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CSA N285 (SERIES) GENERAL REQUIREMENTS FOR PRESSURE RETAINING SYSTEMS & COMPONENTS (PEL-64217)

LECTURER(S): Dr. Amarjit Banwatt & Mr. Richard W. Barnes
DATE: See Website for Delivery Dates
LOCATION: ON-LINE Delivery through ANRIC Enterprises Inc.
FEES: Register & PAY three (3) weeks before the start: \$1,750.00 (pp/plus HST). Register within three (3) weeks of the start: \$1,920.00 (pp/plus HST). Group pricing available; please contact <training@anric.com> or Call (416) 253-9459. ** Payment can be made by Credit Card or Purchase Order.

OBJECTIVE:

This course will introduce participants to the concepts and practices that form the basis of the N285 approach to maintaining the integrity of the Pressure Boundary. Participants will have the opportunity to discuss the basic elements in order to assist them in their understanding of the concepts. The course will review the detailed requirements for Code Class, Registration of Design, and the Documentation Requirements, in particular, the documents associated with the design and manufacture of Pressure Boundary products.

The course will explore the importance of the N285 Series to the Regulator and the close relationship between CSA Standards and the ASME Boiler and Pressure Vessel Code. It will present an overview of concepts associated with the requirements for spares, replacements, modifications and periodic inspection. However, in-depth coverage of the requirements for these areas is covered in a subsequent course due to the detailed and complex nature of these subjects which require considerably more time to discuss.

CONTENTS: Online delivery – Delivered over four (4) half-day segments. (8:00 AM – 12:00 NOON)

COURSE CONTENT	COURSE CONTENT
<ul style="list-style-type: none"> Safety & Pressure Boundary Integrity Regulatory Requirements Scope of CSA Pressure Boundary Standard N285.0 Other N285 Standards Fundamental Concepts: Control of Activities, Third Party Inspection and Compliance ASME SEC III & the N285 Series Classification Design Registration 	<ul style="list-style-type: none"> Plant Requirements System Requirements Component Requirements Code Responsibilities Documentation Requirements Specific CANDU Components Specific CANDU Containment Requirements Periodic Inspection (overview) Spare, Replacements & Modifications (overview) Checkout

WHO SHOULD ATTEND?

The N285 Series, in particular the upper tier standard CSA N285.0, impacts on the many disciplines in the field of Pressure Boundary. Personnel working in the disciplines of design, inspection, fabrication, procurement, quality assurance and maintenance will find this course beneficial in that it will help them to better understand their roles and responsibilities. Attendance at this course is considered as meeting part of the requirement for updating their qualifications in accordance with Appendix XXIII.

EXPECTATIONS:

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

- An understanding of the importance of the CSA N285 Series of Standards to the Regulator.
- An understanding of the fundamental concepts underlying the Codes and Standards for Pressure Boundary in a Nuclear Power Plant and how they are embodied in the N285 Series.
- A basic knowledge of the documentation packages required for the approval of Component Classification, Registration of Design and Fabrication compliance for the CANDU Nuclear Power Plant
- An understanding of the relationship between N285 and the ASME Code, Section III, Div.1, and how the

Canadian requirements are integrated into the system.

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LECTURER:

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.

Mr. Richard W. Barnes is the Principal Engineer at ANRIC Enterprises Inc. and has been actively involved for over 30 years in the development of the ASME and CSA Codes and Standards associated with Pressure Boundary for both nuclear and non-nuclear power plants. Mr. Barnes leads the team at ANRIC Enterprises Inc that offers technical assistance for companies registering Pressure Boundary items and provides expert consultation on the application of the various pressure boundary codes.

Mr. Barnes sits on various code committees responsible for the development of Codes and Standards for quality assurance and requirements for the pressure boundary. He is:

Past-chair and member of the ASME Standard Committee of the BPV III (Section III), Past Vice-Chair and member of N285A Technical Committee, Member of the B51 Technical Committee, Past Vice-Chair and Member of N286 Technical Committee; and Member of ASME B16 Standards Committee.

Mr. Barnes is a Fellow of ASME and has been recognized for contribution to the industry through the following awards:

The ASME Dedicated Service Award, The Bernard F. Langer Nuclear Codes and Standards Award. The CNA Outstanding Contribution Award, The CSA Award of Merit; and The ASME Melvin R. Green Codes and Standards Medal.

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

IMPORTANT INFORMATION:

PAYMENT: Full payment is due at time of registration. Payment can be made via credit card (VISA, MasterCard or American Express) or purchase order. **PLEASE NOTE:** Payment is non-refundable within 3 weeks prior to the start of the course.

CANCELLATION POLICY: Cancellation must be received in writing 7 days prior to course start date. You may send a substitute. Notification of a substitute must be received at least **72 hours prior to the commencement of the course to allow time for delivery of course material.** If a substitute is not available, the fee for the course may be used towards another ANRIC course at a later date.

**** ANRIC Enterprises Inc. reserves the right to cancel any course and/or change lecturers. Courses that fail to register a "MINIMUM" of 6 participants will be cancelled. Personnel who require this course to meet qualification requirements should contact the office at training@anric.com to discuss/arrange other options.**

INFORMATION ASSOCIATED WITH ON-LINE COURSES FOLLOWS:

The course is delivered on-line.

The maximum number of people per course is 16 people. This limitation is set because the courses are run with Workshops using Breakout Rooms to provide for maximum interaction and learning experience. This provides an excellent learning opportunity.

All rights, title and content of the course manuals and all other instructional material shall remain the property of ANRIC Enterprises Inc.

The manuals will be delivered to course participants by courier.

The course is run online in half day sessions (4 half-day), to accommodate the ergonomic issues of sitting at a small screen. An added benefit is that it allows people to cover off other work duties during the course. We have successfully done this for the nuclear power stations in Ontario over the past year and this system has proven to be excellent. This course if run in a classroom setting, is a two (2) full day course.

REQUIREMENT: This course requires participants to have video and audio capability.

There will be an examination/checkout at the end of each course. ANRIC Enterprises Inc. will only provide certificates of successful completion for participants that achieve an examination result of 80% or higher and video access is required for the checkout.