QuiK-Lab E

Heraeus

QuiK-Lab E
Thermal Analysis
in Cast Iron

Electro-Nite

QuiK-Lab E
For Reliable Thermal Analysis in Cast Iron Melts

QuiK-Lab E wall-mounting instrument with 50 mm multi-functional display

QuiK-Lab E is the economy variant of our successful QuiK-Lab series. With QuiK-Lab E the foundry man possesses the perfect instrument for quality control.

Its extensive metallurgical calculation program can be customised for a wide range of applications.

- **Calculation program for grey and white solidification of cast iron: TL, CEL, Sc, TS, Si%, C%, ΔT, ΔTM**

- **Additional program for unalloyed lamellar casting: Z/H, HB, RM, K, MEG**

QuiK-Lab E works with an improved evaluation method which automatically controls the important metallurgical parameters.

The automatic detection of grey and white solidification of cast iron makes manual programming irrelevant.

- **Independent detection of grey and white solidification of cast iron**

- **Automatic control of metallurgical parameters**

- **50 mm LED display with measurement result selection switch**

- **Instrument for single and multiple station installation**

QuiK-Lab E is simple and easy to use with fully-automatic operation during measurement. The brilliant LED display ensures the results are already legible even in poor light conditions.

QuiK-Lab E is fitted with customer oriented instrument interfaces. One data interface and signal outputs are strategic of the basic devices.

Peripherals can be connected to the signal and measurement data outputs e.g. large-format remote displays, indicator lamps and high level computers.

Standard Interfaces and Outputs:

- **Serial interface TTY/20 mA**

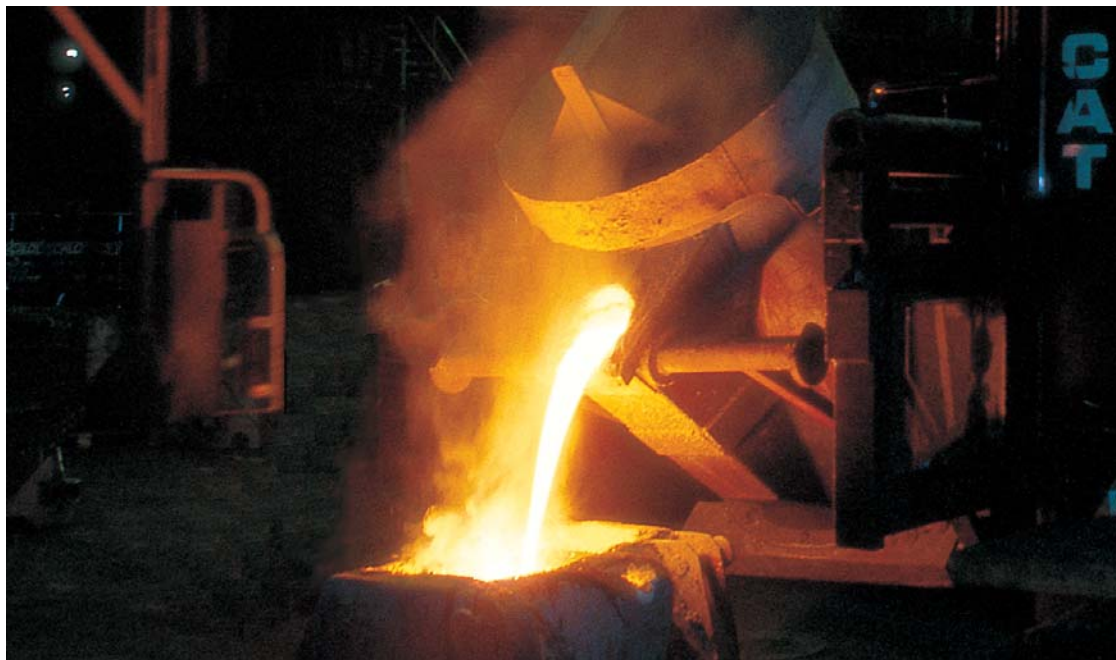- **Three control outputs for signal alarm devices**

Optional:

- **Ethernet**

Technical Data

QuiK-Lab E

Analysis program for grey and white solidification of cast iron melts	determination of C%, CEL/Sc, Si%,	undercooling ΔT, ΔTM	
Additional program for unalloyed grey cast iron melts	calculation of tensile strength (Rm), brinell hardness (HB)	tensile strength hardness factor (Z/H), graphite factor (K)	quantity of the eutectic graphite (MEG)
Temperature measuring range	arithmetically linearized according to IEC 584, IPTS 68	type K (NiCr-Ni) 400 °C - 1370 °C	
Temperature display	LED 4-digits, digit height 50 mm	° C/ °F	resolution 1 °C/ 1 °F
Measuring result display	with floating point		
Reference temperature	0 °C with cold-junction adjustment		
Accuracy	+ 18 °C up to + 28 °C ambient temperature ± 1 °C accuracy	0 °C up to + 50 °C ambient temperature ± 2 °C accuracy	
Multi-functional display	liquidus temperature (TL), solidus temperature (TS), carbon equivalent (CEL),	degree of saturation (Sc), carbon content (C%), silicon content (Si%)	undercooling ΔT and ΔTM, error measurement
Measuring sequence display	"ready", "measurement", "complete"	via coloured signal lights	
Operation	individual measuring result selection via rotary switch	Si%-adjustment via digital potentiometer	C%-adjustment via potentiometer (internal)
Data output	measuring results and measurement station no.	TTY, 20 mA, 300 Baud, active or passive	two selectable data telegrams
Signal outputs	"ready", "measurement", "complete"	output via potential free relays, maximum load 250 V, 1A	maximum 60 W
Housing, dimensions and weight	metal housing for wall-mounting, protection IP 55	h = 200 mm, w = 200 mm, d = 120 mm	weight 5 kg
Operating data	power supply 230 V AC ± 10%, 50/60 c.p.s., instrument variant: 115 V AC ± 10%, 50/60 c.p.s.	power consumption 25 VA - 30 VA	ambient temperature 0 °C up to + 50 °C
Optional interface	Ethernet		
Instrument variant	QuiK-Lab-E WinProcess	extendable to network based data management system MeltControl 2000-win	

Further technical details on request. We reserve the right to modify illustrations and technical data without notice.

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