

INSTRUMENTATION

LET US BE THE GAUGE EXPERTS SO YOU DON'T HAVE TO BE



When Everything's at Stake Gauges Serve as System Indicators

When gauges are functioning properly, and when they seem to function improperly, they can point to an even larger issue or impending disaster.

"The pressure gauge would have shown that the cement was failing and that pressure was building as oil and gas was rushing into the well. But they got a reading of 'no pressure' on that gauge. Another gauge was showing pressure building... They made the wrong judgment call about whether the pressure was or wasn't building, looking at these two pressure gauges. And that was the blowout."

A Sea in Flames: The Deepwater Horizon Blowout Carl Safina Random House, 2011

Gauges are Silent Alarms: What Are They Telling You

Not only can they indicate when something is seriously wrong, but **gauges** can also help diagnose deeper issues within your systems and processes that can eventually lead to serious safety issues.



You can use gauges to:

- Detect signs of degradation in process performance
- Diagnose causes of system and production disruptions
- Predict how long a piece of equipment can be safely (or economically) run
 - Identify potential time bombs that could cause catastrophic failures

A Failed or Misapplied Gauge Can Lead To:

Unsafe Work Environments



Unfortunately, a misapplied gauge could lead to an accident that causes a lost workday. If a bourdon tube in a pressure gauge fails, the process media will escape causing possible environmental damage and possibly a fire or explosion. If you have a failure, you have to send a worker in for repair: Putting them in harm's way.

More than 250 WIKA Instrument Audits

Pressure instruments are potential leak points that need attention

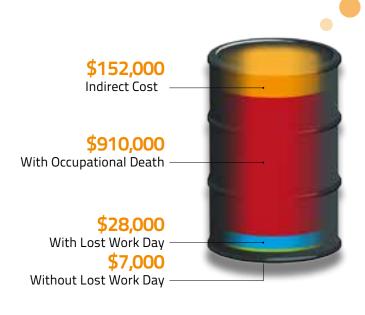
25% of instruments in typical processing plant have failed or are about to fail.*

A Failed or Misapplied Gauge Can Lead To: Accidents

Let's face it. Things can get dangerous real quick in any plant. Once a recordable incident, lost-time incident or violation occurs your team and many times the entire company has to react.



OSHA Accident Report Costs



An accident can cost your company

>\$1,000,000

Source: OSHA average costs, includes both direct and indirect costs, excludes property damages.

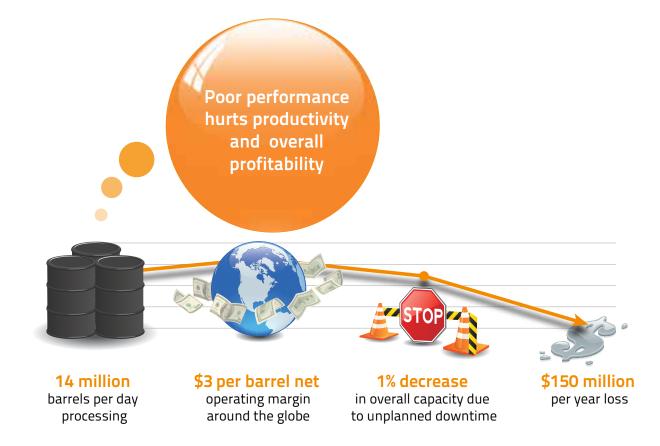
A Failed or Misapplied Gauge Can Lead To: Lost Productivity

The average loss in production for process plants due to abnormal events is 3-7%.¹ These can be safety incidents or simply unexpected downtime for maintenance.

Industry estimates suggest as much as 5% of production capacity is lost each year as a result of unplanned shutdowns.²

¹Source: "Abnormal situation prevention through smart field devices," Hydrocarbon Processing, March 2006, p. 41.

²Asdza Nadleehe, "Engineering & Maintenance: Prevention Is Better Than Cure Oil & Gas IQ, October 2011



So what can be done about these issues?

Introducing the FAST Service Program





Gauges, if used properly, can be effective alarms for your plant's performance. However, you don't want to be the experts and with FAST from WIKA, you don't have to be. Our Full Audit Service Team (FAST) will take care of your gauges to help lower costs, make you safer and reduce downtime. Best of all, FAST is the only solution you need: A total care program for the same price you're currently paying for gauges.

