

Molten Splash Shield for Ferrous Casting Process

The Challenge:

The ferrous casting process in a manufacturing plant involves casting automotive parts from molten Iron at extremely high temperatures. This operation requires the transfer of molten metal at 1430°C (2606°F) from a holding furnace into a pour pot and then into the die. During the pouring process from the holding furnace into the pour pot the die is subject to molten splatter that often hardens as pellets in the die. When the molten iron is then transferred from the pour pot to the die the pellets create pits in the finished part that must be discarded.

The Worbo Solution:

Worbo Inc. developed one of the heaviest molten splash shields in the world at almost 100oz/yd². Molten Splash-away™ shield is made up of a very heavy, smooth coating of iron oxide silicone rubber calendared onto a bulky heat treated woven fiberglass substrate. This material has been developed specifically for shedding heavy, intermittent bouts of molten metal splash up to 3000°F. The non-stick, low surface energy hydrophobic characteristics of the iron oxide silicone coating doesn't allow the molten spatter and splash to stick to it which greatly reduces the opportunity for heat transfer.

