

Perspectives

A word from industry leaders

In each issue, *Ocean Resources* interviews a leader in the energy sector. For this issue we interviewed Richard M. Grant, president of Halifax-based Grantec Engineering Consultants Inc. Grant is the vice-chair of the Strategic Steering Committee on Offshore Structures, the chair of both the Fixed Steel and Topsides Working Groups of the Canadian Advisory Committee on Offshore Structures, and the Canadian representative on ISO TC67SC7 Working Group 3 for Fixed Steel and Topside Structures.



RICHARD M. GRANT
President of Halifax-based
Grantec Engineering
Consultants Inc.

Q: What was the catalyst for you to get behind updating/developing the offshore structural standards?

A: My involvement in the offshore structures standards initiatives began in 1997 when I was approached to be one of the five founding members of the Canadian Advisory Committee (CAC) on Offshore Structures Standards under the Standards Council of Canada (SCC). The purpose of this CAC was to monitor and participate in the development of the new offshore structures standards being developed by the International Organization for Standardization (ISO). During the period of 1999 to 2000, while reviewing safety critical systems on an offshore platform, I determined the Canadian requirements were deficient in regard to Fire and Explosion safety, both within the Canadian regulations and the standards. On this matter, I performed

research including consultation with regulators in UK, Norway, Australia and the US, and experts from various parts of the world. The identification of these deficiencies and the realization that I was in a position to do something about them became the main driver for my involvement in advancing both the CSA and ISO offshore structures standards. I looked at requirements in the North Sea and said to myself, "Why should our workers in the Canadian offshore be afforded any less protection than those in the North Sea?"

Q: Why hadn't the standards been examined before?

A: Our Canadian standards had not been examined prior to 2000, essentially due to lack of use. Although the CSA Offshore Structures standards were published in the early 1990s, they had not been used for projects such as Cohasset-Panuke and the Sable Offshore Energy Project (both in Nova Scotia) and only parts were used for the Hibernia Project (in Newfoundland).

Q: Do you think the average Canadian thinks our regulations are tougher than those in the US?

A: If the average Canadian was following the media coverage during the Deepwater Horizon incident, I would suggest that they would have the perception that the Canadian regulations are more stringent and that we have excellent regulations. Having worked in depth with the Canadian offshore regulations, my opinion is that the regulations have strengths, but they also have significant shortcomings. They were found to be lacking in the area of fire and explosion safety by myself and have failed to keep up with advances in safety and technology. Further, Canada still relies on Certificate of Fitness Regulations whereas the UK, due to the Piper Alpha tragedy (167 lives lost in 1988), moved to a Verification scheme that mandates the review of offshore platforms be performed by "Independent Competent Persons." Canada still has no Offshore Pipeline regulations, although the Nova Scotia offshore pipeline has been operating since 1999. These are just a few of the issues. It is recognized that Canada has been moving to goal-oriented regulation for some time now, with the current trend by the regulators to categorize them as a "hybrid," being part goal oriented and part prescriptive. This approach must be taken carefully. If not developed and implemented properly, the result may be regulations that are difficult to use, and do not provide the necessary clarity, resulting in regulations that are actually a detriment to safety.

Q: Since Deepwater Horizon, officials say the same disaster couldn't occur here. Do you agree with that?

A: In reality, the probability of the same scenario occurring in the Canadian offshore is low, but this does not preclude it from ever happening. We must remember that the Atlantic Canadian offshore has one of the harshest environments (i.e. waves, wind, etc.) in the world. Some of the largest offshore equipment in the world

has been humbled by our Atlantic Canadian offshore climate. There have been significant failures in the Atlantic Canadian offshore and to believe that a serious failure involving loss of life and/or harm to the environment could not occur would not be realistic.

Q: What still has to be done to make working in the offshore safer, not only for workers, but for the environment?

A: The Offshore Helicopter Safety Inquiry (The Honourable Robert Wells, Commissioner) Report that was published in November 2010 has recommended that a strong independent and knowledgeable (competent) safety agency be established to regulate safety in the Newfoundland offshore (Report Recommendation 29). I agree that there needs to be a strong, independent and competent safety agency established, however, not just for the Newfoundland offshore but a national agency that regulates safety for the entire Canadian offshore. Canada needs to follow the examples set by the UK, Norway and Australia, countries that all have strong, independent and competent national regulators with a depth of "in-house" expertise.

Q: Every offshore disaster is a chance to learn what can be done differently. What did the industry learn from Deepwater Horizon? And how could the Offshore Structure Standards have made a difference in that case?

A: The unfortunate thing about some offshore disasters is that for some, the lessons had already been learned by others and/or best practices were not employed. Based on expert testimony in Washington during November 2010, there is considerable evidence to indicate that best practices were not employed for the Deepwater Horizon Macondo well. This would also be the case for the Bombay High North tragedy that occurred in 2005 in which a standby vessel impacted gas risers resulting in total loss of the platform. The offshore structures standards at the time would have required that the structure prevent the impact of the risers by the vessel. Unfortunately the structure did not and the explosion and fire from the ruptured risers resulted in the total loss of platform and 22 reported fatalities. Media reported that the platform had been certified Fit for Purpose by a Certifying Authority.

Q: What can Canada teach other countries about these standards? How can we be leaders?

A: Without question, Canada has been a leader in the area of ice loading. This comes from the expertise within Canada from the Beaufort and the Newfoundland offshore. As a result, Canada is the lead country developing the ISO 19906 for Arctic Offshore Structures which has now been published by ISO (December 2010).

Q: What has been the highlight in this process for you personally?

A: The most significant accomplishment was to have corrected serious deficiencies in the Canadian offshore regulations in the area of Fire and Explosion safety through the development and inclusion of new provisions in the updated CSA Offshore Structures standards (2004) and then the participation in the development of similar provisions in the new ISO 19901-3 Topsides structures standard (published December 2010). These new provisions will enhance safety on offshore platforms all over the world.

Q: How do you plan on continuing working on these standards? What else do you think needs to be done?

A: Currently one of the activities that I am focused on is moving Canada's offshore welding requirements into the CSA W59 Welding standard. At the present time, the offshore welding provisions are contained in the CSA S473 Offshore Steel Structure standard that we are replacing with CAN/CSA Z19902 (the Canadian National Standard version of ISO 19902). We have an excellent Canadian Working Group responsible for this work with involvement from offshore welding experts from Newfoundland, Nova Scotia and the Canadian Welding Bureau. We are taking the opportunity to incorporate lessons learned from Canadian offshore projects and to address issues within the provisions during this work. Following this work, we will then be adopting the ISO 19901-3 Topsides standard as a National Standard of Canada. The bulk of our work on the offshore structures standards will then be focused on the maintenance of the new ISO offshore structures standards.