**ABSTRACT SUBMISSION –– 19th IALA Conference 2018**

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**ABSTRACT**

BOIA ESTACA (“POLE BUOY”)

**Floating top marks** for **pole beacons** in flooding rivers or channels.

In canals or rivers marked with pole beacons and where the water level variation is high, defining focal plane is not straight forward. A high focal plane increases cost and may hinder night time visibility. Beacons with a low focal plane run the risk of being fully submerged when the river floods.

During flooding the beacons will not be visible and the waterway will no longer be navigable under these conditions as the beacons themselves become submerged obstacles. Pole top marks and lights will probably be damaged, following the floods beaconing must be inspected and repaired to restore full navigability of the channel.

In conjunction with Instituto Hidrográfico (Portuguese Navy), Almarin have been working on a top mark designed as a buoy that floats off the pile, increasing probability that the AtoN survives undamaged to the flood. Once the water level subsides a maintenance team repositions the top marks on the piles.

Design stage has been concluded and is forecast to be installed before next winter when rivers usually flood. Our aim is to present the complete project at the 19th IALA conference.