# API-579/ASME-FFS-1 Fitness for Service
## *Foundation Level*

Presented by:
Alan Chung

Location:
Penspen Office, Houston, USA

Dates:
2 days
August 16-17, 2016

Cost:
$1795 per attendee
Early bird offer: Book by May 17th and receive a $100 discount!

### Course Objective:

- To present defect assessment concepts which address the fitness for service of equipment encapsulated in API-579/ASME-FFS-1:2007.
- Discuss assessment limitations, applicability and data requirements to enable the practical application of fitness for service assessment techniques.

### About the Course Presenter:

Alan Chung is a Chartered Engineer and a Fellow with the Institute of Mechanical Engineers and has worked on defect assessment related integrity issues for a variety of industries and equipment for the past 17 years. He was involved in the development of defect analytical techniques and has contributed to numerous safety cases including those for the UK's fleet of nuclear power stations.

Alan joined Penspen in 2014 and is currently the Project Director for Penspen's Pipeline Defect Assessment Manual (PDAM) which provides engineers with a practical guide for conducting 'best practice' defect assessments.

Alan is also currently a course tutor for the defect assessment module for the University of Northumbria's Pipeline Engineering Master's programme.

### Course Overview:

With the improvement of inspection technologies and the shift towards asset life extension, there is a growing need for defect assessments to be conducted in order to demonstrate that equipment is safe for continued operation.

Fitness for Service assessments (FFS) can be based on API-579/ASME-FFS-1:2007, a globally recognised industry standard for the assessment of defects, which will provide a reliable assessment of the condition of an asset.

The FFS assessment is comprised of a compendium of assessment methods to determine the acceptability of specified defect types.

For each defect, three assessment levels are provided that are progressively detailed and conversely, less prescriptive. Consequently, the code is heavily reliant on the engineer's competency in conducting the assessment.

This course aims to provide a fundamental understanding of the concepts behind the methodologies within API-579/ASME-FFS-1:2007.

Throughout the course, attendees will learn practical techniques that can be applied to real world scenarios. They will also develop confidence in conducting and reviewing FFS assessments by performing basic fitness for service assessments on sample cases.

## Who should attend?

- Inspectors who require an understanding of the significance of defects.
- Integrity engineers who need to undertake fitness for service assessments.
- Plant and integrity managers who are responsible for making run, repair, rerate or replacement decisions based on fitness for service assessments.

## Outline Course Agenda:

- Welcome and Introduction:
  - FFS Concepts
  - Failure case studies
  - What is FFS and when is it required?
  - Structure of API-579/ASME-FFS-1:2007
  - API-579/ASME-FFS-1:2007 Annexes
  - Roles and responsibilities
  - Data requirements
  - Assessment levels
  - Expected FFS outcomes
- Individual Defect Modules:
  - Brittle Fracture
  - General Metal Loss
  - Local Metal Loss
  - Pitting Damage
  - Crack-Like Flaws
  - Creep Damage
  - Dents and Gouges
- Each Individual Defect Module will consist of:
  - Causes and nature of defect
  - Data gathering
  - Applicability and limitations of assessment
  - Level 1 assessment concepts
  - Level 2 assessment concepts
  - Level 3 assessment concepts
  - Other considerations
  - Case studies
  - Problem exercises

**For further information or to book your place, please contact us at:**

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