Case Study

NEENAH FOUNDRY
The NEI Group

Need

A customer in the Construction market segment challenged Neenah Foundry to develop a ductile iron casting design for an attachment coupler. The previous design was welded steel and consisted of over 30 separate components. By converting the coupler to a single-piece casting, the customer would realize a number of benefits:

- Streamline raw inventory flow and logistics
- Improve assembly
- Reduce piece price

Actions

Developing a casting design involved close collaboration with the customer. Over the course of several months, many design iterations were developed before a final concept was agreed upon. Next, prototype castings were produced and testing was completed successfully. Finally, production tooling, which including patterns as well as multiple core boxes, was produced and PPAP completed.

Results

The green-sand molded ductile iron attachment coupler, designed by Neenah Foundry in collaboration with the customer, replaced a 30+-piece steel fabrication with a single, 355 kg iron casting and the following benefits were realized:

- The number of individual components required to make this was reduced from 30+ down to a single casting, thereby reducing the overall assembly components required.
- As this part was fabricated/assembled in-house by the customer, it helped streamline their raw inventory flow and logistics as this part was delivered fully painted and machined.
- Performance of the casting was on par with the steel fabrication

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