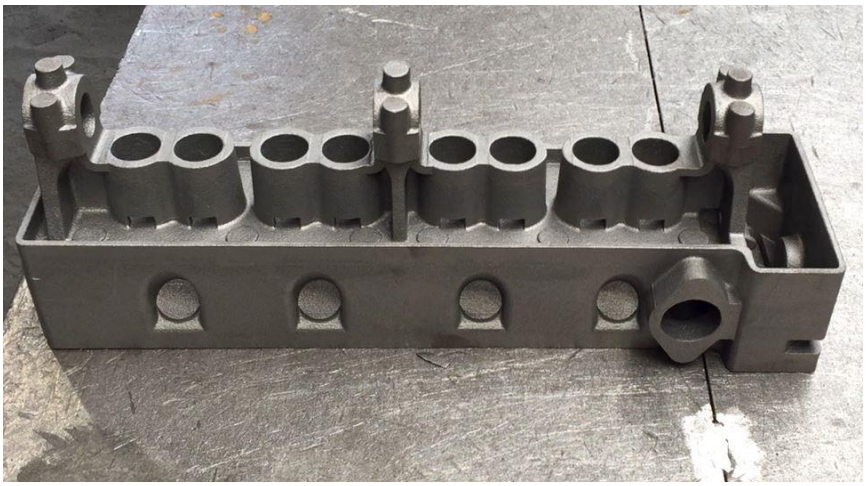
CASE STUDY O.K. Foundry Company, Inc.

Low Volume Cylinder Head Casting

HMD Helps Antique Car Enthusiast Rebuild Engine

CHALLENGE

HMD collaborates regularly with a local foundry to design 3D printed sand molds for prototype or low volume castings. For this project, OK Foundry came to us with a very unique and challenging project. We needed to create a mold to reproduce the cylinder head for a nearly 100-year-old vehicle engine! With very few, if any, working examples left in existence, casting a new head was the only sure way for OK Foundry's customer to get their antique car running.



SOLUTION

After studying the customer's damaged cylinder head, and a 3D-scanner generated CAD model, we determined the best way to design and split the mold. HMD worked with OK Foundry and a 3D printed sand mold company to finalize the mold design that would both properly flow the cast iron, and work with the constraints of the 3D sand mold printing process. The final mold is an intricate design with 12 interlocking pieces required to create all the internal details of the cylinder head.

OUTCOME

Using HMD's molds, OK Foundry poured four successful castings. The cylinder heads were sent to the customer in the Netherlands for final machining.

To learn more about O.K. Foundry Company, Inc., visit okfoundry.com.

For more information please visit *www.hmd-llc.com*
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