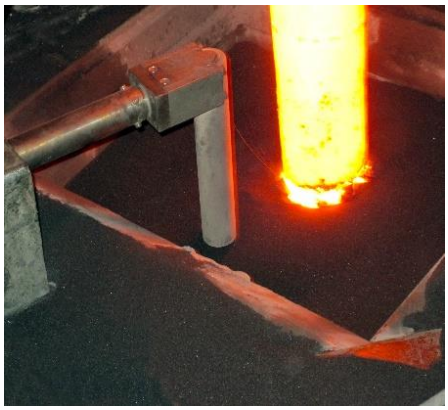
AGELLIS

AN RHI MAGNESITA BRAND

EMLI-MouldLevel Suspended

Electromagnetic mould level measurement



Monitors metal level using a sensor suspended in a continuous casting mould in order to maintain accuracy and improve quality in the casting process.

The Agellis EMLI-MouldLevel Suspended sensor constantly monitors steel level in the mould during casting and provides outputs to control the flow to maintain desired operating levels.

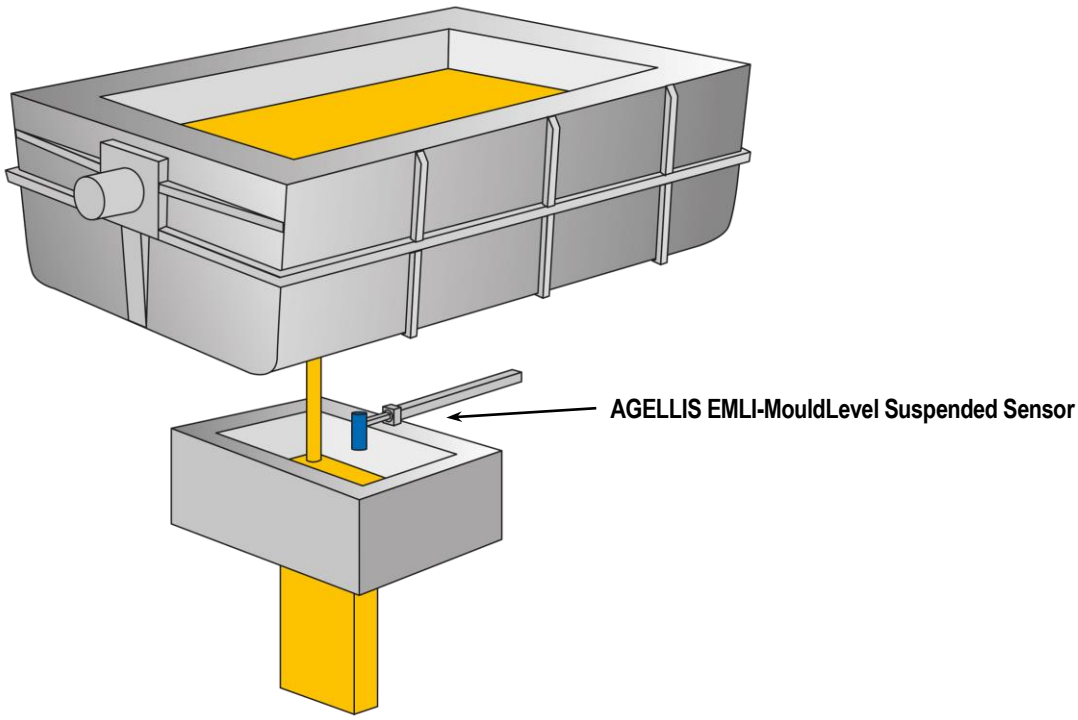
The suspended sensor unit can be mounted on an automatic or manual arm in order to access the correct position in the mould.

The Agellis EMLI sensor is designed to operate in the extreme conditions. It has high temperature covers and is designed for cooling.

Unlike radioactive systems the electromagnetic (eddy current) technology in the EMLI-MouldLevel Suspended system gives the operator true steel level irrespective of the amount of mould powder on the steel surface.

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

All EMLI system types have compatible parts, which means stocking spares is cost effective and reduced to a minimum.



