**ANRIC**

# ASME B31.1 POWER PIPING DESIGN & FABRICATION

## OBJECTIVE:

The objective of the B31.1 piping course is to provide participants with an understanding of the basis of the design requirements for piping and their relationship with the materials, fabrication and examination requirements which are closely related in B31.1. The course will include group discussion on the application of the Code to practical situations in industry. The knowledge gained in attending the CSA B51 course compliments the knowledge gained in the ASME B31.1 course for Canadian practice.

## CONTENTS: A two day course consisting of the following:

| DAY 1: | DAY 2: |
|---|---|
| • Introduction to piping design | • Layout of piping system |
| • Jurisdictional limits | – support location |
| • Review of content of B31.1 | • Flexibility analysis |
| • Loadings | – collapse protection |
| • Selection of material, components and joints | – stress intensification factors |
| • Primary stress protection | – flexibility factors |
| – pressure design of components | • Fatigue |
| | • Interaction of fabrication and examination with design |

## WHO SHOULD ATTEND?

The B31.1 course is directed toward piping designers and personnel who are required to interact with and to understand the design documents associated with piping either in an industrial settings or in an operational Nuclear Power Plant. Those attending should have a reasonable degree of familiarity with the Code and its application. This course is directed more to the development of personnel who have some experience.

## EXPECTATIONS:

Course participants with adequate experience will have attained the following information at the end of the course:

1. An understanding of the concepts used by the B31.1 Code to maintain Pressure Boundary integrity and operate in a safe manner at the design conditions.
2. A working knowledge of the relationship between the design of the piping system, its layout, the impact of Code requirements on these elements including techniques that a designer can use to meet these requirements.