







Acoustic and Flow Induced Vibrations in Industrial Systems

Online Course



-  Self-paced
-  4 modules
-  3:45 hours
-  English
-  1-yr access
-  SPC010



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Personal Certificate
to prove your knowledge






Course Objective

“To give maintenance and process engineers the tools to understand and solve AIV and FIV related challenges.”

Program

Module 1	General Concepts	1 hr 10min
Module 2	Acoustic Induced Vibrations (AIV)	52min
Module 3	Flow Induced Vibrations (FIV)	58min
Module 4	Cavitation, Flashing & Slugs	43min

After this course, you...

-  Have a good understanding of the physical phenomena associated with AIV and FIV
-  Know how to approach AIV and FIV issues in the field
-  Are able to identify the risk of AIV and FIV for new systems
-  Know Codes and Guidelines that are relevant when evaluating AIV and FIV
-  Have seen a multitude of real-life cases

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Provided by



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Project Engineer, Dynaflo Research group

Mechanical, Piping, Pulsations

DYNAFLOW
RESEARCH
GROUP.

Dynaflo 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

Acoustic Induced Vibrations (AIV) and Flow Induced Vibrations (FIV) can cause piping systems to vibrate potentially resulting in fatigue failure. These excitation mechanisms are non-linear and strongly influenced by system settings such as valve openings and fluid velocity. Therefore, it can be difficult to predict the presence in new systems or the best remedial action in existing systems.

In this course you will come to understand the physical concepts of both excitation mechanisms in detail and gain knowledge on strategies to overcome associated vibration issues in the field and reduce the risk when designing new systems. Next to relevant theory, high risk systems and codes & standards, a multitude of real-life cases is discussed including methods for trouble shooting AIV and FIV issues.

The course consists of 4 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 knowledge for your work projects.

Who should attend this course

- Engineers and technicians involved with solving vibration issues in existing piping systems
- Process and Piping engineers involved with designing new systems or maintaining existing systems

Prerequisites

- Basic understanding of piping systems is beneficial

Level | - Intermediate