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**STRUCTURAL BEHAVIOR OF FLOATING BREAKWATERS WITH  
DIFFERENT MOORING LINES. APPLICATION TO MARINA CORUÑA**

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**INTRODUCTION**

*Floating breakwaters (FBW) are marine structures used to reduce high frequency agitation within fishing and recreational harbors, already protected against long period waves by another structure, either natural or manmade. The development of a large number of new marinas and harbors around the world has led to a growing interest in the study of the structural behavior of FBW over the past two decades (Hales, 1981; Olivier, 1994; Cox, 2006). Prototype tests have been carried out and there have also been efforts to formulate the forces that appear between pontoons, both analytically and numerically, resulting in specific design programs for these marine structures. However, physical modeling of breakwaters in current use is rare. In this study, we offer a description of a model of a floating breakwater already installed and operating at Marina Coruña (43°22'3''N, 8°23'13''0) as well as the dynamic results obtained by simulating both elastic and non-elastic types of mooring lines. It is innovative in the field of marine hydraulics due to the fact that 4 degrees of freedom of forces and moments were able to be recorded between two modules of a floating breakwater. These results include wave transmission and most of all, the structural response of the breakwater recorded both at the mooring lines and in between two adjacent modules.*

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