

Thermocouples

EXPENDABLE IMMERSION LANCES FOR MOLTEN METAL TEMPERATURE MEASUREMENT

DESIGNED AND MANUFACTURED FOR TOTAL CUSTOMER SATISFACTION

The thermocouple remains an indispensable process control tool within the metallurgical industry. Dedication to the highest standards of accuracy and dependability has made Heraeus Electro-Nite (HEN) the world's largest maker of immersion thermocouples. We define product quality in terms of total customer satisfaction. Numerous preferred supplier awards from major steel and foundry companies attest to the success of this policy.

Users of HEN's lances benefit from the industry's most extensive research and development program, resulting in continual product improvements. The wire used in HEN's thermocouples is calibrated by the suppliers to standards of the National Institute of Standards and Technology (NIST), and must pass our company inspection by magnification, tests for physical properties, and checks against rigid EMF standards.

Just as we demand quality verification from our suppliers, HEN is able to support our customers' accountability requirements with proof of NIST testing and production SPC documentation. All three single-use immersion thermocouples—the EN3, the ML Positherm, and the non-splash ENtherm—utilize a monolithic fired flange and body which protects a smaller castable core and holds cement exposure to a minimum.

They are available in lengths and thermocouple types to meet the needs of every steel mill application. The ENtherm and Positherm lances, along with HEN's exclusive multiple immersion designs, are also used in ferrous foundries.



HEN provides all necessary hardware, accessories, and instrumentation for complete temperature control systems. Customers receive prompt service, expert technical support, and fast shipments from stock from our nationwide sales and distribution network.

Our innovative Research and Development team has achieved advancements in existing technologies while pioneering new methods consistently for over 45 years. We have remained the industry leader because customers rely on our experience, our reputation for quality, and our devotion to innovation.

PRE-ASSEMBLED CABLES

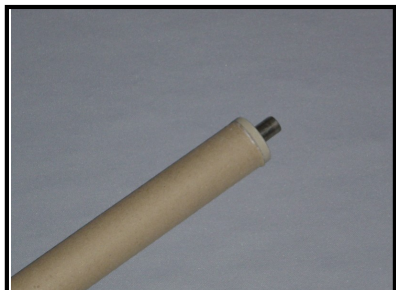
Ordering the pre-assembled lance cable will save our customers time. This includes the contact block and lead wire, made to the required length. The cable is pre-stripped for easy mating to the pole end connector. The high temperature insulated lead wire is sheathed in braided stainless steel. Also available are copper clad high temperature head wire for rugged applications.



Electro-Nite

EN3

LARGE DIAMETER LANCE



BUILT TOUGH FOR LARGE FURNACE MEASUREMENTS

HEN's emphasis on superior design and quality manufacturing is crucial when it comes to big furnace temperature measurements with the large diameter EN3 lance. This lance is durable to assure fast and accurate reproducible readings every time in BOF and Electric Furnace applications.

With its fired ceramic flange and body, high density convolute wound paper tubing, precision-formed and temperature compensated lead

wires, and the highest quality thermocouple wire, the EN-3 is the most accurate, user-friendly big furnace lance on the market.

Note: All platinum thermocouple lead wire is color coded, red for negative, black for positive. Type S (10%) and Type R (13%) thermocouples require compensated lead wires and connectors. Type B (6/30) thermocouples require non-compensated lead wires and connectors. Lead wire is supplied in specific lengths (in meters) or may be ordered in spools.

ORDERING INFORMATION

EN3 - Blank (for IPTS 48) or 68 (for IPTS 68)

ST for Steel Cap
AL for Aluminum Cap

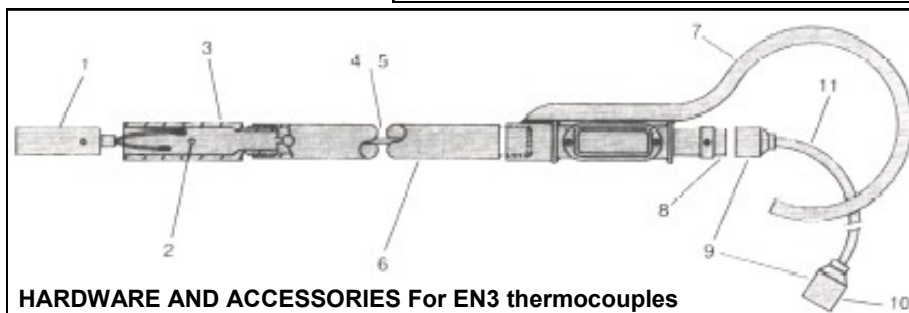
Length
36," 48", 60", 72", 96"

Thermocouple Type:
10% (S), 13% (R),
6/30 (B)

Order Ex: EN31036ST
EN31096AL 68

Packaged: 25 per box

Pallets: 96" = 300 or 400 per pallet, all others 500



HARDWARE AND ACCESSORIES For EN3 thermocouples

No.	Part No.	Description
1	T271	EN-3 Contact block compensated for 10% or 13% thermocouple
	T271N	EN-3 Contact block non-compensated for 6/30 thermocouple
2	RP1	1/8" diameter x 1" long roll-pin (one supplied with each T271 and T271N)
3	T280	EN-3 Contact block holder
4	TC <input type="checkbox"/> <input type="checkbox"/>	Copper sheath lead wire cable assembly with 9" flexible leads. Specify compensation: 3 for compensated, 4 for non-compensated. Specify length of copper sheath, from 6' to 15' in one foot or 1/2 foot increments (6, 6 1/2, 7, 7 1/2, etc.) Longer lengths available. (Ex. TC36)
5	LCAC2 <input type="checkbox"/>	Lance cable assembly with T271 compensated contact block attached
	LCAN2 <input type="checkbox"/>	Lance cable assembly with T271N non-compensated contact block attached
6	Customer Furnished	3/4" IPS pipe, length to suit application. I.D. threads at one end, 7/8", 14 NF. O.D. threads on other end, 3/4" NPT
7	T333	Heavy duty loop handle
8	T260AFC	Female (pole end) connector, compensated, heavy duty
	T260AFN	Female (pole end) connector, non-compensated, heavy duty
	T262AFC	Female pole-end connector, screw lock, type S compensated
9	T250AMC	Male (cord end) connector, compensated, heavy duty
	T250AMN	Male (cord end) connector, non-compensated, heavy duty
	T252AMC	Male cord-end connector, screw lock, type S compensated
10	T251AMC	Male (cord end) connector, compensated, standard: connects T344G lead wire to recorder or instrument
	T251AMN	(Same as above, but non-compensated)
11	T344G	Rubber covered, stranded 2-conductor lead wire, 18 ga., compensated (specify length in meters)
	T345	(Same as above, but non-compensated)