Title: Errata to correct wrong paragraph number in para. A860.2

Rationale: In the 2010-2016 Editions of the Code, the paragraph number for the topic "Examination When Exposed" in the Offshore Chapter XIII was para. A860.2(e). As is done throughout the Offshore Chapter, this paragraph paralleled the numbering and content of para. 860.2(e) in the main body of the Code. For no apparent reason, the Publishers changed this paragraph number in the 2018 Edition from para. A860.2(e) to para. A860.2(b). This needs to be changed back to the way it was.
The use of subsurface equipment equipped with cutters, ejectors, jets, or air suction systems should be carefully controlled and monitored to avoid damaging the pipeline, external coating, or cathodic protection system.

When lifting or supporting pipe during repairs, the curvature of a pipe sag bend and overbend should be controlled and maintained within limits to minimize pipe coating damage, overstressing, denting or buckling during the repair operation, and lifting equipment should be selected accordingly.

Wave and current loads should be considered in determining total imposed stresses and cyclical loads in both surface and subsurface repairs.

Personnel working on pipeline repairs should understand the need for careful job planning, be briefed on procedures to be followed in accomplishing repairs, and follow necessary precautionary measures and procedures.

When pipe is repaired, damaged coating should also be repaired. Replacement pipe and components shall be protected from corrosion.

**A851.4.6 Offshore Repair of Flexible Pipe.** If the operability of the flexible pipe is impaired (i.e., major structural damage), the pipe shall be repaired by replacement of the damaged section. In the event of surface cuts and abrasions in the protective coating that do not expose the load carrying members to potential corrosion, the repair shall be performed in a manner recommended by the manufacturer.

**A851.7 Pipeline Markers and Signs**

Permanent markers are not required for offshore pipelines; however, suitable signs should be posted on platforms to serve as a hazard area warning. Where appropriate, signs should display the operating company identification and emergency communication procedures.

**A854 LOCATION CLASS**

There are no operating Location Classes offshore.

**A860 CORROSION CONTROL OF OFFSHORE PIPELINES**

**A860.1 Scope**

Since offshore pipelines cannot be readily inspected after installation and there is the possibility of damage to the coating system, special consideration should be given to the selection, design, and application of corrosion control coatings, the cathodic protection system, and other corrosion design elements.

**A860.2 Evaluation of Existing Installations**

(a) **Monitoring.** The operating company must rely on monitoring, investigation, inspections, and corrective action to control corrosion. Such activities shall be performed at periodic intervals sufficient to ensure that adequate corrosion control is maintained. Where it is determined that corrosion that is taking place may be detrimental to public or employee safety, the facility shall be repaired or replaced, and corrosion control measures applied or augmented.

(b) **Examination When Exposed**

(1) When a pipeline is lifted above water for maintenance or repair, the operating company shall visually inspect for evidence of coating deterioration, external corrosion, and where possible, the condition of any exposed anode. If excessive corrosion is present, remedial action shall be taken as necessary.

(2) If repairs are made below water, inspection for evidence of external corrosion or coating deterioration shall be made, and necessary corrective action shall be taken to maintain the corrosion protection of the pipeline.

**A861 EXTERNAL CORROSION CONTROL**

**A861.1 Submerged Installations**

All submerged steel pipe, valves, and related fittings shall be externally coated and cathodically protected. All above-water piping and components shall be protected from the particularly corrosive conditions of the salt water atmosphere and cyclic wetting and drying.

**A861.1.1 Coatings**

(a) **Coating Design.** The design of coating systems for offshore installation should reflect the type of environment in which the facility is to be installed. Selection of the protective coating should be based on

(1) low water absorption

(2) compatibility with the type of cathodic protection to be applied to the system

(3) compatibility with the system operating temperature

(4) sufficient ductility to minimize detrimental cracking

(5) sufficient toughness to withstand damage during installation

(6) resistance to future deterioration in a submerged environment

(7) ease of repair

(b) **Cleaning and Surface Preparation.** There may be additional cleaning and surface preparation requirements, such as a near white metal finish and an anchor pattern to promote a good bond for all epoxy-based thin film coatings. Welds should be inspected for irregularities that could protrude through the pipe coating, and any such irregularities should be removed.