ENG2-11.2.2

**Sub Working Group: Maintenance of AtoN Structures**

**Task Register References**

* 4.1.2 - Develop guidance on Maintenance of AtoN Structures

**Summary**

**An outline of the proposed structure of the new guideline on** Maintenance of AtoN Structures is shown below:

1. Introduction
   1. Maintenance strategy - maintenance system

strategy regarding extreme natural events (earthquake, cyclones,...)

special requirements for historic lighthouses (material, techniques,...)

1. Structures and building types (including ancillary AtoN operational buildings)
   1. Pile/pole beacon

A vertical spar fixed in the ground or in the sea-bed or a river bed to show as a navigation mark.

* 1. Turret/tower rock

A station, founded on an isolated rock pinnacle or group of rocks. In recent years the terms have been extended to offshore structures, founded on the seabed, It is always a solid structure used to support aids to navigation.

* 1. beacon

A small fixed artificial navigation mark

* 1. lighthouse

A substantial building or structure, erected at a designated geographical location to carry a signal light and to assist marine navigation.

* 1. facilities accommodation/inhabitations
  2. others

1. Materials (+ quoting illustrations)
   1. Masonry (including stone)
      1. Material description and properties
      2. Behavior and risks / issues (including corrosion where relevant)
      3. Durability and additional protection systems (cathodic protection, painting and protective coatings, protective membranes, etc.)
      4. Periodic maintenance
   * Inspection and survey
   * Spots of corrosion
   * Painting renewal
   * Typical maintenance frequency…
     1. Repair techniques (detail major repairs below)
   1. Timber
      1. Material description and properties
      2. Behavior and risks / issues (including corrosion where relevant)
      3. Durability and additional protection systems (cathodic protection, painting and protective coatings, protective membranes, etc.)
      4. Periodic maintenance
      * Inspection and survey
      * Spots of corrosion
      * Painting renewal
      * Typical maintenance frequency
      1. Repair techniques (detail major repairs below)
   2. Concrete (blockwork, brickwork, reinforced concrete, …)
      1. Material description and properties
      2. Behavior and risks / issues (including corrosion where relevant)
      3. Durability and additional protection systems (cathodic protection, painting and protective coatings, protective membranes, etc.)
      4. Periodic maintenance
      * Inspection and survey
      * Spots of corrosion
      * Painting renewal
      * Typical maintenance frequency…
      1. Repair techniques (detail major repairs below)
   3. Composite ( including plastics)
      1. Material description and properties
      2. Behavior and risks / issues (including corrosion where relevant)
      3. Durability and additional protection systems (cathodic protection, painting and protective coatings, protective membranes, etc.)
      4. Periodic maintenance
      * Inspection and survey
      * Spots of corrosion
      * Painting renewal
      * Typical maintenance frequency
      1. Repair techniques (detail major repairs below)
   4. Ferrous Metal
      1. Material description and properties
      2. Behavior and risks / issues (including corrosion where relevant)
      3. Durability and additional protection systems (cathodic protection, painting and protective coatings, protective membranes, etc.)
      4. Periodic maintenance
      * Inspection and survey
      * Spots of corrosion
      * Painting renewal
      * Typical maintenance frequency
      1. Repair techniques (detail major repairs below)
   5. non ferrous Metal
      1. Material description and properties
      2. Behavior and risks / issues (including corrosion where relevant)
      3. Durability and additional protection systems (cathodic protection, painting and protective coatings, protective membranes, etc.)
      4. Periodic maintenance

* Inspection and survey
* Spots of corrosion
* Painting renewal
* Typical maintenance frequency
  + 1. Repair techniques (detail major repairs below)

1. Control mechanisms - Environmental controls – building conditioning
   1. location surveys : erosion , cliff stability, tide
   2. structure surveys (frequency)
   3. local weather conditions monitoring