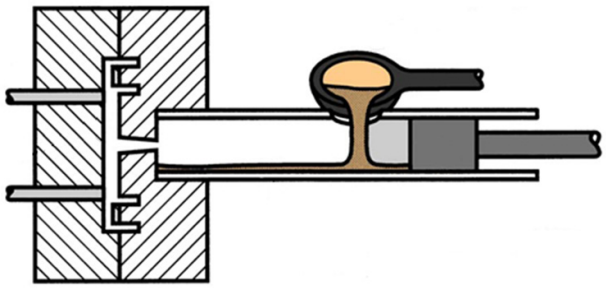
Pyrotek RFM Dosing Launder

FOUNDRY PROCESS
High Pressure Die Casting (HPDC)



ALLOY
AlSi 10MnMg alloy

POURING TEMPERATURE
660—710°C (1220—1310°F)

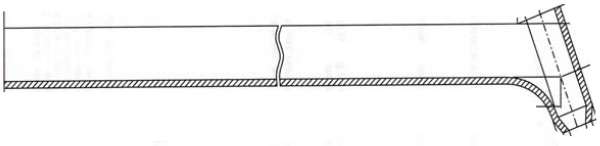
PREVIOUS SITUATION
Especially with small parts (0.8 kilograms), the HPDC customer was facing the following casting issues when using a steel dosing launder:

- Melt would often freeze during casting
- Launder required continuous heating
- Cleaning of launder was required six times per shift
- Production stops to clean launder accounted for up to 20 minutes per cleaning cycle

PYROTEK SOLUTION
Pyrotek's reinforced fibreglass material (RFM®) launder is strong, lightweight and durable.

Not only is the RFM launder over 60 times more insulating than the cast iron counterpart, but its improved design reduces oxides by creating a smooth transition for the metal to flow from the launder to the shot chamber.

The addition of a boron nitride (BN) coating improves aluminium non-wetting and the lifetime of the part.



PROCESS IMPROVEMENTS
Overall, Pyrotek's RFM Launder has eliminated downtime and dramatically improved production.

Launder lifetime is reported to have as many as 50,000 shots (about three months operation) with no interruption due to metal sticking and cleaning during operating shifts. Other improvements include:

- No temperature loss from the launder
- No preheating of the launder necessary
- No freezing of the melt with small parts
- Reduction in maintenance time
- Decreased iron contamination in the melt

ESTIMATED SAVINGS

Total Production Increase	118,800 parts
Estimated Sale Increase*	USD$385,000

*Estimate assumes USD$3.25/kg sale price.