



MOLD CHECKER SLAB

MEASUREMENT OF MOLD SURFACE AND FOOT ROLLS

BENEFITS

By measuring the 3-dimensional contour of a mold, it is possible to observe the wear during lifetime, estimate the lifetime of the mold and to measure and properly adjust foot rolls. Correctly adjusted mold tapers minimize the probability of breakouts. By knowing about scratches and the deviation from the set point geometry, the best time to exchange mold plates can be determined in order to prevent breakouts and save money. Newest laser technology makes it possible to acquire all the mold relevant data with only one measurement device that measures contactless and fully automatically.

FIELD OF APPLICATION

Mold Checker slab is a single device for several different mold formats, as well as a single device for the measurement of molds and mold foot rollers at continuous slab casting machines. A particular version, Mold Checker, is available for use in billet and bloom caster molds.

FUNCTION

The Mold Checker slab consists of a measurement unit with laser and the evaluation PC. The measurement unit is positioned in the corner region of the mold. It automatically calibrates its position in reference to the mold and the vertical axis. A menu-driven HMI guides the operator through the measurement of the mold.

The operator only has to enter data like mold number, mold width and number of casts and start the measurement. The measurement itself is done completely automatically, so the operator is not prevented from doing other tasks. For each cross section more than 6000 measurement points are taken in less than 6 seconds.

PRODUCT STRUCTURE

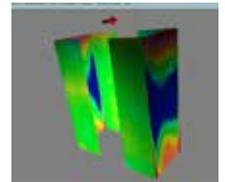
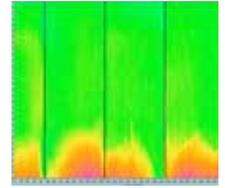
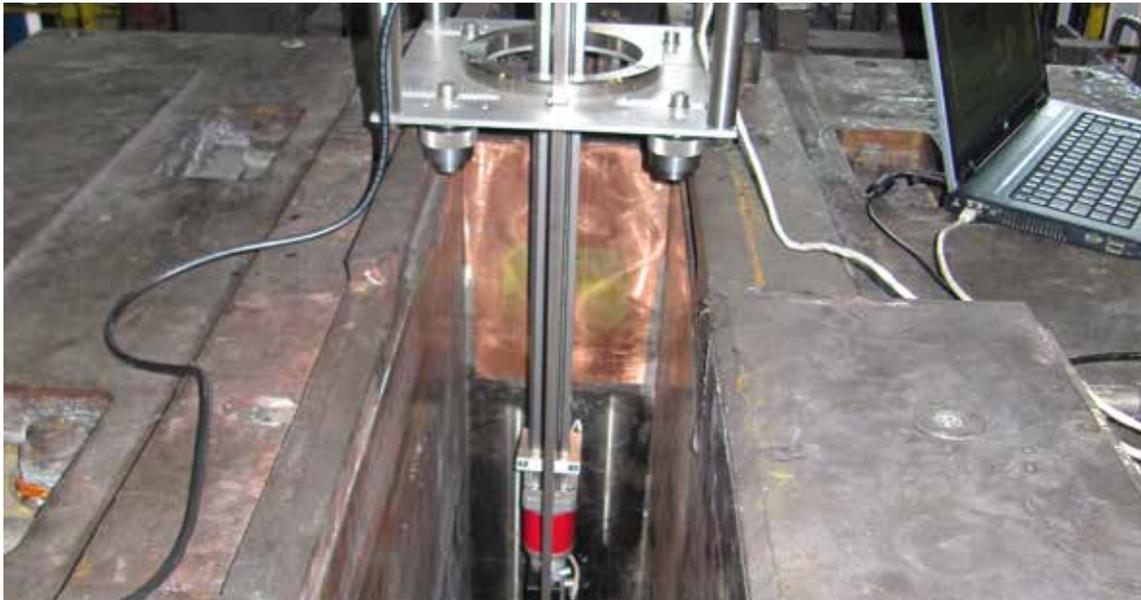
Measurement unit with calibration ring, the unit's base will be adapted to fit the customer molds

10 m connection cable between evaluation unit and measurement unit

Evaluation unit (laptop) with software to control the measurement unit and for data evaluation

Transport and storage case

Measurement and visualization software (only executable program without source code)



TECHNICAL DATA

Laser class	2 (not dangerous for human eye)
Measurement range	120 mm
Resolution	7.4 μm
Linearity	$\pm 0.02\%$ ($\pm 0.08\%$ max)
Measurement frequency	1.25 Hz
Temperature stability	0.01%/K
Duration of measurement	depends on number of measured cross sections (customized) typically < 10 minutes
Measuring time per cross section	5 to 10 s
Measurement points per cross section	approx. 6,000
Repeat accuracy	± 0.08 mm
Operating temperature	10 - 35°C (PC) not cond. 0 - 50°C (electronics)
Storage temperature	-20°C to +60°C

SERVICES

- Commissioning advisory
- Training
- Spare parts

OTHER CUSTOMERS BOUGHT ADDITIONALLY

- Gap Checker
- Strand Checker
- OsciChecker
- Mold Checker slab
- Taper Checker
- Mold Expert
- Thermocouple Checker
- Mold SurfaceMon

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