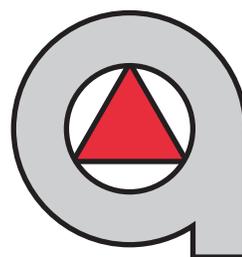


# Laundry Transfer Pumps

**MINI HF**

**Workhorse HF**



**Molten  
Metal  
Equipment  
Innovations**



## Description

MMEI's new Laundry Transfer Pumps offer a technological leap in molten metal transfer. This pump offers an advanced way to transfer metal quickly and precisely and in a very quiescent manner. It also allows metal transfers to be accomplished very safely without exposing operators to risk. The Laundry Transfer Pump can be used to replace many traditional transfer pumps and tapout plugs.

Traditional transfer pumps require a riser and refractory lined piping to transfer the metal. The Laundry Transfer Pump eliminates the riser and the need for transfer piping. Instead, the pump transfers metal directly to the launder. When the pump is turned on, the metal is lifted in the transfer well until it begins to flow down the launder. Instead of flowing through a small pipe opening at high velocities and generating dross, high flow rates can be achieved at low velocities with very quiescent movement of the metal to minimize dross.

The Laundry Transfer Pump can be used in a multitude of ways to improve productivity and reduce costs. Ladles can be filled quickly with minimal turbulence and dross formation. Metal can be transferred directly between furnaces, even when the furnaces are at different elevations. Once again, the transfer of metal is accomplished quickly with minimal metal disturbance.

The Laundry Transfer Pump can also be combined with our Metal Level Sensor System to maintain metal levels in a launder at a precise metal depth. The sensor adjusts the flow from the pump to maintain the metal level within a tight range (less than +/- 3mm) even though the metal may be changing in the feed furnace. The quiescent flow of metal provides cleaner metal. It eliminates surges downstream through the filtering and degassing system which can effect process control and metal quality. The Laundry Transfer Pump can also be used to feed casting lines in place of expensive tilting furnaces.

The new MMEI Laundry Transfer Pump lifts metal transfer to a higher level of performance and improved metal quality. To learn more about this revolutionary new pump, contact us for more information.

## Product HighLights

- ◆ **The newest method for molten metal transfer!**
- ◆ **Transfer metal faster with improved metal quality.**
  - **Achieve high metal flow rates**
  - **Quiescent metal flow reduces dross and improves metal quality**
  - **Easily control metal flow rates to achieve precise metal transfers**
  - **Improved reliability and longer service life than traditional transfer pumps**
- ◆ **Improved safety for operators - no splashing metal from pulling or replacing tapouts**
- ◆ **No riser tubes to wear out or clog**
- ◆ **Metal transfer is achieved through launders - no lined piping is used.**
  - **Wider cross sectional area of launder allows same flow rate at lower metal velocities for quieter metal transfer and lower dross formation**
  - **Service life of launders is significantly longer than that of piping**
  - **Open access of launders allows easy cleaning and maintenance.**
- ◆ **Available in 2 different sizes based on flow rate requirements - MINI HF or Workhorse HE**
- ◆ **Built with same rugged designs found in all MMEI pumps**
- ◆ **Advanced mixed-flow rotor designs achieve high metal flow rates at low shaft speeds (RPM's) for longer service life**
- ◆ **Self-aligning pump design is easy to build and maintain in-house - no need for a complicated alignment fixture.**

