

YOUR PARTNER IN TEMPERATURE



Temperature Sensing
Experts



Comprehensive
Global Network



Sustainability
Management



Investor in
People



Thermo Electric

Thermo Electric Instrumentation has been at the forefront of temperature sensing manufacturing since 1967, initially concentrating on the specific needs of airplane engine exhaust gas temperature monitoring. Today, as a leading provider of temperature measurement solutions, we offer an extensive range of industrial temperature measuring products designed for a wide range of applications and industries.

Our advanced technology and manufacturing capabilities enable the creation of products that endure harsh conditions, including corrosive chemicals, vibrations, extreme temperatures, and high pressures, from absolute zero (-273 °C) to above 2,700 °C. We are experts in these demanding environments.

With a global reach, we ensure a local presence through a network of factories, distribution centers, sales, and service points across Europe, the Middle East, and Asia. We serve as a trusted partner to OEMs, end-users, system integrators, EPC contractors, main instrument vendors, the general process industry, and R&D companies.

Sustainability sits at the heart of everything we do. As a responsible business, we're committed to integrating sustainable practices throughout our operations and value chain and continually review our sustainability strategy to align with our corporate values and our stakeholders' priorities.

Led by our experienced team, Thermo Electric Instrumentation is ideally positioned to meet your global needs, providing temperature measurement solutions that are not only technologically advanced but also responsible and sustainable.

Jan-Willem Noordermeer
CEO, Thermo Electric Instrumentation



We specialize in a Variety of Sectors

- Chemical, petrochemical, oil and gas
- Semiconductor and solar
- Steel, non-ferrous and glass
- Aerospace
- Energy

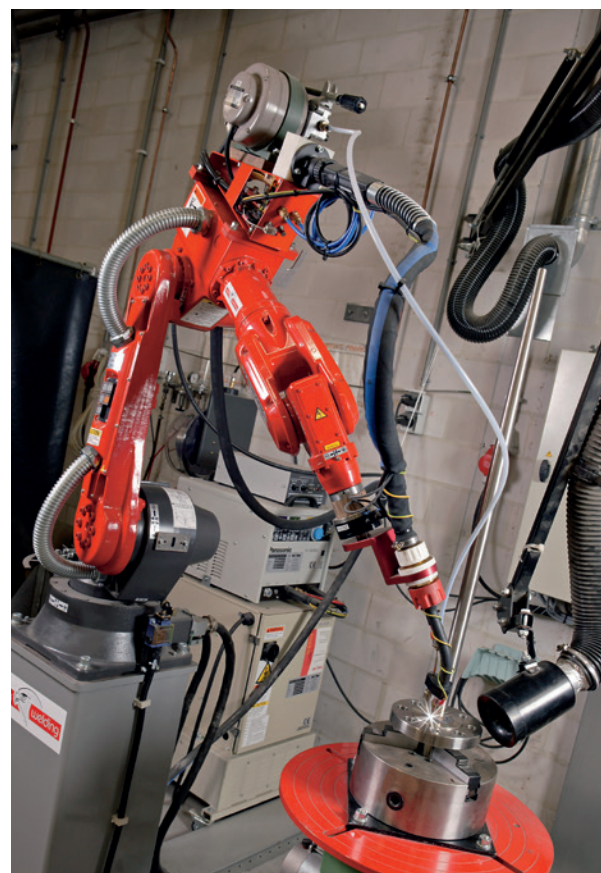


Quality is our Priority

Our product excellence is reinforced by adherence to our ISO9001 quality management system, which guarantees the highest level of traceability for your projects. We are also certified in ISO14001 and ISO45001, underscoring our dedication to environmental stewardship and occupational safety.

Our in-house calibration laboratory, accredited by RvA according to the ISO/IEC 17025 standard, sets us apart in the industry. This accreditation streamlines our certification and calibration processes by eliminating dependence on external entities, thus ensuring our partners enjoy more consistent and reliable delivery timelines.

In addition to this, our laboratory offers unparalleled capabilities. We supply temperature sensors with full manufacturer calibration certificates for a vast temperature range, from -195°C to $1,500^{\circ}\text{C}$. Tailored to meet your precise requirements, these calibrations are conducted against a variety of criteria, ensuring our solutions are perfectly aligned with your specific needs.





Chemical, Petrochemical, Oil and Gas

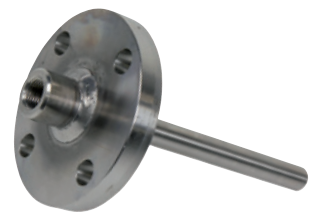
The chemical, petrochemical, oil and gas industries increasingly demand innovative temperature measurement solutions. Reliability, durability, and quality are standard in our products, addressing these needs effectively.

