

# W. M. HUITT CO. TRAINING COURSE - MODULE VII

## STEAM AND CONDENSATE SYSTEM DESIGN 90 Minute Course Schedule

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**Course Description:** This course will provide the novice or experienced Pipe Designer with the essential information they need to set up and design steam and condensate piping systems. It will provide plant maintenance personnel with a better understanding of steam trap function and operation as well as the various aspects of system design. Mechanical, Process, and Utility Engineers will get the information they need to better understand the piping design process, and its various elements in their interrelationship with piping.

**Who Should Attend:** This course is useful to beginner and experienced piping designers. It will also benefit maintenance personnel who work with pipelines day in and day out. It is also of benefit to mechanical, process, and utility engineers.

### **Abstract of the Online Course**

This course will begin with terminology frequently used in conjunction with steam service. The course will then touch on steam tables. This will provide the basics for the rest of the course. We will then step through some of the equations typically used in steam service. The attendees will go through exercises in sizing steam distribution mains and will be shown how to determine what the targeted steam pressure should be for a facility. We will discuss partial pressure and what effect it has on steam. The course will touch on such things as ambient sensing valves and whether they work or not.

The attendee will learn:

1. How to size steam mains,
2. How to calculate radiant heat loss,
3. How to determine condensate load,
4. How to select and size steam traps,
5. How to determine if a duplex trap arrangement is necessary,
6. How to strategically locate steam traps.
7. How to determine the amount of impurities in steam,
8. What effect those impurities have on steam quality,
9. About steam Tracing,
10. Much more



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- I. Terminology
  - a. Touch on the terms used in steam discussions
- II. Steam Tables
  - a. A look at the information contained in steam tables
- III. Generating steam
  - a. A look at the how steam is generated
- IV. Distributing steam
  - a. Determining an efficient and effective way at distributing steam
- V. Sizing steam mains
  - a. What factors are involved in sizing steam lines
- VI. Handling condensate
  - a. Consideration in designing condensate return systems
  - b. Sizing condensate return lines
- VII. Selecting steam traps
  - a. How to select a steam trap for an application
- VIII. Sizing steam traps
  - a. What do you need to know in order to size a steam trap
- IX. Steam tracing
  - a. Designing a steam tracing system

**END OF SESSION**