

PRIDE CAST METALS, INC.

A HISTORY OF INNOVATION CONTINUES WITH GMBOND® CORES

Company Background

Created in 1983 when the foundry was purchased from the Dover Corporation, Pride Cast Metals is a premier supplier of high quality castings to the petroleum industry. Originally founded in 1892 as Ohio Pattern Works, the foundry began concentrating its efforts on manufacturing brass and aluminum petroleum equipment in the early 20th century. Currently, Pride Cast Metals manufactures



gate valves, nozzles and other cast parts from a range of alloys including aluminum, brass, bronze, zinc aluminum and other non-ferrous alloys. Their castings and machined castings are used in a variety of products and industries including: service stations, valves and fittings, vapor recovery, storage tanks, quick couplings, tank truck parts, lighting fixtures, environmental control products, spill containment and material handling equipment. Through the diversification of its metal casting services and capabilities, Pride Cast Metals has grown from a supplier of castings into a turn-key manufacturer that is able to offer services and products beyond the scope of a typical foundry. With its size, investment in technology and skilled employees, Pride Cast Metals has a reputation for delivering high quality, competitively priced products on time, often with a short lead time.

Challenge

Like many manufacturers, Pride Cast Metals faces the ongoing challenge of running a competitive business — keeping costs down without sacrificing quality or performance levels. Pride Cast Metals first considered using GMBOND® to resolve shakeout issues for castings of gas pump swivels. The parts must be cast of a zinc alloy (ZA12) to be durable enough for the application. However, because zinc alloys have a much lower pouring temperature (900°F), the cores were not exposed to high enough temperatures for the sand binder to thermally degrade adequately. In order to remove the still solid cores, a foundry worker had to manually drill them out from each casting. This was a slow process which resulted in lowered production rates and increased production costs.

Solution

Pride Cast looked to Hormel Foods' GMBOND® Sand Binder as a solution because it degrades at lower temperatures than traditional petroleum-based binders, making core removal much easier. During evaluations of GMBOND® cores, Pride Cast Metals found that removal of spent cores was much improved and required no drilling. Using pre-molded GMBOND® Sand Binder cores, Pride Cast Metals has been able to reduce the core costs by 24 percent and reassign personnel from drilling out cores to other tasks.



According to Dirk Byerman, foundry superintendent at Pride Cast Metals, "We have been very pleased with the performance and cost of the GMBOND® cores and are considering it for several other applications in the foundry."

Environmentally friendly sand binders like GMBOND® Sand Binder offer equal if not better performance than petroleum-based products with fewer environmental and health risks. GMBOND® Sand Binder helps foundries reduce costs associated with shakeout, sand reclamation, and emission compliance to improve their bottom line. GMBOND® is protein-based, so core sand retention is virtually eliminated and reclamation, disposal, and landfill costs are dramatically reduced. Testing by the Casting Emission Reduction Program (CERP) has proven that GMBOND® reduces emissions by over 90 percent.

Benefits

Using pre-made cores molded with GMBOND® sand binder, Pride Cast Metals was able to:

- Achieve significantly lower costs per casting
- Significantly reduce the time spent manually removing cores, thereby increasing the number of castings processed
- Maintain good surface finish
- Reduce the amount of toxic emissions released during the casting process



Specialty Products

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