



# PROFESSIONAL DEVELOPMENT COURSE

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## CSA N285.0 & ASME SECTION III CLASS 1 REQUIREMENTS AS APPLIED TO DESIGN REPORT/STRESS ANALYSIS REPORT

**LECTURER:** Dr. Amarjit Banwatt, P. Eng.  
**LOCATION:** ANRIC Enterprises Inc., 701 Evans Ave., Suite 202, Toronto  
**FEE:** Register four weeks before and pay at time of registration: \$1,495.00 (pp/plus HST)  
 Registrations received within four weeks: \$1,645.00 (pp/plus HST)

### OBJECTIVE:

This course will introduce basic concepts of and practices of ASME Code Section III Sub-sections NB, NF; and Standards CSA N285.0 and CSA N289.3 requirements pertinent to the analysis for the preparation of Design Report/Analysis Report. Background and basic requirements will be discussed in the class and the participants will have the opportunity to discuss the basic elements of various Clauses associated with the stress analysis of pressure boundary components.

The course will cover the basics concepts and requirements for the analysis of components. An overview of the analysis process will be provided and relationship between the analysis results and meeting the Standard or the code will be discussed.

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

<p><b>DAY 1:</b></p> <ul style="list-style-type: none"> <li>Brief Introduction to CSA Standard N285.0 requirements.</li> <li>ASME Section III, Subsection NB Vessel and Components Applied to Stress Analysis:             <ul style="list-style-type: none"> <li>(a) Background, Class 1 requirements and various operating conditions.</li> <li>(b) Basic concepts of limiting stresses for various service conditions</li> </ul> </li> <li>Seismic Analysis – CSA Standard 289.3 Seismic requirements and Brief Introduction to Appendix N (Dynamic Analysis Methods)</li> </ul>	<p><b>DAY 2:</b></p> <ul style="list-style-type: none"> <li>Supports; CSA N285.0 and ASME Section III, NF requirements</li> <li>Introduction to ASME Section III Mandatory and Non-Mandatory Appendices: Appendix 1, Appendix III, Appendix XXIII, Appendix A, Appendix F,</li> <li>Bolting Requirements</li> <li>Requirements and concepts for performing design analysis and its applicability in meeting CSA Standard N285.0 and ASME Code Section III, Class I components and requirements.</li> </ul>
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### WHO SHOULD ATTEND?

This course touches important aspects of CSA Standard N285.0, N289.3 and ASME Code Section III, Subsection NB as applicable to analysis requirements in the preparation of Design Report/Stress Report. This course is a valuable resource for new employees and designers, who would like to understand how the codes and standards are applied to meet the CSA/ASME code requirements. Attendance at this course is considered as meeting part of the requirement for updating their qualifications in accordance with Appendix XXIII.

### PRE-REQUISITE:

Participants are expected to have completed the CSA N285 (Series) and ASME Section III – An Overview courses.

### EXPECTATIONS:

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

1. An understanding of the importance of the CSA N285 Series of Standards as applicable to stress analysis requirements.

2. An understanding of the fundamental concepts underlying the Codes and Standards for Pressure Boundary in a Nuclear Power Plant as they are applied in the preparation of Design Report or Stress Report.
3. An understanding of the relationship between N285 and the ASME Code, Section III, Div.1, and how the Canadian requirements are integrated into the analysis of components in meeting Standard/Code requirements.

## LECTURERS:

Dr. Amarjit Banwatt has been actively involved for over 35 years in the stress analysis field and the use of ASME Codes and CSA Standards. He has been involved for the past 10 years in the development of the CSA N285.0 Standard as member of the Technical Committee. He has worked at AECL to prepare registration documents for Pressure Boundary components. Dr. Banwatt is a recognized stress analyst and Codes expert; he is consulted by many groups for Code clarifications. Dr. Banwatt is the past president of the Canadian Society for Mechanical Engineering and past member of NSERC Grants Selection Committee, Ottawa. He is a fellow of the Canadian Society for Mechanical Engineering and the Engineering Institute of Canada.

## IMPORTANT INFORMATION:

**PAYMENT:** Full payment is due at time of registration. Payment can be made via credit card (VISA, MasterCard or American Express), cheque or purchase order. PLEASE NOTE: Payment is non-refundable.

**CANCELLATION POLICY:** Cancellation must be received in writing 7 days prior to course start date. If cancellations are made after that date, the cancellation fee will be 50% of the course cost. You may send a substitute. Notification of a substitute must be received at least 48 hours prior to the commencement of the course or a cancellation fee will be charged. PLEASE NOTE: The cancellation fee can be discounted towards any future course taken at the ANRIC Learning Centre.

**ACCOMMODATION:** The Stay Inn, 560 Evans Ave (2 minute drive to 701 Evans Ave), has provided a quote of \$99.00 per night for 1 bed and \$109.00 for 2 beds, including a continental breakfast. The Stay Inn can be contacted at [info@stayinn.ca](mailto:info@stayinn.ca) or 416-259-7899/1-888-445-4473 for more information. Please refer to ANRIC Enterprises Inc. when speaking with reservations. This is a small hotel, so it is advisable to book early.

**FOOD AND BEVERAGE:** At the start of the day juice, fruit, pastries, coffee and tea will be provided before the course. Coffee and Tea will be provided at mid-morning break, including pop in the afternoon and lunch will be provided. Please indicate when you are enrolling for the course if you have any specific food requirements. Every effort will be made to accommodate your needs in this area.

**COURSE TIMES:** Registration begins at 8:00 a.m. The course will begin at 8:30 a.m. and conclude at 4:30 p.m.

**DRESS:** Please dress so that you will be comfortable. It is prudent to dress light and bring a light jacket in case you need it during the course. The tolerance to temperature varies for people and sometimes room temperature acceptable to the majority may not be right for an individual.

**PARKING:** There is parking available for a fee of \$5.00 per day. There is parking at 701 and 703 Evans Ave.

ANRIC Enterprises Inc. specializes in courses of calibre to industry by providing lecturers who have recognized expertise and who are involved with the development and application of Codes and Standards.

ANRIC Enterprises Inc. reserves the right to cancel any course and/or change lecturers.