

# Ladle Slag Detection System

## AGELLIS EMLI SIL

## Slag Detection at Ladle Teeming

Continuous monitoring of metal teeming ladles to rapidly detect the onset of slag in the stream, control slag carryover and improve quality in the casting process.

### System Capabilities

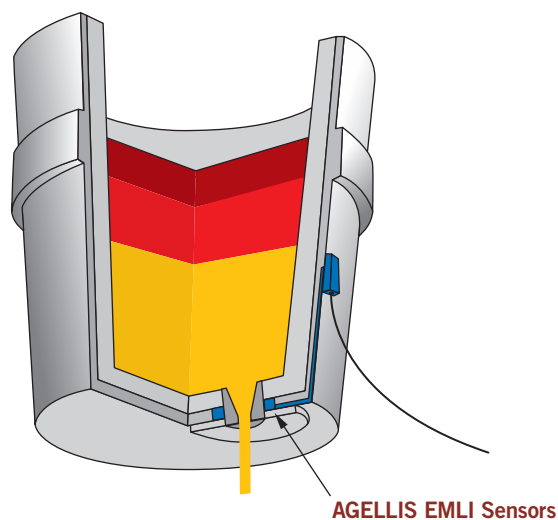
The AGELLIS EMLI SIL unit constantly monitors steel flow during ladle teeming at the caster and provides alarm outputs at the onset of slag in the stream. These outputs can be used to immediately end teeming by gate closure, while also giving visual and audible alarms.

The AGELLIS EMLI sensors/cabling are customized to fit any ladle and sliding-gate arrangement with only minimal modification to existing equipment.

The two sensor configuration means only a single sensor needs replacement if there is a breakage, thus reducing maintenance costs and making the EMLI SIL more cost effective to run than other systems.

The Management Unit is capable of running up to 4 Control Units of the same or different EMLI system types. This enables the user to expand the system to run extra slag detection systems or add mould level or tundish level measurement systems.

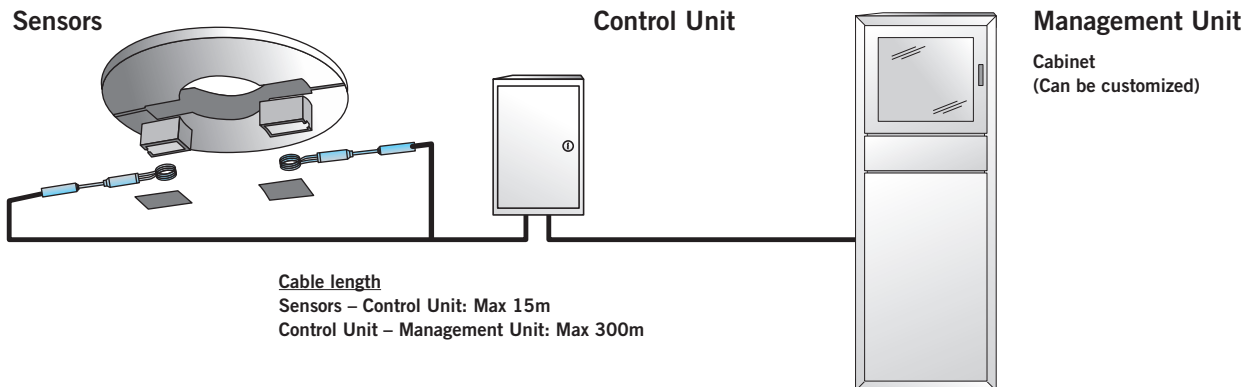
All EMLI system types have compatible parts, which means stocking spares is both simple and cost effective.



# Technical Information

## AGELLIS EMLI SIL

### System Overview

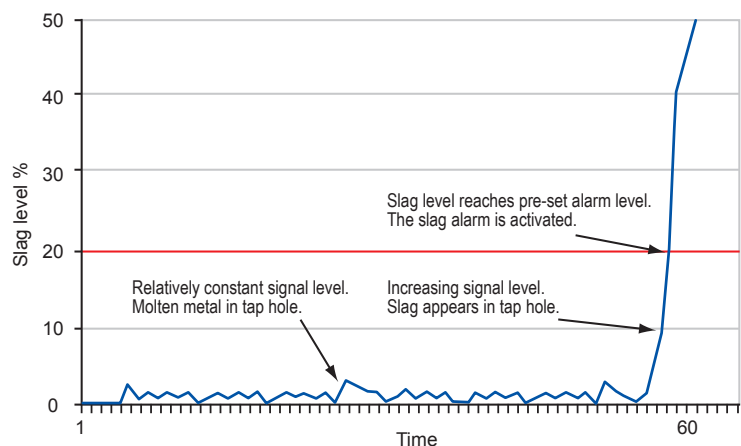
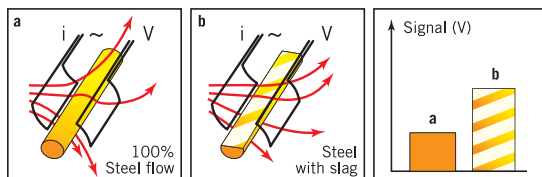


### Technical Information

<b>Power Supply:</b>	90 - 230 VAC 50/60 Hz max 500 W
<b>Frequency:</b>	Normally 280Hz
<b>Sensitivity:</b>	0,2%
<b>Alarm level:</b>	Adjustable
<b>Mounting specification:</b>	Designed to endure the industrial environment mounted on a ladle
<b>Cooling:</b>	Sensors – no cooling required Main Electronics Unit – ambient temp. range up to +55°C
<b>Safety standard:</b>	Complies with known safety standards

### Principles of Operation

A transmitter sensor is supplied with a current of a selected frequency which creates an electromagnetic field that in turn induces a corresponding voltage of the same frequency in the receiver sensor. When a 100% steel flow exists between the transmitter and receiver there is an induced voltage (a) at the receiver. As soon as the flow becomes a steel/slag mix, the induced voltage immediately increases (b).



Agellis follows a policy of continual improvement of design and we must therefore reserve the right to supply equipment differing in detail from that described herein.

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