

# Introduction to Pipe Stress

# Bundle







(L) 15 hours

English

C 1-yr access

**■** BUN503



**Learn from home** 100% online training



Video Lectures watch multiple times



**Available 24/7**1-year unlimited access



Personal Certificate to prove your knowledge

### **Course Objective**

"Ideal for Lead Piping Engineers and Junior Pipe Stress Engineers that want to make the right decisions."

#### **Course Overview**

This course by Stressman Engineering gives you a strong base and understanding of Pipe Stress Engineering. It will enhance your discussions with colleagues, vendors and clients and refuels you with inspiration and knowledge. In a set of online modules, you learn to understand the design philosophy of pipe stress. With practical examples, the instructors will provide you with a prominent course and give you a complete overview.

The course provides a broad context of the concepts, insights into possibilities for optimization and cost reduction, and a strong base for deeper discussions with colleagues, vendors and clients.

This Fundamentals course contains 7 online modules based on video content. You receive 1-year unlimited access to the course and the discussions forum. This allows you to perform modules again when you need to refresh your knowledge for your work projects.



Self-paced OR e-Hybrid

Available in self-paced format, optimum for individual learning, and available eHybrid format that combines self-paced modules with 4 instructor-led live sessions (4.5 hours), optimum for teams.

### Fundamentals 1

| Program   |   |             |
|-----------|---|-------------|
| Module 1  | Why do a Pipe Stress Analysis? (Free Course Previ | ew) 11 min  |
| Module 2  | Back to Basics                                    | 1 hr 7 min  |
| Module 3  | Stress analysis on various systems                | 55 min      |
| Module 4A | Piping Codes & Standards                          | 50 min      |
| Module 4B | Equipment Codes & Standards                       | 2 hr 13 min |
| Module 5  | Types of stress analysis                          | 57 min      |
| Module 6  | Wall thickness calculation                        | 53 min      |

### **Results**

After this course you...



Understand the different loads relevant for pipe stress and their combinations



Know the different codes & standards related to pipes and connected equipments, and their context



Understand the differences for pipe stress analyses of different types of systems



Know how to perform a Piping Stress Criticality Selection and perform pipe wall thickness calculations

## Fundamentals 2

| Program   |   |             |
|-----------|---|-------------|
| Module 7  | Flexibility Calculation as per B31.3<br>(Free Course Preview) | 1 hr 54 min |
| Module 8  | Load Combination Cases for Pipe Stress Analysis               | 1 hr 30 min |
| Module 9  | Piping Component and Support                                  | 41 min      |
| Module 10 | Flange Leakage Calculations                                   | 50 min      |
| Module 11 | Piping Stress Special Cases                                   | 1 hr 10 min |
| Module 12 | Reporting a Pipe Stress Analysis                              | 1 hr 16 min |

#### **Results**

After this course you...



Know all concepts involved in a pipe stress flexibility analysis



Better understand code related load combinations



Have a good overview of all types of piping components and support types



Know about different flange types and calculations



Understand special load cases for piping systems



Have a detailed understanding of the documentation aspects involved with pipe stress and interfaces with other disciplines







#### Who should attend this course

- Piping Design Engineers & Piping Design Leads which are required to understand the basics of pipe stress engineering to make the right decisions
- Junior Pipe Stress Engineers with 0-3yr experience
- Mechanical, Process and Structural engineers that require a broad perspective on piping system design

### **Prerequisities**

Technical background

**Level** Fundamentals

### **Provided by**



Stressman Engineering is all about stress and the laws of physics. Ranging from simple hand calculations to advanced dynamic 3D finite element analyses, they get the job done efficiently and smoothly.

Stressman Engineering's mission is to be your preferred supplier of numerical analyses. They are a one-stop-shop that can supply everything from simple hand calculations to complex fluid-structure analyses. A high level of knowledge combined with a passion for science makes them a powerful team.

### **Instructors**



**Sondre Luca Helgesen**CEO, owner and Senior Analyst at
Stressman Engineering

Pipe Stress, Piping Design, FEA, Ansys



**Juan Manuel Mendez Franco**COO at Stressman Engineering
President of The PSI Association

Pipe Stress, Piping Design, FEA, Ansys



**Jonathan Arana Garcia**Piping Manager at Stressman Engineering

Pipe Stress, Piping Design, FEA, Ansys