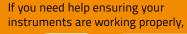
Full Suite of Services

Instrument Audit	Turnaround	Instrument Failure	Instrument Safety
	Instrument Planning	Analysis	Training
WIKA's Instrument Audit program provides an expert analysis and solution. Our FAST technicians help you put the right gauge in place for your application to curtail potential safety issues.	Our team performs an Instrument Audit We standardize what instruments you need and deliver the product when you really need them before your turnaround begins so you can avoid delays.	Send us your failed gauge and our technicians will conduct a root cause analysis. By understanding the mode of failure our FAST technicians can recommend a solution to prevent further safety issues.	Our FAST technicians can train your team to look for signs of instrument failure when completing a scheduled evaluation of your instrumentation.

FAST Expertise

Over 250 Reviews

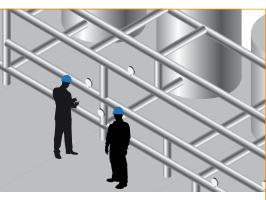
Over **100K** Instruments Reviewed Prevented >8K Major Incidents







1. Investigate Find the critical issues facing the plant: The problems you see and the ones you don't



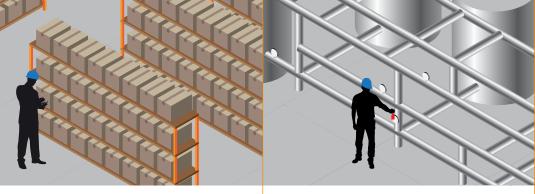
2. Diagnose

Discover the cause of any current or potential ticking time bombs that pose threats to safety or productivity



3. Recommend

Provide solutions to correct issues before they become costly incidents



4. Consolidate

Audit storeroom to eliminate any redundant or inappropriate SKUs so that you only have the right products for your applications

5. Compliance

Provide sure-fire process to help avoid future issues and make sure products meet your standards

FAST INSTRUMENT AUDIT

WIKA's Instrument Audit provides expert analysis from our FAST technicians, who help you identify the right gauges for your applications and avoid potential safety issues. As part of this service, we can also conduct a **Storeroom Instrument Audit** to help you eliminate redundant inventory, which can reduce MRO (Maintenance, Repair and Operational) expenditures.

Lastly, we implement a simple system to ensure the right gauges are always used for each application. By employing this comprehensive approach, WIKA will take the hassle out of dealing with instrumentation while making your plant safer and more cost efficient.



FAST INSTRUMENT SAFETY TRAINING

The Abnormal Situation Management Consortium found that one of the most common causes of procedural operations failures in process plants was "Failure to detect abnormal conditions." Our FAST technicians can train your team to look for signs of failure and to understand what is causing it and how it may be serious.

PROCESS:

- Discuss the symptoms you are experiencing and determine your expectations
- Find any potential ticking time bombs that pose threats to safety or productivity
- Provide immediate recommendations for corrective actions and standardize on select instruments
- Tag pipes and gauges with SAP numbers (or other indicator) to ensure operators know which gauge to install for each application

DELIVERABLES:

- Final report on current gauge installations, including recommendations on necessary actions with part number list, prices and lead times
- A maintenance plan/follow-up to ensure recommendations are being followed
- Customized compliance solution (e.g., SAP or part # on each gauge, stainless steel tags on each gauge, etc.)

BENEFITS:

- Improve safety by ensuring you have proper gauge for each application to reduce the risk of fire, explosion and leaks
- Reduce the chances of misapplication and guesswork, making your job easier and helping you avoid possible leaks, fugitive emissions or other costly incidents
- Reduce redundant or incorrect inventory and costly inventory carrying costs
- Reduce the time needed to find and replace gauges

FAST INSTRUMENT FAILURE ANALYSIS

Sometimes it seems that one particular gauge needs replacing a lot more often than others, and you don't know why. In order to avoid equipment failures, you must understand the root causes of failure and systematically remove these causes.

Scheduling an Instrument Failure Analysis would give you insight on repeated gauge failures if you are experiencing repeated gauge failures.

For a complete failure analysis, our FAST experts can review the gauge and its installation in your plant. For a more in depth analysis, you can even send the gauge to WIKA and our FAST technicians will diagnose the cause of failure and provide you a complete test report with recommendations.

> Pressure instruments are potential leak points that need attention

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* More than 250 WIKA Instrument Audits

When everything is at stake.



Visit www.WIKA-FAST.com, call **780 463 7035** or email info@wika.ca to learn more.



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