ABSTRACT SUBMISSION –– SOUMISSION DE RESUME

**Topic No.: / Sujet n° : 4 or / ou**

**proposed topic / sujet proposé:**  **Conversion from steel to plastic buoys at the German coast**

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ABSTRACT / RESUME:

**The presentation gives an overview about the plastic buoy conversion project on the German coast and its special requirements.**

**The German Federal Waterways and Shipping Administration operates more than 4500 buoys for the north and baltic sea. These are mostly steel buoys of different classes and constructions (historically grown). For operation and maintenance extensive equipment and specially trained staff have to be provided by the administration.**

**Economic calculations showed that buoys with a diameter of less than 2.5 m should be converted to plastic buoys. The calculations were based on specific requirements, such as**

* **ice durability**
* **use of coastal unified buoys**
* **12 years lifetime, no repairs**
* **extension of inspection intervals**
* **optimizing of the anchor systems**

**The initial work was:**

* **coast-wide inventory of existing buoys**
* **classification and specification of new buoy types**
* **budget calculations**
* **determing safety requirements**
* **procurement concept**
* **action planning, etc.**

**During the preparation of the first tender it has been recognized that certain plastic buoys are protected by registered designs at the EUIPO (EU Intellectual Property Office). To prevent competition restrictions, a patent attorney was appointed. After clarification of the patent matters the procurement of more than 3000 plastic buoys began.**

**Parallel to this tests of large modular plastic buoys (diameter > 2.5 m) have been started. Nautical and technical parameters are being investigated (swimming behavior, resistance of materials and colors, visibility, etc.). In case of positive test results, a conversion of large buoys may be also economical…**

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