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Phone: 724-339-2040

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*Westmoreland Advanced
Materials, LLC*

*210 C Schreiber Industrial Park
Arnold, PA 15068*

Case History No. 21

Better Raw Materials Result in Better Performance

Customer Need: Improved Service for Ductile Iron Treatment Vessel

Solution 1: High Mullite, Low Cement WAM® 50 LC

Solution 2: Manufacture Within 12 Hours of Every Order

Result: Improved Service Life, Long Term Cost Savings

A Pennsylvania foundry that makes ductile iron in a tundish ladle was experiencing acceptable service life of about 16 heats, including maintenance after each shift of production. The dam required the most maintenance, since the ferro magnesium charge reacted most severely in that area.

Like most foundries though, imported casting continually put pressure on production costs, so they were open to an opportunity to save money in the long run, even if it meant spending a little more up front.

WAM® 50 LC was purchased for a trial in two of the tundish ladles. A target of 20 heats was set as a break even service life that would justify the price premium compared to current practice. The trial was considered worth a try since the breakeven point would provide a savings in downtime and labor. Extra heats would result in extra savings.

Expectations were for some improvement because of the high percentage of mullite in **WAM® 50 LC**, and because of the expected service advantages the homogenous, mineralogically stable mullite would provide.

Installation went well at the recommended water content. The maintenance crew had no trouble filling the ladle form one side and vibrating the material into the dam. No voids were cast into the lining, the form released smoothly, and the typical dry out procedure worked well.

The trial ladle rotated in and out of service in the standard schedule over the course of several weeks. The maintenance crew log book shows that less repair work was required than typical for both ladles. One ladle suffered a frozen charge due to a casting line problem, was cleaned out and ultimately lasted 18 heats. The ladle that did not suffer any operations related problems lasted 22 heats, saving the foundry money in maintenance, downtime and labor. **WAM® 50 LC** has become the new standard for performance at this foundry, because it provides long term cost savings.

Should you re-evaluate your standards of performance?