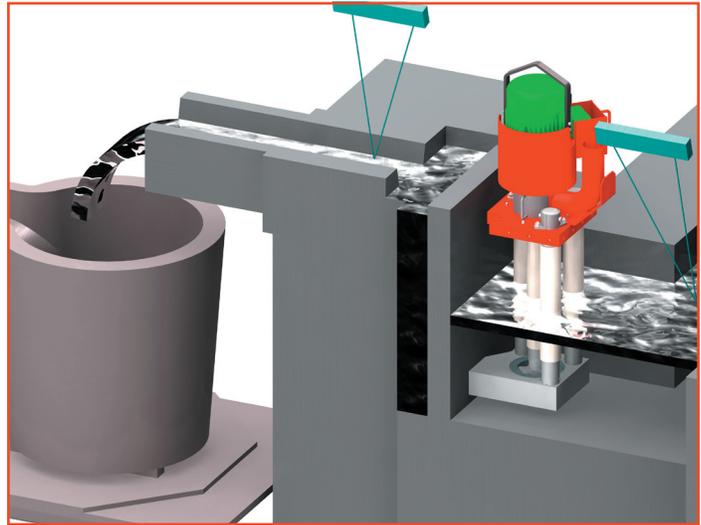


## Laundry Transfer Pumps

### Examples of Applications

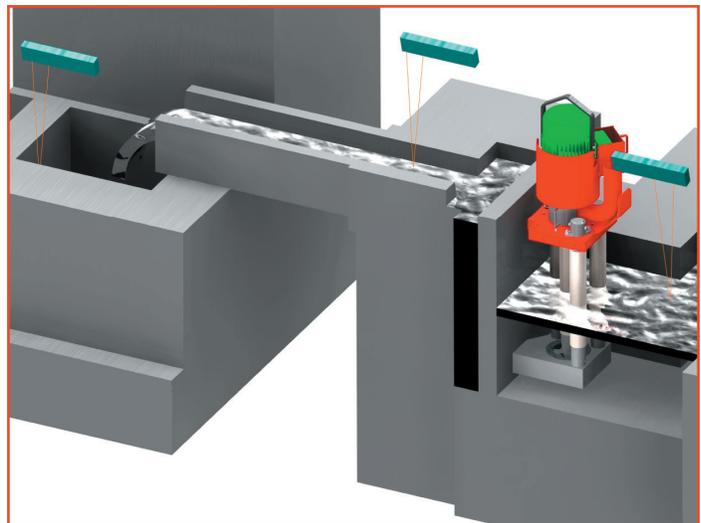
#### Use to Fill Ladles

- ◆ Fill ladles fast with the Laundry Transfer Pump to improve productivity
- ◆ Metal cascades at minimum velocity from wide opening of launder to provide quiet filling of ladle
- ◆ Quiet flow minimizes dross formation
- ◆ Operator remains at a safe distance during filling process - no tapouts to pull or replace
- ◆ Launder can be easily cleaned
- ◆ No riser or piping to clog up or replace



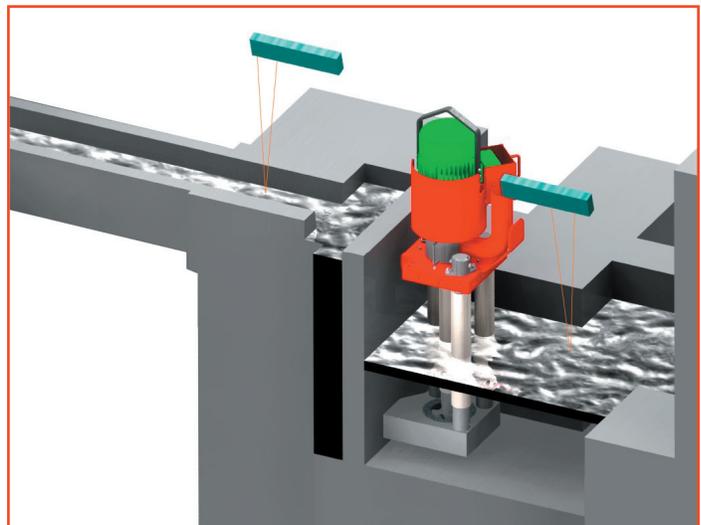
#### Transfer Metal Between Furnaces

- ◆ Achieve quiescent metal transfers between furnaces in rapid time - increase productivity
- ◆ Metal cascades at minimum velocity from wide opening of launder to provide quiet transfer
- ◆ Quiet flow minimizes dross formation
- ◆ Operator stays safe distance during filling process - no tapouts to pull or replace
- ◆ Launder can be covered to reduce temperature loss during transfer. Launder is easily cleaned and maintained.
- ◆ Can be combined with MMEI Laser Metal Sensor System to provide accurate metal transfers



