



THE CHALLENGE

In the past, it was common to completely weld crane trolley rails, as a result, after many years, you have a challenge when removing the entire rails when it is at the end of its life. STARKON's crane service team was selected by its client to research the best possible replacement solution for an RMG crane. STARKON chose to take on this challenge together with IV-Consult. The two companies would do the engineering together.

THE SOLUTION

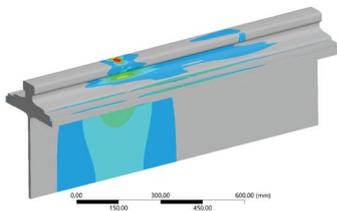
STARKON has wide experience in the field of rail replacement and, together with IV-Consult, wide experience in engineering. During the research, we also needed to do a review because one of the cranes, like this one, already had a rail replacement. STARKON had reservations about whether the same approach as had been done on the other crane, would be the best solution. Research has been done, among other things. The rail profile is checked in FEM, and the rail clips are checked. In addition, the base plate assessed as well as the deformation of the rail foot between the rail clips. And since the welded rail contributes to the structural stiffness of the beam, the deformation, strength, and fatigue of the beam with welded rail is compared to the beam without welded rail.

THE RESULT

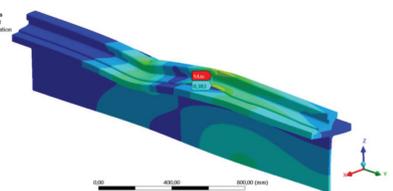
The outcome of the review, followed by research, was clear; we needed to choose another type of rail and rail clips together with replacing the existing base-plate from the welded rail for a sole-plate with in-house prefabricated, welded bottom plates from the new rail clips. The client accepted our proposal, requested a quotation, and gave STARKON the order to do the replacement.

Good work IV-Consult + Team STARKON!

C: DIN A75
Equivalent Stress
Type: Equivalent (von Mises) Stress
Unit: MPa
Time: 1
Max: 1.25e3
Min: 0.00577



D: DIN A75 railclips
Total Deformation 1
Type: Total Deformation
Unit: mm
Time: 1
Max: 0.08
Min: 0.00005



<https://starkon.nl/project/rmg-trolley-rail-research>

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