We recognize our customers' need for dependability and expertise from a supplier partner. Our engineers can integrate seamlessly with main contractors, having experience working alongside well-known, leading engineering and procurement companies.

AN INVALUABLE RESOURCE FOR OUR CUSTOMERS

Our expertise in procurement, engineering, project management, and product qualification in the chemical, petrochemical, oil and gas industries assists our customers in selecting the right product from the start. Our support in design and calculations has proven to be a reliable and valuable resource. This is why customers continue to choose Thermo Electric products for their projects.

- Industrial temperature assemblies
- High pressure sensors
- High temperature sensors
- Tube skin thermocouples
- Multipoint assemblies
- Thermowells





Semiconductor / Solar Industry

TEMPERATURE SENSING AND PRODUCT DEVELOPMENT

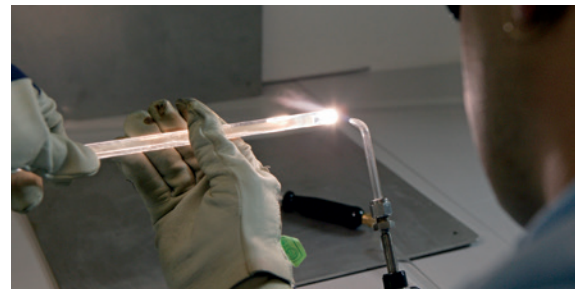
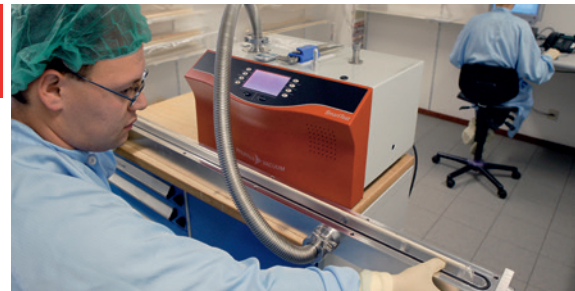
We have consistently led the way in the development of temperature sensing technologies within the semiconductor and solar industries, now further strengthened by our laboratory's accreditation from RvA under the ISO/IEC 17025 standards. This recognition, along with our unique features and manufacturing processes, positions us distinctively in the market and solidifies our competitive advantage.

KEY FEATURES AND BENEFITS OF THERMO ELECTRIC SPIKE AND PROFILE THERMOCOUPLES

- Ceramic insulation sleeves capable of accommodating up to seven thermocouples (14 channels)
- Handles made from lightweight aluminum or anodised aluminum
- Enhanced durability to minimize the risk of breakage
- Quartz protection tubes subjected to vacuum testing
- Specially designed packaging for global shipping

EXTRAORDINARY CARE AND CALIBRATION

We produce all of our spike and profile thermocouples in a dedicated cleanroom, ensuring each sensor is made to the highest quality standards. Each thermocouple comes with a calibration report and meets the latest international specifications and criteria.



Thermo Electric Instrumentation specializes in the design, manufacture and supply of spike and profile thermocouples to both original equipment manufacturers and end-users.



Steel, Non-Ferrous and Glass Industry

Thermo Electric Instrumentation has a long history of manufacturing and supplying temperature sensors, playing a critical role in industries like steel, non-ferrous metals, and glass.

INNOVATIVE SOLUTIONS FOR DEMANDING PROCESSES

Our products are integral in various applications including coal grinders, sintering plants, blast furnaces, and glass furnaces. These are environments where demanding processes necessitate high-performing industrial temperature sensors capable of withstanding temperatures up to 1,500 °C.

We offer innovative solutions for such high-temperature measuring needs. For example, our thermocouple sensor with a platinum sleeve, made from ceramics and sealed with platinum, uses much less precious metal. This approach leads to considerable cost savings.





