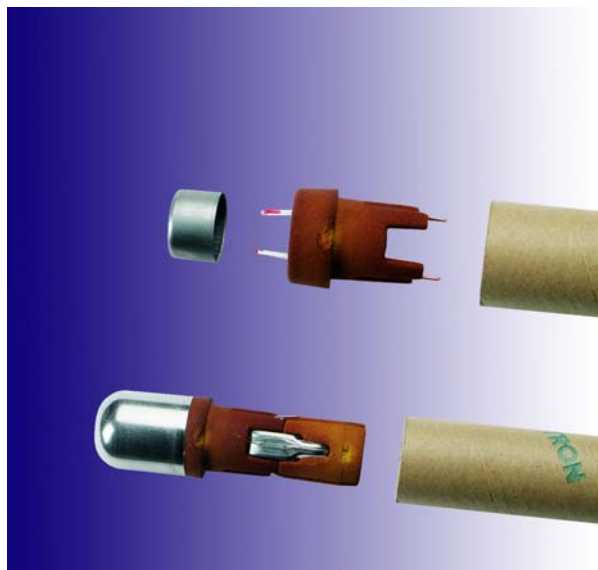


SL sub lance probes

The sub lance probes of FERROTRON Division correspond to the geometry of sub lance devices. Therefore, all common contact blocks and hardpaper tubes with different diameters and lengths are available. For the requirements of the different converter types and variable measuring demands we apply tailor-made measurement heads and slag protection caps. All sub lance probes can be stored and handled fully automatic.



Range of application:

Temperature measuring:

T-SL Temperature measuring probe
DT-SL Temperature measuring probe with two thermocouples

Oxygen activity and temperature measuring:

TF-SL EMF - Temperature measuring probe

Temperature measuring probe with sample:

TP-SL Temperature measuring probe with sample

Oxygen activity-, temperature measuring probe with sample:

TPO EMF – Temperature measuring probe with sample

The evaluation of the detected measurement signals can be made by processor-controlled measuring instruments like TempNet or OxyNet. The results are used to optimize the metallurgical process.

Description of the substance probes

T-SL and DT-SL

The T-SL and DT-SL probes detect the temperature of the liquid steel. By using two thermocouples in the measuring head, the measurement is very safe and leads to a readout above 98%.

Technical data

Thermocouple:	T-SL: Pt 30 Rh-Pt 6 Rh (Type B), other on request DT-SL: 2 x Pt 30 Rh-Pt 6 Rh (Type B), other on request
Contact piece:	depending on the substance device
Dimensions:	correspond to the geometry of the substance device

TF-SL Probe

The TF-SL substance probe detects the EMF- and temperature values of the liquid steel. Based on this information the activity of oxygen can be calculated, which leads to the contents of Carbon.

Technical data

EMF-cell:	ZrO ₂ (MgO stabilised), tube crucible, Cr/Cr ₂ O ₃ -reference material
Thermocouple:	Pt 30 Rh-Pt 6 Rh (Type B), other on request
Contact piece:	depending on the substance device
Dimensions:	correspond to the geometry of the substance device

TP-SL-Probe

The TP-SL sublance probe offers the opportunity to take a sample and detect the temperature of the liquid steel at the same time. The probe head is build by a bipartite sand body. The mould and the thermocouple are placed in the sand body.

Technical data

Thermocouple:	Pt 30 Rh-Pt 6 Rh (Type B), other on request
Sample:	Mould: double thickness oval, other moulds on request
Contact piece:	depending on the sublance device
Dimensions:	correspond to the geometry of the sublance device

TPO-Probe

The TPO-SL sublance probe offers the opportunity to take a sample and detect the EMF- and temperature values of the liquid steel at the same time. The probe head is build by an bipartite sand body. The mould, the thermocouple, the EMF-cell as well as the bath contact are placed in the sand body.

Technical data

EMF-cell:	ZrO ₂ (MgO stabilised), tube crucible, Cr/Cr ₂ O ₃ -reference material
Thermocouple:	Pt 30 Rh-Pt 6 Rh (Type B), other on request
Sample:	Mould: double thickness oval, other moulds on request
Contact piece:	depending on the sublance device
Dimensions:	correspond to the geometry of the sublance device

Information contained herein is believed to be accurate and reliable. However, no responsibility is assumed by *MINTEQ/Ferrotron* for its use. Technical data are subject to change without notice.

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