

For Immediate Release
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Mr. Steven Campbell, President of Trans Ocean Gas announced today, “a new method to transport natural gas by ship and tractor trailer”. Trans Ocean Gas already holds the patent rights to transporting compressed natural gas in fibre reinforced plastic pressure vessels. “This new method of storing and transporting natural gas is a derivative of our existing technology”. Trans Ocean Gas is located in the National Research Council’s Institute for Ocean Technology in St John’s NL.

Patents for pressurized liquefied natural gas (PLNG) using fibre reinforced plastic pressure vessels have been filed this week. Pressurized liquefied natural gas is an alternative to expensive LNG for the storage and transportation of natural gas. PLNG is high density liquefied natural gas that is achievable by combining low temperatures with relatively low pressures. High density PLNG is achievable between temperatures of -40 and -80 degrees Celsius. The corresponding pressure is between 80 and 40 Bar pressure.

PLNG is not applicable for use with low-temperature carbon steels; the temperature limit of low-temp carbon steel is -40 C. Low-temp carbon steel is therefore not practical for PLNG storage and transportation. In contrary, fibre reinforced plastic pressure vessels have a much lower temperature capability. Thus, PLNG is very practical and cost efficient through the use of FRP pressure vessels.

Trans Ocean Gas will be testing full scale fibre reinforced plastic (FRP) pressure vessels in Sheet Harbour NS this fall. Destructive burst testing required for certification will be conducted at Atlantic Steelworks facility in Sheet Harbour NS. Environmental Simulation Laboratories of Dartmouth NS has been contracted to administer the testing program. Certification of the prototype pressure vessels will be issued by Det Norske Veritas (DNV).

The FRP pressure vessels about to be tested for CNG transportation are very similar the ones intended for PLNG. Low temperature testing of FRP pressure vessels is expected to follow certification for CNG transportation.

PLNG will have significantly increased value in cold temperature environments. Cold water is an excellent conductor of heat energy. Thus, refrigeration costs can be significantly reduced, making it easier and less costly to obtain gas temperatures of -50 C. At -50 C, PLNG in FRP pressure vessels is a safe and very cost effective way to store natural gas.

PLNG is a significant increment to our existing CNG technology. PLNG is a derivative of FRP CNG technology. At low temperatures, gas capacity can be increased from 50% to 100%. Simultaneous to this is a major pressure reduction. Reducing the pressure requirement lowers the cost proportionately.

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