A NEW SOLUTION FOR
MOULD LEVEL CONTROL
IN CONTINUOUS CASTING PROCESS
WITHOUT RADIOMETRIC SYSTEM:
UT-LEVEL with ULD sensor

Ultrasonic mould level detector
TECHNICAL DATA

TECHNOLOGY:
ultrasound

PRECISION:
+/- 2mm with 50ms response rate

MEASUREMENT RANGE:
up to 210 mm according to the installation

01 ULD sensor
02 Copper tube
03 Scintillator for radioactive source and radioactive source: ELIMINATED
04 Connector
05 EMS
06 Water jacket
UT-LEVEL is an innovative sturdy system applicable to billets, blooms and beam-blanks CCMs for measuring and controlling the steel level in the mould based on the ULD sensor.

UT-LEVEL is used for both open stream and submerged stream casting (subject to verification of installation feasibility carried out by ergolines specialists). It can operate together with Electromagnetic Stirrers because it is not affected by the EMS electromagnetic field.

UT-LEVEL enables significant cost savings and fast return on investment as the costs of replacement and disposal of radioactive sources are eliminated and maintenance operations are simplified and without risks for operators.

The ULD sensor Standard measurement range is up to 210 mm and it can perform the automatic start of casting (range can be customized).

The system can be supplied for steel level measurement only or with the automation to perform steel level control.

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**MAIN ADVANTAGES**

› No radioactive source needed providing a maximum level of safety for the operators
› Easy to install as it is positioned on the water jacket and not on the copper tube
› Contactless measurement
› Easy installation also on existing casters
› Easy to use for operators as no calibration is required
› Can be used with EMS
› Minimum maintenance costs
› Customized measuring range
› Suitable for any casting size or format regardless of dimensional limits
› Fast recovery time in case of replacement
› Commissioning and remote support included
› Can provide the copper tube thermal profile of the meniscus area
› A forward-looking solution based on industry 4.0
STEEL LEVEL CONTROL WITH AUTOMATIC START

Typical trends of automatic casting start are displayed below. The position of the ultrasonic probes and copper thermal profile of the mould measured by ULD sensor are schematized in the bottom right corner.

STEEL LEVEL CONTROL WITH CASTING SPEED REGULATION 130X130 BILLET

SMOOTH AUTOMATIC START

REALTIME THERMAL MAPPING PROVIDED BY ERGOLINES UT-MAP SOFTWARE

CLICK HERE TO SEE THE VIDEO
EXAMPLE OF UT-LEVEL SYSTEM LAYOUT

MOULD LEVEL CONTROL + AUTOSTART WITH ULTRASONIC LEVEL DETECTOR

FURTHER ADVANTAGES FOR QUALITY IMPROVEMENT:

UT-MAP (ULTRASONIC THERMAL MAPPING)

In addition to information regarding the steel level, the data provided by the ULD sensor can be used by UT-MAP software package provided by ergolines for the real time thermal mapping of the copper mould available on demand. UT-MAP is able to detect anomalies in the solidification process in the mould and to provide key data for break-out prevention.

It is a smart software solution designed for industry 4.0

› LEARN MORE ABOUT UT-MAP SOFTWARE PACKAGE <