



## STEAM TRAP SURVEY TECHNICIAN CERTIFICATION PROGRAM





# ARMSTRONG STEAM TRAP SURVEY TECHNICIAN CERTIFICATION PROGRAM

The ability to accurately evaluate steam trap operation can pay dividends in energy conservation, save countless maintenance hours, and reduce unscheduled downtime in your steam system due to trap failure. As a global leader in utility management, Armstrong International is on the forefront of technology and innovation. Our in-depth knowledge and experience spans more than a century, enabling us to serve customers in ways no one else can.

An investment in learning about steam trap testing will typically pay a rapid return. This certified multi-level Steam Trap Survey Technician training program will prepare technicians to accurately and efficiently survey steam and condensate utility systems and diagnose root causes of any trap failures.

## Ready to learn more?

To enroll in this extensive multi-level certification program, contact your Armstrong Global Learning Center coordinator at:

[university@armstronginternational.com](mailto:university@armstronginternational.com)

At Armstrong, we're committed to sharing all that we've learned to help make the smartest decisions. For additional information about our extensive curriculum and training opportunities, visit [armstronginternational.com](http://armstronginternational.com)

## Level 1:

### Entry Level Steam Technician Class

**Location:** Three Rivers, MI

**Prerequisite:** Armstrong University Online: College of Environmental Health and Safety

Two-day in-depth classroom and onsite training covering:

- Steam Basics
- Operating Characteristics of Different Steam Traps
- Proper Piping Practices
- Low Pressure Trapping
- Steam Trap Application and Sizing
- Trap Assembly and Repair (Hands on)
- Trap testing Methods (temperature, acoustic, visual)
- Water Hammer
- Condensate Management Methods
- Coil Piping Practices
- SAGE training
- Operating and surveying with the SAGE UMT
- Level 1 Class is free with purchase of SAGE® UMT

## Level 2:

### Hands-on Experience & Online Course Completions

- **Prerequisite:** Completion of Level 1 requirements
- Logged 1,000 traps surveyed in SAGE®
- Armstrong University – Complete and pass the following Armstrong University online courses:
  - **College of Steam Principals**
    - Steam Basics
    - Typical Steam and Condensate System Components
    - Air and Non-Condensable Gases in Steam
    - Water Hammer
  - **College of Steam Distribution**
    - Piping Specifications
    - Designing Steam Distribution
    - Distribution Headers
    - Typical Optimization for a steam distribution system
    - How to Audit a Steam Distribution System
  - **College of Steam Users**
    - Steam Traps
    - Testing Steam Traps
    - Trap Management Through SAGE® and SAGE® UMT
    - How to Audit Steam Users



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## Level 3:

### Advanced Steam Technician Class

Location: Three Rivers, MI

- **Prerequisite:** Completion of all Level 1 and Level 2 requirements
  - Fundamentals of Steam (review)
  - Steam Trap Operation (review)
  - Proper Piping Practices – Advanced
  - Typical Steam Users
  - Optimization of Steam Use
  - Condensate Return
  - Steam Trap Testing Methods
  - Steam Trap Sizing – Advanced
  - Steam Trap Selection
  - Site Safety
  - Hands-on Trap Testing
  - SAGE® – Advanced
  - SAGE® UMT
  - Best Practices for coordinating onsite replacement
  - Tests - Written & Survey
  - Specialty Applications

## Level 4:

### Hands-on Experience and Online Course Completions

- **Prerequisite:** Completion of all Level 1, 2 and 3 requirements
- Logged 25,000 traps surveyed in SAGE®
- 25 different locations surveyed in SAGE®
- Armstrong University – Complete and pass the following Armstrong University online courses
  - **College of Steam Users**
    - Basic Heat Transfer
    - Calculating Steam Used in Equipment
    - Direct and Indirect Steam Heating
    - Heat Exchangers
    - Control Valves Revised
    - Steam Tracing
    - Steam Ejectors
    - Typical Optimization on a Steam User
    - O&M Best Practices for Steam Users
  - **College of Condensate Return**
    - Designing Condensate Return Lines
    - Flash Steam
    - Stalling Theory
    - Typical Condensate Return System Optimizations
    - How to Audit a Condensate Return System

## Level 5:

### Hands-on Experience and Online Course Completions

- **Prerequisite:** Completion of all Level 1, 2, 3 and 4 requirements
- Logged 100,000 traps in SAGE®
- 75 different locations surveyed in SAGE®
- Armstrong University – Completed and pass the following Armstrong University online courses:
  - **College of Industry Specific Solutions & Services**
    - Refining and Petrochemical Plants – Introduction
    - Refining and Petrochemical Plants – Advanced
    - Carbonated and Non-Carbonated Beverages
    - Pharmaceuticals Industry
    - Power Industry – Intro
    - Power Industry – Advanced
    - Instant Coffee Process
    - Dairy Industry
    - Culinary Steam
    - System Solutions for the Institutional Markets
    - System Solutions for the Brewing Industry
    - System Solutions for the Steel Industry
    - System Solutions for the Textile Industry
    - System Solutions for the Tobacco Industry
    - Pre-Audit Purpose and Execution Strategies



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