



RICK GRANT DISCUSSES THE CAN/CSA Z19902 STANDARD, WHICH WAS DONATED TO THE DALHOUSIE SEXTON LIBRARY, WITH HELEN POWELL (MIDDLE) AND SARAH JANE DOOLEY (LEFT) OF THE DALHOUSIE SEXTON LIBRARY.

Committee on Offshore Structures (SSCOS). These committees fall under the umbrellas of the Standards Council of Canada (SCC) and the Canadian Standards Association (CSA).

ISO 19902 Fixed Steel Structure Standard

The publication of the ISO 19902 offshore structure standard for Fixed Steel structures represents the culmination of significant efforts over many years. Providing guidance and procedures for the design and fabrication of offshore fixed steel structures, the Standard has been developed based on established standards for fixed offshore steel structures and through direct input from many of the countries actively engaged in the development of the offshore, including the United States, United Kingdom, France, Norway and Canada, to name a few. Canada has participated in the development of ISO 19902 both at the ISO level and through the CAC. A Canadian Regional Annex was developed under the Fixed Steel Working Group for inclusion in the ISO 19902 standard. Among the requirements in the Canadian Regional Annex is reference to CSA S471 "General Requirements" for purposes of guidance in designing structures for the arctic environment. It also provides requirements if the CSA W59 welding standard is used.

ISO 19902 Deviation

During the Canadian review process (Spring 2008) for the adoption of ISO 19902 as a National Standard of Canada by the Fixed Steel Working Group, there was reflection on whether the ISO 19902 standard, as published with the Canadian Regional Annex, truly reflected the intent of specific requirements for welding as embodied in the current CSA S473 "Steel Structures" offshore standard and other Canadian welding standards used across the country. The specific issue was that of certification of: the welding fabrication companies and associated personnel; and the welding inspection companies and personnel.

The matter was considered in detail by the Working Group, drawing on their experiences relative to current and past Canadian offshore projects. The Working Group (consisting of members from operators, regulators, and consultants) reached agreement that it was appropriate to address the matter immediately as a Deviation to the standard rather than delay it until the next update of ISO 19902. The Deviation was subsequently authored within the Working Group, accepted, and then presented to the CAC. A formal ballot by the CAC members for adoption of ISO 19902 with the Deviation was held during October 2008 with all members voting in favour. The National Standard of Canada

Offshore Structures Standards: Flagship ISO 19902 Adopted as National Standard of Canada

By RICHARD M. GRANT, M.ENG., P.ENG.

This year marks a very important milestone in the ISO offshore structures standards initiatives and the Canadian initiatives to advance these standards and adopt them as National Standards of Canada. This milestone is the publication of the ISO 19902 offshore structures standard for Fixed Steel structures. This standard is considered by many, both within Canada and internationally, as the "flagship" ISO standard. The adoption of this standard, along with other ISO standards already adopted as National Standards, means that Canada will soon have a core suite of standards that can be used to replace the existing Canadian offshore structures standards published under the Canadian Standards Association (CSA).

Background

Canada's efforts to harmonize the existing CSA offshore standards with the new ISO offshore structures standards have

been the subject of several articles previously published in Ocean Resources magazine. The most recent of these was "Offshore Structures Standards: Canada Adopts ISO Standards" by R.M. Grant (August / September 2007). The 2007 article provides considerable background on the harmonization process and the rationale for the adoption of the ISO standards in Canada.

Canada's efforts to harmonize the existing CSA offshore structures standards with the offshore structures standards being developed under ISO has been on going since 2000. Many of the ISO Offshore Structures standards have now been adopted as National Standards of Canada. The ISO harmonization process is being performed with tremendous effort of many from the various stakeholder groups including: industry, fabricators, consultants, academics and regulators. The work is being carried out by the Canadian Advisory Committee (CAC) on Offshore Structures under the jurisdiction of the Strategic Steering

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version was subsequently published by CSA in February 2009 as CAN/CSA Z19902 (note: the Z denotes that the standard includes a deviation). The Deviation covers: certification of welding fabrication and inspection companies; welding inspectors; and the use of a third-party verifier.

As chair of the Fixed Steel Working Group, I would like to take this opportunity to thank all members of the Working Group for providing comment and review of the ISO 19902 standard and in particular those contributing significantly to the Deviation including: Rod Bursey, Doug Luciani, Jack Hobbs, and Peter Rogers.

Withdrawal of CSA S473 Standard

With the adoption of the 19902 standard as the National Standard of Canada, efforts of the Fixed Steel Working Group are now directed toward the withdrawal of the current CSA S473 (Fixed Steel) standard. Since the Regional Annex for Canada within the 19902 standard references welding requirements contained in the CSA S473 standard, the S473 standard cannot be simply withdrawn. Due consideration of the welding provisions contained in the Annexes of S473 and the possible migration of

these provisions to the CSA W59 and W47.1 welding standards is required. The Fixed Steel Working Group is currently developing a plan for the possible means to migrate the welding provisions contained in the S473 Annexes. This work will be the focus of attention for the Fixed Steel Working Group in the near term.

It is important to note that the application of the CSA welding standards is not mandatory within CAN/CSA Z19902 for Canadian offshore projects. Other welding standards such as those of the American Welding Society (AWS), EEMUA (Engineering Equipment & Materials User Association) and Norsok (Norway) are permitted. This is representative of the flexibility that has been sought through Canada's harmonization process.

ISO 19901-3 Topsides and ISO 19906 Arctic Structures

The complete replacement of the CSA offshore structures standards with the ISO standards will be realized once the ISO 19901-3 "Topside Structures" and ISO 19906 "Arctic Structures" standards are published as National Standards of Canada. The ISO 19901-3 standard has been developed with significant participation from Canada and the draft standard contains important provisions from the CSA S471 standard. Some of these provisions include the requirements for Accidental Actions such as fires, explosions, dropped objects, ship collisions and strong vibrations.

With respect to the ISO 19906 "Arctic Structures" standard, Canada is the lead country (i.e. the convenor) for the development of this standard. The intent of the Arctic standard is to fill the gaps in the base ISO offshore structures standards in regard to the provisions for offshore structures in Arctic regions. It also contains many of the provisions from CSA S471. Until the ISO 19901-3 and 19906 standards are published by ISO there will remain the need to keep the CSA S471 standard standing, however, it is important to note that the ISO offshore structures standards could be used for the development of offshore structures in non-Arctic waters prior to the publication of the ISO 19906 Arctic standard.

The published National Standard of Canada versions of the ISO standards, including those with deviations (i.e. 19902 "Fixed Steel" and 19901-2 "Seismic") are available for purchase through the CSA (www.csa.ca). Also, the CAN/CSA Z19902 standard is now available at the Dalhousie Sexton Library in Halifax, Nova Scotia through a donation from Grantec Engineering Consultants Inc.

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