ENGINEERING TRAINER

BOSpulse Basics

This course shows how to conduct an API 618 compressor pulsation study using the BOSpulse software package. It covers piping and gas-passage models, acoustic and structural analyses, resonance, pulsation-control options and the inclusion of structural steel in the model. This self-paced online course includes video lectures and a completion certificate with PDH credits.

Buy This Course

Request a Quote or Invoice

ONLINE	SELF-PACED	1-YEAR ACCESS
3 MODULES	2 PDH	2 HOURS

TRUSTED BY ENGINEERING TEAMS WORLDWIDE

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What you'll learn

This course teaches you the fundamentals of doing a pulsation analysis conform API 618 with the pulsation analysis software BOSpulse.

The course is intended for engineers involved in the acoustic and/or mechanical design of the piping upstream or downstream of a reciprocating compressor. You will first be shown how to model the gas passage, interstage piping, and connected piping, including how to directly import Ariel compressor data.

The second module shows how to run the pulsation analysis, showing how to set up the solver, the tool for dimensioning Pulsation Suppression Devices (PSDs), and the effect of re-routes on the resonance modes in the system. The final part of the course covers how to model the structural steel directly in BOSpulse to improve the calculation of the stiffnesses and resonance modes in the pulsation analysis.

On completing this course, which is formed of worked example, you will be ready to use BOSpulse for a pulsation analysis conform API 618.

Skills you'll gain

- ✓ have a good understanding of the BOSpulse software
- ✓ know how to build a model of your compressor and piping system,
- ✓ can run and analyze the results of a pulsation analysis,
- ✓ have seen how to build a dampener (or PSD) in BOSpulse,
- ✓ can refine your model to include structural steel.

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About the instructor

Dynaflow Research Group

Dynaflow Research Group is an engineering consultancy working across piping design and analysis, flow dynamics, vibration, FRP piping, pressure equipment and specialist engineering software. Its experience includes EN and ASME design rules for piping and pressure vessels, buried piping, water hammer, pulsation, dynamic stress assessment, vibration measurement, FEA tools, BOSfluids, BOSpulse, PV Elite and NozzlePRO workflows.

Who this course is for

- ✓ Piping engineers starting to use BOSpulse for reciprocating-compressor piping
- ✓ Pulsation engineers who build or review API 618 analyses
- ✓ Mechanical engineers who need to include structural response in a BOSpulse model

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Course content

Modeling of the Piping System

- The Ariel Interface
- Modeling the Gas Passage
- Modeling the Interstage Piping
- Modeling the Discharge Piping

Performing the Pulsation Analysis

- Steady State Analysis
- Transient Analysis
- Harmonic Analysis
- Pulsation Suppression Devices
- Applying a Frequency Sweep
- Acoustic Modal Analysis
- Re-routing
- Resonance and Standing Waves

Performing the Structural Analysis

- Setup of Structural Model
- Import Structural Steel and Restraints
- Structural Modal Analysis
- Structural Harmonic Analysis
- Adding Bracing