AGELLIS Group AB
Tellusgatan 15
224 57 Lund
Sweden

Phone:+46 (0)46-10 13 60
Fax: +46 (0)46-10 13 61
Email: info@agellis.com
www.agellis.com

Your local representative:

RHI MAGNESITA

COM/DES/004760/REV C

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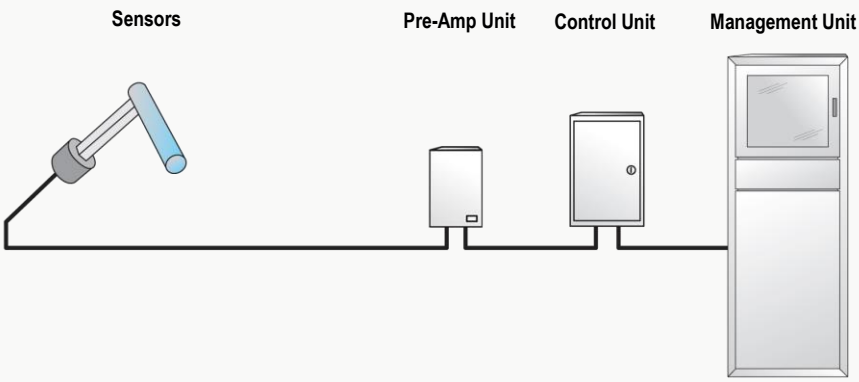
System Overview



Cable Length: Sensors – Pre-Amp Unit: up to 25m
Pre-Amp Unit – Control Unit: Max 200m
Control Unit – Management Unit: Max 300m

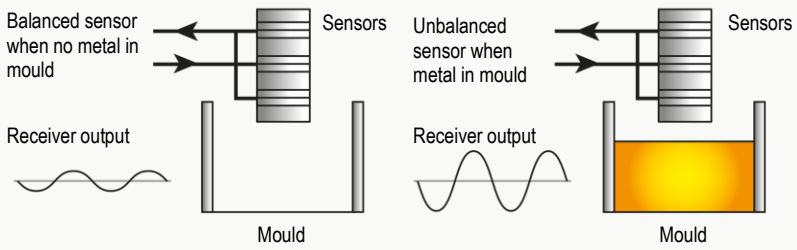
Cabinet: Can be customised

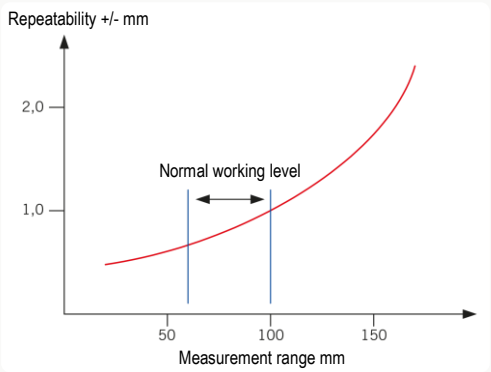
Technical Information

Power Supply:	90 - 230 VAC 50/60 Hz max 500 W
Frequency:	35 mm sensor normally 12kHz 90 mm sensor normally 1120Hz
Sensitivity:	0,2%
Minimum Sensor Lifetime:	12 months or more
Mounting Specification:	Designed to endure the industrial environment over a mould
Cooling:	Sensor – air/nitrogen cooling required Main Electronics Unit – ambient temp. range up to +55°C
Safety Standard:	Complies with known safety standards

Note: Above data can vary depending on mould size shape and local conditions

Principles of Operation





Within the suspended sensor unit a transmitter coil is supplied with a current of a selected frequency that in turn induces a corresponding voltage of the same frequency in receiver coils also within the unit. These sensor coils are balanced when in an empty mould.

As the mould is filled the metal moves within the range of the sensor and the balance between the coils is changed in proportion to the metal proximity. The calibrated signal output is linearized to denote the actual metal level in the mould.

The normal meniscus working level is typically between 50 - 100 mm. Within the normal working level repeatability is between ± 1 mm to ± 1,5 mm. The maximum range is 150 mm.

User Benefits & Advantages

Process control	– Measures true metal level, irrespective of powder. – High measurement precision. – Fast true response time.
Automation	– Easy to handle. – Automatic deployment and withdrawal when used with manipulator*. – Automatic calibration.
Compatibility	– Can be used with EMS, EMBr and coating conditions.

* Optional manipulator to automatically position the sensor.

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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