#### Maintain Metal Level in a Launder

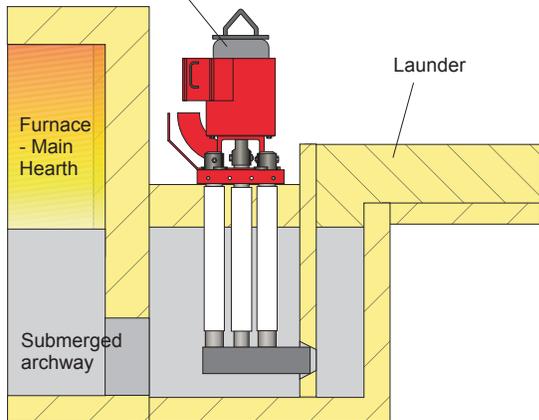
- ◆ Use to maintain metal level to precise depths in launder for feeding casting lines.
- ◆ MMEI Laser Metal Level Sensor controls speed of Laundry Transfer Pump to ensure metal depth remains constant - within +/- 3mm.
- ◆ Subsurface metal movement provides quiescent metal transfer in launder
- ◆ System operates automatically
- ◆ Changes in metal level in the feed furnace do not effect the level in the launder
- ◆ Reliable and accurate system improves process control





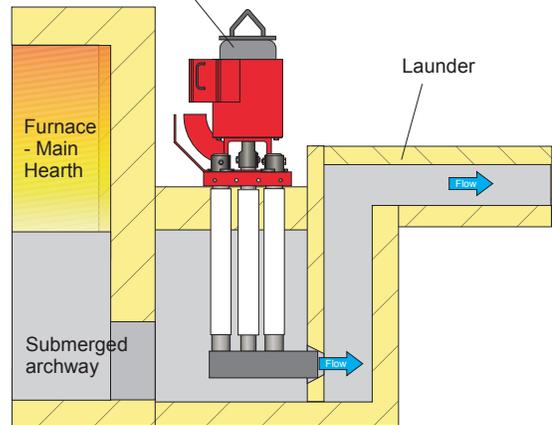
## How a Laundry Transfer Pump Works

MMEI Laundry Level Pump



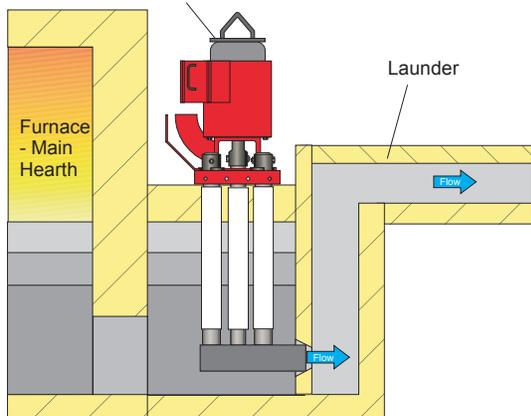
The outlet of the Laundry Transfer Pump is mated up to a small opening in the divider wall. The metal level is even on both sides of the divider wall when the pump is not operating.

MMEI Laundry Level Pump



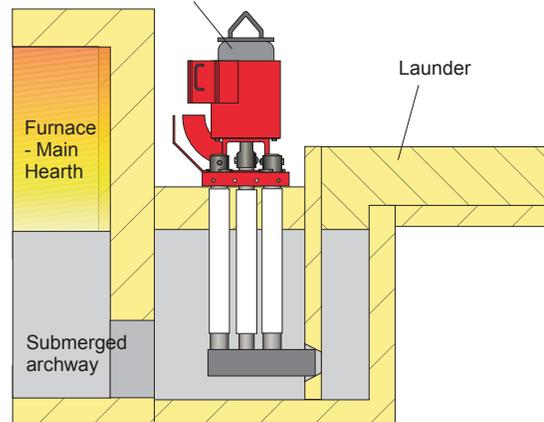
When the pump turns on, the metal level is pushed through the opening in the divider wall, lifting the metal level on the other side of the wall. The metal level rises and begins to flow down the launder.

MMEI Laundry Level Pump

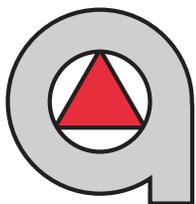


The metal level in the furnace may change, but the pump maintains the metal at a constant level in the launder. A laser metal level sensor monitors the level in the launder and adjusts the pump speed.

MMEI Laundry Level Pump



When the pump stops, the metal in the launder either drains out of the launder or flows back into the pump well. The metal level returns to the level in the furnace.



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