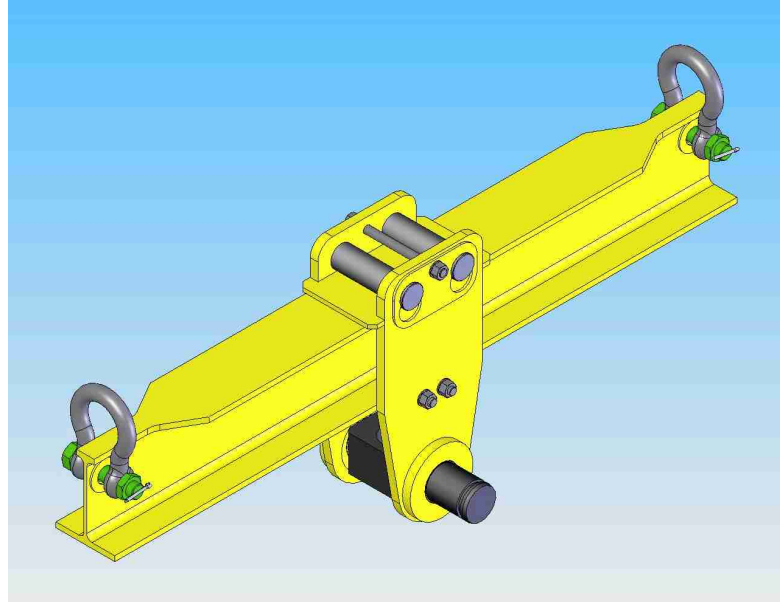
## Project lifting beam (Doss.no. 476)



Request by: Techno Metal Industry Vlissingen for Royal Schelde Shipyards

### Description

At the shipyard facility two independent gantry cranes were available with a limited lifting capacity. However, for heavy lifting there was a need for an external crane. As an alternative, combined lifting by both cranes as one was investigated. Due to the difference in lifting capacity between both gantry cranes standard products were not available. A special lifting beam had to be made for the shipyard to prevent the need for hiring an external crane. TMI was asked to quote for this lifting beam.



### Challenge for IMC

Develop a special lifting beam that maximizes the lifting capacity of the Royal Schelde shipyard and minimize the production costs of TMI.

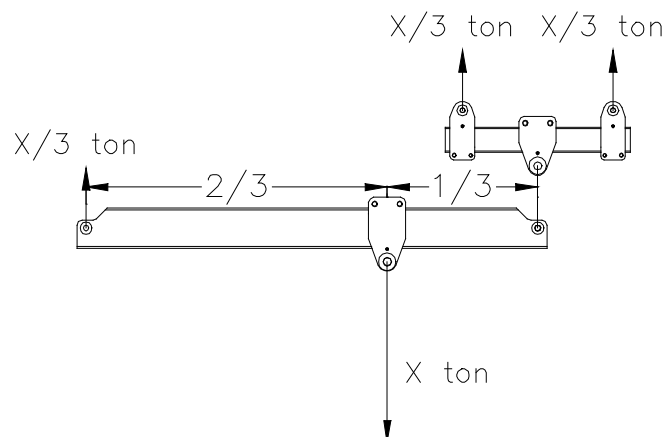
### Result

IMC developed an a-symmetrical lifting structure based on two separate cantilevers. The most distinct feature of the each cantilever beam was that it was bolted together without welds and therefore not needed a heat treatment. The bolted construction had a significant weight reduction and the construction was easier and faster to assemble. Further, without welds a continuous structure without weak points is achieved. TMI never intended to bolt the beam together but was convinced soon.

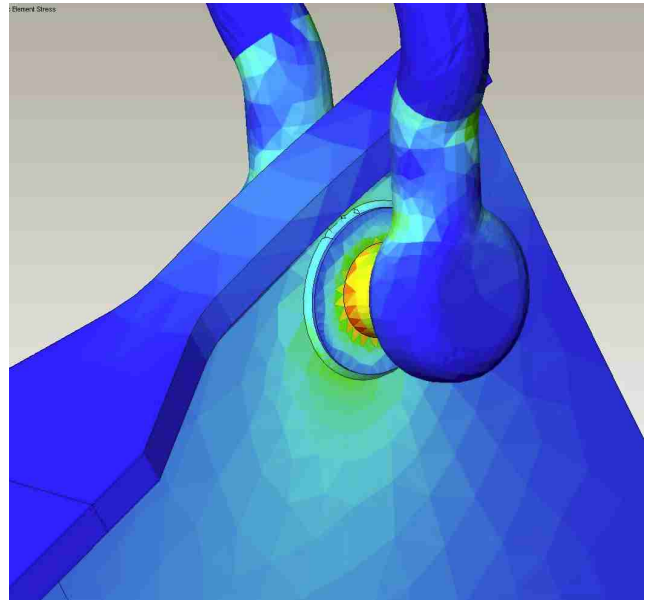
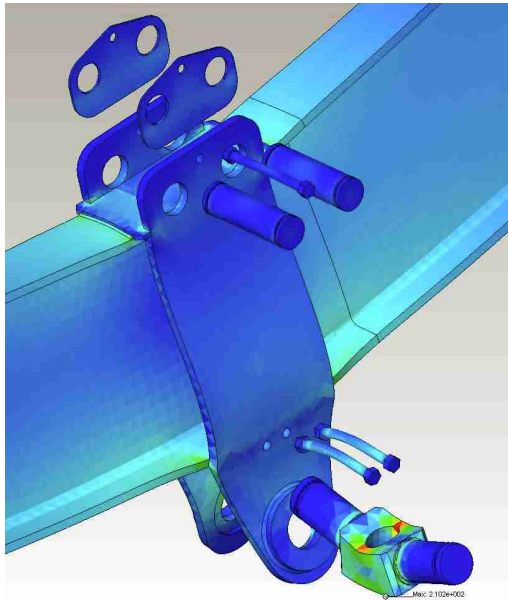
By hiring IMC for the development TMI gained a competitive advantage because they could offer a value added product that enhanced the process of the Royal Schelde shipyard. The production of the lifting beam was assigned to TMI. The product was test-loaded under LR attendance and delivered to the Royal Schelde to their full satisfaction. And the lifting beam has been in good service since.

### Approach of IMC

- Conceptual design  
Analysis of the situation and the available concepts, leading to a specific double cantilever structure



- Strength analysis  
Based on structural calculations, the overall dimensioning was performed
- Detail design  
From the overall dimensions, the detail connection points were analysed and structural details determined



- Class approval  
As final part of the development, the design drawings and calculations were submitted to LR for approval.

For more information [www.imcgroup.nl](http://www.imcgroup.nl)