Power and Energy Industry

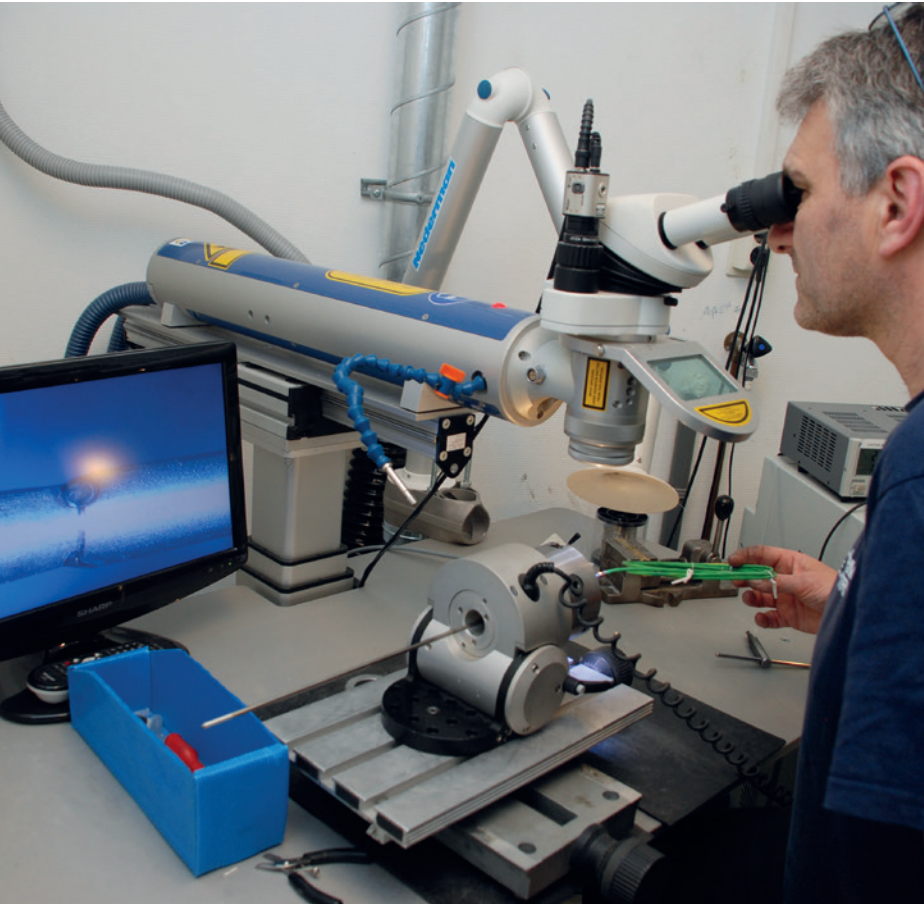
We take pride in our products having set industry standard specifications within the energy sectors, many of which are still in use today.

UNIQUE 'COOK BOOKS'

As a partner to the energy industry, we've worked closely with our customers to streamline order processes and simplify the selection and calculation of temperature sensors.

Our unique 'cookbooks' are designed to ease and expedite the engineering of temperature measurement solutions in gas turbines, boilers, and steam pipelines.





Manufacturing Facilities

Our production and engineering facilities are centrally located in the Netherlands and manned by our highly skilled employees. This setup is essential for upholding our high standards and best practices in engineering and design. The expertise of our personnel, coupled with state-of-the-art facilities, guarantees the efficient manufacture of Thermo Electric temperature sensors and their consistent high-quality performance in the field.

CALIBRATION FACILITIES

Our laboratory holds ISO17025 accreditation for temperature measurements ranging from $-200\text{ }^{\circ}\text{C}$ to $1,500\text{ }^{\circ}\text{C}$, as well as for evaluating electrical parameters including millivolts (mV), milliamperes (mA), ohms (Ω), and volts (V).



SERVICES

- Wake frequency calculations for Thermowells as per ASME PTC19.3
- Cleaning for oxygen services
- Customized drawings
- Customized Inspection and test plans / procedures

