

**R.L. Stone Co., Inc.
Presents**

A Seminar on the Science of Steam

Dear Customer:

The following Topics are available for a personalized seminar, at your facility:

A.) What is Steam?

(Time: 30 Minutes)

This is the basics-of-steam primer... the "Steam 101" short course on the principles of steam...that leads to a thorough understanding of the concepts outlined in the many Armstrong training tapes and materials. Both live action video and clear, simple animation are used to illustrate steam properties and behavior.

B.) Let's Talk Steam Traps/Update.

(Time: 45 Minutes)

Part one uses the latest animation techniques to help viewers see and understand the operating principles of the three types of traps: Mechanical, thermostatic and thermodynamic. In addition, the discussion helps steam trap users understand the internal operation of inverted bucket steam traps, differential condensate controllers, float and thermostatic, thermostatic and disc traps.

C.) Guidelines for Steam Trap, Troubleshooting and Testing.

(Time: 30 Minutes)

Just as properly functioning steam traps contribute to the efficient operation of a steam system, those which are malfunctioning can result in lost steam, lost head and most especially, lost dollars. "Guidelines for Steam Trap Troubleshooting and Testing" not only outlines the need for establishing a preventive maintenance program, but more importantly details what to look for in your testing.

D.) Guidelines for the Prevention of Water Hammer.

(Time: 35 Minutes)

The purpose of this educational tool is to help customers understand the nature and severity of the water hammer problem.

E.) Guidelines for Steam System Efficiency.

(Time: 45 Minutes)

This educational program covers basic considerations in the design, piping, and trapping of steam systems. Topics include correct sizing and installation of steam supply and condensate return lines, steam velocities in the system, proper steam trap installation, trap safety factors, the use of air vents, vacuum breakers, and safety drains; and how non-condensables affect the performance and service life of heat exchanger equipment.

F.) Let's Talk PRV's.

(Time: 45 Minutes)

Pressure reducing valves, or PRV's are important to the efficient use of fluids and gases in industry. "Let's Talk PRV's" is an in-depth look at the reasons for, configurations of, and means of evaluating, pressure reducing valves.

G.) Guidelines for Unit Heater Efficiency.

(Time: 30 Minutes)

Every winter industry relies on unit heaters to provide a comfortable environment for its workers. The heating season is no time for the nuisance and discomfort of unit heater repair or replacement. This discusses how correct selection, installation and maintenance of steam supplied unit heaters, ensures longer service life and reduces unnecessary repair and replacement costs.

H.) Guidelines for Steam/Air Coil System Design.

(Time: 45 Minutes)

This educational discussion explains the major causes of frozen steam coils, and the steps that can be taken to prevent the problems. The program uses the air handling system assembled in the Armstrong demonstration lab to illustrate problems and solutions.

I.) Guidelines for Steam Trap Repair.

(Time: 30 Minutes)

Begins by outlining a plan for identifying faulty traps and returning them to effective operation. The first part of the discussion provides guidelines, which should be followed in the inspection and repair of any trap.

J.) The Use of Direct Steam Service for Making Hot Water.

(Time: 45 Minutes)

A discussion on the different methods of generating hot water with the use of direct steam injection. Also steam and water mixing valves for hot water.

K.) The Use of Indirect Steam Service for Making Hot Water.

(Time: 45 Minutes)

A discussion on shell and tube heat exchangers, coil and tank systems and instantaneous steam water heaters.

L.) Let's Talk Condensate Return Systems.

(Time: 60 Minutes)

A talk on the effective recovery of condensate systems; designs and piping requirements. The basic types of condensate pump trap systems.

N.) Let's Talk Liquid Draining.

(Time: 30 Minutes)

A discussion that deals with the operation principles of drain traps and outlines their specific application to a wide variety of products used by industries.

O.) Humidity.

(Time: 60 Minutes)

This section covers the essentials of humidity and outlines the primary reasons for humidity control. What is humidity? Relative humidity? What is dew point? Enthalpy? How does evaporation affect comfort? How does humidity conserve energy?