







Pulsation & Vibration theory for Reciprocating Compressors

Online Course



-  Self-paced
-  4 modules
-  3 hours
-  English
-  1-yr access
-  SPC128



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Course Objective

"To provide piping professionals with a solid understanding of pressure pulsation phenomena and evaluation methods."

Program

Module 1	Pulsation & Vibration theory for Reciprocating Compressors	1hr 09 min
Module 2	Field case - Compressor Station	26 min
Module 3	Understanding mechanical vibrations due to pulsations	38 min
Module 4	Field case - Pipe Vibrations	26 min

Results

-  Understand what pressure pulsations due to reciprocating compressors are and what consequences they can have
-  Are familiar with calculation methods for analyzing pressure pulsations
-  Know the basics of performing API 618 pulsation analysis
-  Have an understanding of assessing associated vibrations
-  Know what mitigation measures are available and when they are applicable
-  Have seen several real-life cases (2 in much detail)

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Provided by



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Mechanical, Piping, FEA, Flow

DYNAFLOW
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Dynaflow Research Group specializes in the advanced end of the engineering spectrum. Their work often requires a multi-disciplinary approach: encompassing the static and dynamic analysis of both fluids and gases, and mechanical components.

They are at their best when creative thinking and a practical approach are required to tackle a problem.

Course Summary

This course teaches you fundamental knowledge and understanding of pressure pulsations in piping due to reciprocating compressors in the context of API 618 analyses.

By means of several real-life case studies you are thought the details of how pulsations are caused by compressors and what their consequences can be. Associated assessment methods such as pulsation analysis using software are discussed by the instructor as well as conformity checks for the pulsations and resulting vibrations. Possible mitigation measures and good design practices are provided.

Discussions and analyses will be illustrated using the software BOSpulse. No knowledge of this software is required.

Who should attend this course

- Anyone working piping systems connected to reciprocating compressors
- Those involved with piping systems prone to vibrations
- Engineers working with the API 618

Prerequisites

- Basic understanding of piping systems
- Discussions and analyses will be illustrated using the software BOSpulse
- No knowledge of this software is required

Level Intermediate