CERTIFICATIONS

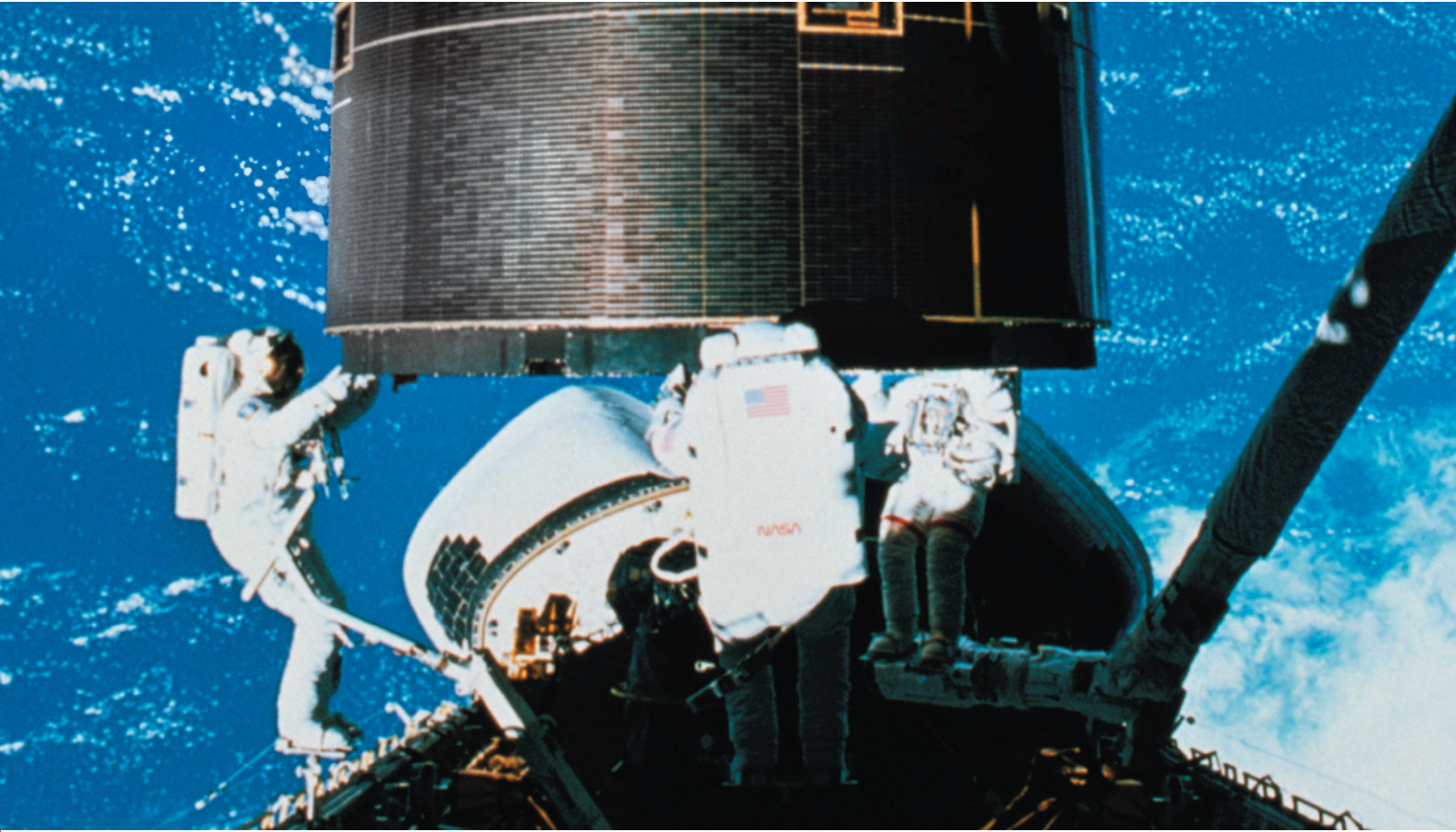
- Material certificate as per EN10204 3.1 or 3.2 and NACE
- Welding procedure specification (WPS) including procedure qualification records (PQR) and Welder performance qualifications (WPQ) as per ASME IX and ISO15614
- Certificate of conformance (EN10204 2.1)
- Certificate of origin

HAZARDOUS AREA CERTIFICATES

	XPS1	XPS2	XPS3	XPS4
IECEX:	Exeb	Exia/b	Exdb	Exec
ATEX:	Exeb	Exia/b	Exdb	Exec
CSA/US:	(A)Exe	(A)Exia/b	(A)Exd	(A)ExnA
KTL:	Exe	Exia	Exd	ExnA
CCOE(PESO):	Exeb	Exia/b	Exdb	
CCC:	Exia	Exdb		

TESTING FACILITIES

- Visual inspection
- Dimensional check
- Pressure testing (up to 1100Bar)
- High pressure testing (up to 5500Bar)
- Dye penetrant examination (DP)
- Radiographic testing (X-ray)
- Ultrasonic testing (US)
- Vacuum testing
- Helium leak testing
- Positive material identification (PMI)
- Batch calibration certificates
- Sensor calibration certificates



Products and Services at a Glance

TEMPERATURE SENSORS

- Industrial temperature sensors
- Multiple temperature sensors
- Profiling temperature sensors
- High-pressure temperature sensors
- Resistance temperature detectors
- PT100, PT1000, NTC
- Miniature temperature sensors
- Tubeskin temperature sensors

