

### **BEXCO's advanced torque matched rope design successfully tested!**

In an answer to the industries' need for reducing the fatigue damage to wire rope when used in combination with synthetic mooring lines, Bexco spent more than 2 years in the development of a unique rope solving this problem.

When combining synthetic mooring lines with wire ropes in one mooring leg, the wire will twist / untwist as a result of the cyclic loading of the mooring leg. This twisting action of the wire rope drastically reduces its lifetime.

To overcome this problem, Bexco's R&D team has designed an innovative torque matched rope. In contrast with other already existing ropes, which only provide torque matching at a defined tension in the mooring leg, this newly developed rope matches torque over a wide range of tensions going from 0% to over 50% of its MBL.

To prove the performance of this advanced rope Bexco recently performed a full scale torque matched test at Holloway in Houston. In this test a mooring leg, consisting of a 89mm 6X52 IWRC steel wire in combination with a 150mm polyester rope, was subjected to cyclic loading around different load levels ranging from 15% up to 55% of rope MBL. This test, witnessed by representatives of Intermoor, Noble Denton, ABS and Moorwest showed that rotation in the steel wire stayed well below 5° per lay length (as prescribed by ABS and ISO) over the complete tension range from 15%-55% of the ropes' MBL. This means that this new rope not only avoids fatigue damage to steel wire at the service load of the mooring leg but also at loads occurring during storm conditions.



For more information on our torque matched rope design, please contact :

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