

W. M. HUITT CO. TRAINING COURSE - MODULE IV

STEAM SYSTEM DESIGN

1-Day Course Schedule

Course Description: This course will provide the designer with the information they need to understand and properly design a steam system. It will provide plant maintenance personnel with a better understanding of steam system design.

Who Should Attend: This course is useful to the piping designer who needs to gain more insight into the workings of a steam system; plant maintenance personnel who repair and maintain steam system piping; mechanical, process, and utility engineers who need to make assurances as to the validity of the design; and the fabricator who needs to understand the design concept for steam systems.

Abstract of the One-Day Course Agenda

This course will take the attendee through the entire process of steam generation from its source to the use points. We will discuss line sizing, steam trap sizing, the need for drip legs, and line slope. We will discuss corrosion issues with regard to steam and condensate lines and how to develop a material specification. Why is it that whenever you walk through an operating plant that has been in operation for several years or more there are numerous small pin-hole leaks on steam lines? We will discuss this as well.

Daily Course Agenda

The morning session will begin at 8:00am

There will be a 15 minute break at approximately 10:00am

There will be a one hour lunch break at approximately 12:00 noon

The afternoon session will begin at 1:00pm.

There will be a 15 minute break at approximately 3:00pm

The afternoon session will end at approximately 5:00pm

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Day 1

8:00am Start of class

- I. A history and the evolution of Industry Standards
- II. The difference between a Code and a Standard
- III. Why do we comply with Codes and Standards
- IV. Deciding between ASME B31.3 and B31.3

~10:00am Mid-morning break

- V. Steam generation
 - a. How is steam generated
- VI. Steam distribution
 - a. Determining generating pressure
- VII. Building a material specification for steam service
 - a. What belongs in a material specification

~12:00 to 1:00pm lunch break

- VIII. Design requirements for steam systems
 - a. Avoiding potential water hammer
 - b. Sloped pipe requirements
- IX. Corrosion & Erosion issues in steam systems
 - a. Calculating for corrosion

~3:00pm Mid-afternoon break

- X. Steam trap selection
- XI. Steam trap stations

~5:00pm End of Course

* It will be beneficial to have with you in class the latest version of ASME B31.3 – Process Piping (2008 for \$350.00US). Upon request, the Standard can be provided and the cost added to the course fee.