Electrical Temperature
Installation & Field Services
“The success of our customers is our motivation. This is a long tradition. When my grandfather, Alexander Wiegand, founded WIKA in 1946, he devoted himself to absolute quality, reliability, and customer focus. Although much has changed since then, it is precisely these values that form the core of the WIKA Group today.”

Alexander Wiegand, Chairman and CEO, WIKA

Ability to Meet any Challenge

As a family-run business acting globally, with over 10,000 highly qualified employees, the WIKA group of companies is a worldwide leader in pressure and temperature measurement. The company also sets the standard in the measurement of level, flow, force, and in calibration technology.

Founded in 1946, WIKA is a reliable partner for all the requirements of industrial measurement technology, thanks to a broad portfolio of high-precision instruments and comprehensive services. With manufacturing locations around the globe, WIKA ensures flexibility and the highest performance. Every year, over 50 million quality products in standard or customer-specific configurations are delivered in batches of 1 to over 10,000 units.

With numerous wholly-owned subsidiaries and partners, WIKA reliably supports its customers worldwide. Our experienced engineers and sales experts are your competent and dependable contacts locally.
With over 25 years of installation experience, we use industry best practices to meet the expectations of our customers and licensor specifications, developing the best solution for all types of installations.

Experience means we can complete the installation quicker than contractors who are unfamiliar with the process, saving you money.

To qualify as a supervisor, our service technicians must have a minimum of 2,500 safe on-site work hours and demonstrated field service supervisor proficiencies. The average tenure for a supervisor is 11 years.

In order to ensure the best product performance, extended warranties of 5 years or more are available for products installed by certified Gayesco – WIKA technicians.

**Application Experts**

We have experience in a wide range of refining and petrochemical applications, and have performed installations in the following units:

- Crude Unit
- Fluid Catalytic Cracking Unit
- Hydrotreating Unit
- Hydrocracking Unit
- Catalytic Reforming
- Sulfur Units
- Syngas Plants
- Amine Unit
- Utilities
- Heavy Oil
- Petrochemical
- Cumene Unit
- Styrene Unit
- Slurry / Embulating Bed
- Coker Unit
Reactor Profiling Applications
No reactor, regenerator, or column application is exactly like any other, that’s why we custom design our multipoint solutions to fit your needs. We don’t force fit a product to your application; we design a custom solution that meets your exact application. Designing and building the world’s best profiling systems isn’t enough to ensure the best possible solution, it has to be installed correctly - by trained, experienced installers.

Simple mistakes in installation can dramatically reduce the life and reliability of the thermocouple assembly. Having experienced installers can mean the difference between measurements you can rely on or readings you can’t.

Gayesco-WIKA Field Services utilizes production staff for installations, so the experienced professionals that build the thermocouples are the same professionals responsible for installation. All of our field installers have participated in multiple installations before they are certified to work at your facility, and are trained in thermocouple manufacturing, installation, and applications. Our installation team gives you the confidence to know you will get an installation you can trust, especially during tight turnarounds.
Common Services that can also be Provided During an Installation Include:

- On-site or internet “kick-off” meeting
- Welding by ASME qualified, experienced welders
- Reactor modifications as required
- Assembly of support structures
- Insertion and routing of thermocouple assemblies
- Advanced thermocouple verification or comparison testing
- Lead wire pulling and hook-up
- Experienced field problem resolutions
- On-site thermocouple repair and modification

Thermocouple Verification
Prior to Service

One of the last, and most important, things done during a multipoint installation is the thermocouple verification. We provide several options:

- A simple function test to make sure each thermocouple is wired correctly and in the appropriate position.

- A precise verification to a known, elevated temperature (typically 700 °F) allowing for a full diagnostic of the thermocouple, wiring, and transmitters all the way back to the control room - all before catalyst loading.

- A precise verification to a known, elevated temperature along with a detailed baseline comparison report.
Fired Heater
Applications

WIKA offers the leading tubeskin application products in the industry. The V-Pad®, Gayesco Xtracto-Pad®, and Gayesco Refracto-Pad® are widely accepted by process licensors and major refiners around the world because of their reliability and durability.

Purchasing a reliable WIKA tubeskin thermocouple is a three part process:
1. Fit for application product design
2. Routing following best practices
3. Proper installation

Gayesco-WIKA Services is the key to ensuring your tubeskin thermocouple system installation is exactly as the design intended, as well as in line with industry best practices. Simple mistakes in installation can dramatically reduce the life and reliability of the tubeskin thermocouple.

<table>
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<th>Fired Heater Services Options</th>
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<tr>
<td>Installation instructions</td>
<td>*</td>
<td>✓</td>
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<td>Routing advise</td>
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<td>Welding supervision</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Routing supervision</td>
<td>*</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>On-site expertise as needed</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Complete welding services by experienced ASME welders</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Proper connection of the thermocouple outside the furnace</td>
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<td>On-site thermocouple design and modification of thermocouple placement</td>
<td>✓</td>
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* not required for full installation by WIKA
Additional Services

In-situ Field Verification
Even if we are not completing a full installation, we can provide field verification on existing thermocouples that are in place on the process unit, including the multipoint line of reactor and column thermocouples.

Many customers will request Gayesco-WIKA Installation Services be present during turnarounds to perform verification and ensure the sensing points are still functioning correctly. Verification can be done any time the unit is off-line and access to the thermocouple tips is available. Verification is performed at process or near process temperatures in a fast, accurate, repeatable manner by trained technicians.

WIKAI is the only manufacturer who can provide SIL-3 certification on existing multipoint installations with this revolutionary verification.

Heater Survey
We also conduct heater surveys to review performance on furnaces. Relevant furnace operation and equipment condition data is collected on-site to identify performance gaps and recommend improvement opportunities by:

- Conducting field measurements of thermal conditions and combustion efficiency using advanced diagnostic tools including IR imaging, combustion probing, and other sensing devices.
- Performing preliminary verification as needed.
- Reviewing preliminary findings with your operating teams and management at the conclusion of each site visit.
- Issuing furnace performance report with recommendations.
- Reduced maintenance costs through better turnaround planning.
- Recommended industry best practices in operations and safety.
- Opportunity for operator cross-training by sharing experience from other sites.

Benefits of a Heater Survey:

- Increased process unit capacity through furnace optimization or debottlenecking.
- Improved energy efficiency with optimal furnace combustion management.
- Fact-based reliability assessment to reduce unscheduled shut-downs.

Field Repair
In the unlikely event a thermocouple is damaged in your reactor, we can assist in repairing or modifying temperature measurement devices in the field. Typical field work includes soldering, welding, splicing, and bending. Once the thermocouple is repaired, we will ensure its operation by verifying the sensing point all the way back to the control room, if required.
For over 70 years, WIKA has continuously advanced instrumentation for pressure, temperature, level, flow, and force measurement. Our broad selection of standard and custom solutions, as well as services, work to support operational safety, productivity and profitability. A global leader in lean manufacturing, WIKA can be your reliable partner anywhere in the world.