





Case study: Connector Support

CONVERSION SOLUTION

11-PCS WELDMENT TO ONE-PIECE SAND CASTING

Challenge

Interest for development of a stronger, lighter and more cost-efficient connector component in alternative to the present 11 pieces welded component.

BEFORE: WELDMENT

Fabrication weight: 9,1 kg/pcs

Mechanical Properties for S 235 JR

ReH Yield strength (MPa): 235 N/mm2 Rm Tensile strength (MPa): 360 N/mm2

Weldment

Material Alloy Grade: S 235 JR acc. to EN 10025









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ENGINEERING SOLUTION

DUCTILE IRON CASTING

AFTER: CASTING

Casting weight: 7,8 kg/pcs

Mechanical Properties for EN-GJS-500-7

ReH Yield strength (MPa): 320 N/mm2 Rm Tensile strength (MPa): 500 N/mm2

Castings Alloy

EN-GJS-500-7 Acc to standard EN/ISO 1563

Casting Method

Sand Casting

Add Value

Finish machining









Surface Finishing

Assemblies

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ENGINEERING OUTCOME

RESULT OF THE CONVERSION



- 14%

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Weight Optimization

From 9,1 kg/pcs in Fabrication to 7,8 kg in Ductile iron Casting.

Total Cost Reduction

Saving cost by redesign of shape, material & weight.



Strength Optimization

Improve material strength by changing the Steel Fabrication Alloy S 235 JR to a Ductile Iron Casting, EN-GJS-500-7.



Product Efficiency



min. + 41%

WELD2CAST transformed a 11-pieces part into a onepiece Casting. The redesign simplified the assembly process for our client and reduced internal labour, manufacturing, inventory and overhead cost.

Combine Your Castings & Forgings with Our ADD-VALUE Services



Need assistance...

in determining if your welded part is a good candidate for a conversion to casting?