INSTRUMENTS

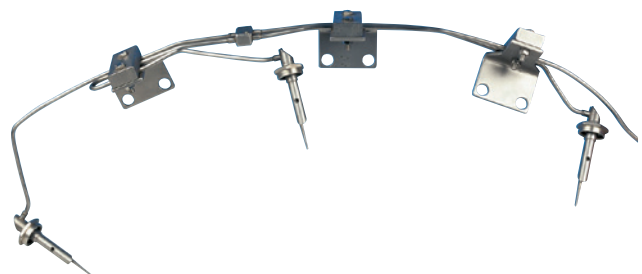
- Optical temperature meters
- Controllers
- Transmitters
- Dry well calibrators

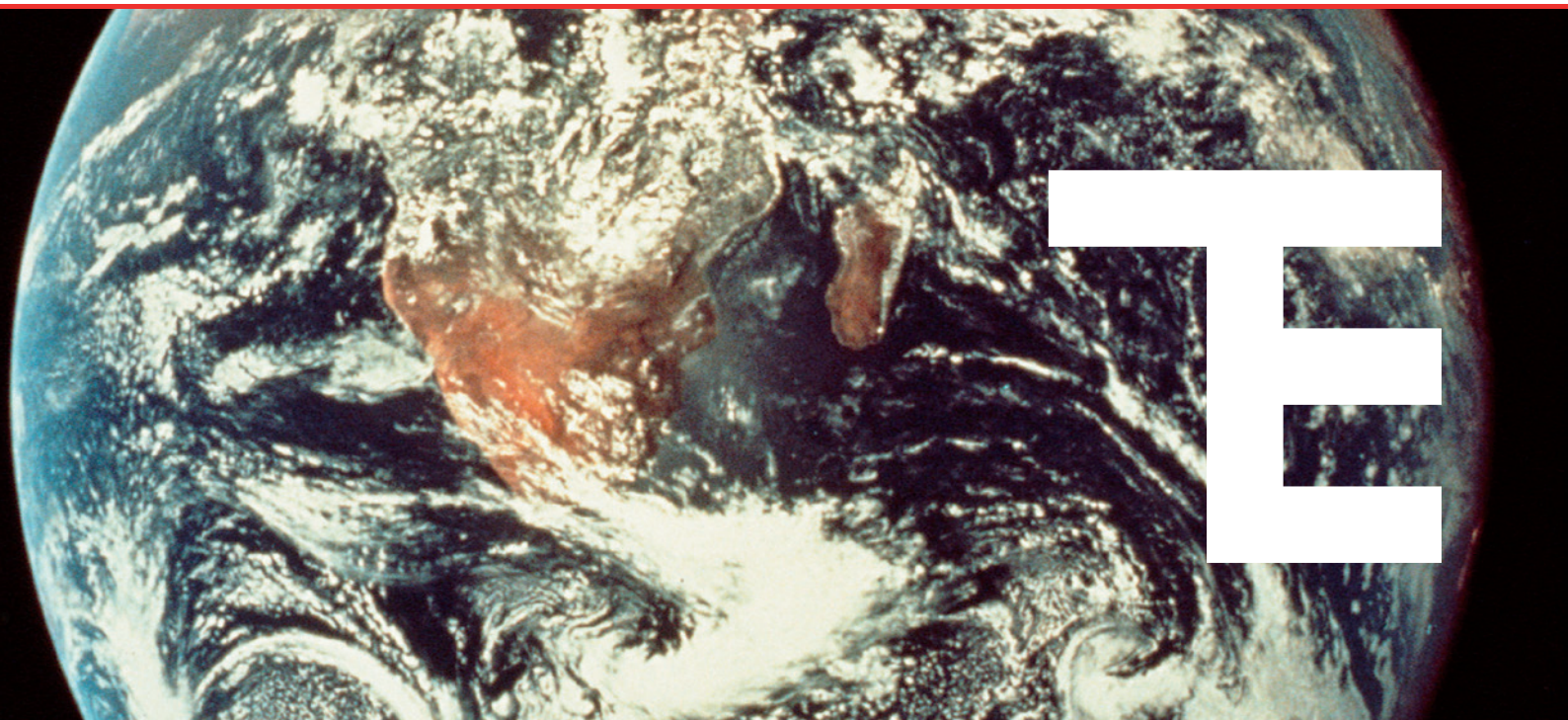
CONNECTORS, PANELS AND WIRES

- Standard thermocouple connectors
- Miniature thermocouple connectors
- Standard thermocouple panels
- Miniature thermocouple panels
- PVC, PTFE, Kapton, Silicon, Glass Fiber

SERVICES - RvA/ILAC ACCREDITED CALIBRATION

- Calibration of temperature sensors
- Repair of instruments





**Your trusted
partner in the
development and
production
of temperature
measurement solutions**

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