

Reduction in media use and metal penetration significantly lowers operational cost

Replacing silica sand with ACCUCAST ceramic casting media eliminates penetration and veining defects.

The challenge

A gray and nodular iron jobbing shop using silica sand in the lost foam process was experiencing high casting defects of penetration veining resulting in high cleaning and scrap costs. The goal was to improve casting quality while lowering operational costs.

The solution

The low thermal expansion of ACCUCAST® ceramic media avoids various expansion-related defects such as penetration and veining. When these defects are reduced or eliminated, the result is reduced scrapped parts, cleaning room time and cost associated with repairing defective parts.

The results

Replacing the silica sand with ACCUCAST ceramic media minimized metal penetration, eliminated veining, reduced casting scrap and lowered cleaning cost. Additional advantages experienced with the use of ACCUCAST ceramic media include roughly 10X reduction in media use, the elimination of respirable silica dust throughout the operation, the tighter dimensional precision of castings and increased capability.

Reduction in operational cost was achieved while improving casting precision for small, complex components for marine and diesel engines such as:

Marine intake-exhaust water-jacket manifold



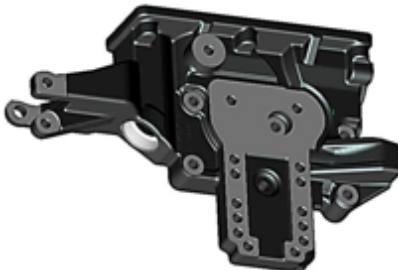
Diesel engine oil cooler housing



Marine 8" exhaust elbow



Diesel engine thermostat housing



Project Details

Client: Gray and nodular iron shop

Location: Mexico

Type: Lost foam process

Deliverables: Small, complex components for marine and diesel engines

Casting media: Replaced silica sand with ACCUCAST ID50 high-performance ceramic casting media

Benefits achieved

- Minimized metal penetration
- Eliminated veining
- Reduced casting scrap and cleaning cost
- Reduced media use
- Improved casting precision

Diesel engine cooler bracket



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