SUBJECT: VISUAL THREAD INSPECTION

1.0 SCOPE

1.1 This document sets forth the broad guidelines for the field visual thread inspection of Hunting's **SEAL-LOCK XP AND XP-PC** connections.

NOTE: SEAL-LOCK XP and SEAL-LOCK XP PC connections are not interchangeable.

2.0 DEFINITION

2.1 Visual thread inspection shall be defined as those inspections that may be performed on Hunting's proprietary connections without the use of proprietary thread element gages.

3.0 PIN END INSPECTION

3.1 Pin Face SEAL-LOCK XP

3.1.1 Place a straight edge across the pin face. Sight between the pin face and the straight edge to determine that the pin face has been cut at a negative angle.

3.1.2 Visually inspect the pin face for surface irregularities. Minor dents or dings to the pin face are detrimental to the connection, however, most can be repaired by lightly filing to remove all protrusions. Dents or dings on new connections that are sufficiently deep to cause a raised area or protrusion on the seal surface are rejectable.

3.1.3 The pin face, ID chamfer and OD chamfer are to be smooth and free from burrs.

3.2 Pin Face SEAL-LOCK XP-PC

3.2.1 Check the coating from the ID to the pin face. All the pin face area shall be coated. Visually inspect the coated surface for dings, dents, or chips. If the coating is chipped and the bare metal is exposed, then the connection is rejectable.

3.2.2 Coating overspray on the radius surface is allowed.

3.3 Seal Surface SEAL-LOCK XP and XP-PC

3.3.1 The active portion of the seal surface should be a slightly tapered, flat surface. Galls, burrs, dents, or dings on a new seal surface is cause for rejection.

3.3.2 Visually inspect the phonograph seal finish. The microgrooves should be distinct and uninterrupted from the pin face to the thread start within the definitions of minor pitting and continuity of seal surface.

3.3.3 Repair of a new seal surface by wire brushing, sanding or filing is unacceptable. Acceptable repair methods include polishing with 000 and 0000 steel wool, medium or fine grit Scotch Brite, #5 sugar sand blasting.

NOTE: When inspecting SEAL-LOCK XP-PC, no coating or overspray on the seal surface is allowed.

3.4 Threaded Area

3.4.1 Visually inspect the whole threaded area. Minor dents or dings to the threaded area are detrimental to the connection, however, most can be repaired by lightly filing to remove all protrusions. Field repairable thread damage on new connectors shall not exceed 0.125" in circumferential length or 0.003" in depth. All repaired areas should be covered with an anti-gall and anti-corrosion compound such as molybdenum disulfide spray.

3.4.2 Allowable corrosion pitting in the thread area shall be as defined in the Ancillary Specifications titled **STEEL IMPERFECTIONS.**

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4.0 COUPLING / BOX END INSPECTION

4.1 Mill Make-up (SEAL LOCK XP-PC Coupling)

4.1.1 Visually inspect the powertight connection for indications of proper make-up. For externally shouldering connections such as SEAL-LOCK XP-PC, the box face shall be in contact with the pin external torque shoulder. This may be checked by trying to insert a 0.0005" feeler gage between the pin external shoulder and the box face.

4.2 Internal Torque Shoulder

4.2.1 Visually inspect the internal torque shoulder. The torque shoulder height should be approximately the same for 360°. It shall be free from protrusions due to corrosion pitting or impact damage and free from burrs for 360°.

NOTE: Verify that the internal torque shoulder and seal surface on the field side of the coupling have not been damaged by the drift inspection.

NOTE: For SEAL LOCK XP-PC accessory box only, check the coating from the box ID to the box shoulder. The ID and half of the shoulder height shall be coated. Visually inspect the coated surface for dings, dents, or chips. If the coating is chipped and the bare metal is exposed, then the connection is rejectable. Coating overspray on the seal ring groove surface is allowed.

4.3 Seal Surface

4.3.1 Visually inspect the seal surface. The transition from the thread relief groove to the seal surface shall be burrs free. The seal shall be a slightly tapered, flat surface with a phonograph finish. Galls, burrs, dents or dings (hydrotest or drift created defects) on new couplings or box connectors are rejectable.

4.3.2 Visually inspect the phonograph seal finish. The microgrooves should be finer than those on the pin but still distinct and uninterrupted for the entire seal length within the definitions of minor pitting, inclusions and continuity of seal surface.

NOTE: The microgrooves of the phonograph seal finish may be hard to detect because of the phosphate coating.

NOTE: When inspecting SEAL-LOCK XP-PC accessory box, no coating or overspray on the seal surface is allowed.

4.4 Threaded Area

4.4.1 Visually inspect the full thread area for damage. Small areas of impact damage or galls must be repaired. Field repairable thread damage on new connectors shall not exceed 0.125" in circumferential length or 0.003" in depth. All repaired areas should be covered with an anti-gall and anti-corrosion compound such as molybdenum disulfide spray.

4.4.2 Allowable corrosion pitting in the full form thread area shall be as defined in the Ancillary Specifications titled **STEEL IMPERFECTIONS**.

4.5 Coupling / Box Face

4.5.1 Visually inspect the coupling / box face and OD chamfer for impact damage. Impact damage that has caused the starting thread crest to be indented sufficiently to cause interference with the pin connector thread root on make-up is cause for rejection. Minor impact damage may be repaired by lightly filing away all protrusions.

NOTE: All minor repairs have to be performed by a qualified Hunting Representative and covered with an anti-gall and anti-corrosion compound such as molybdenum disulfide spray.

5.0 CONNECTION GAGING

5.1 The gaging of Hunting's proprietary connections shall only be performed by a Hunting Quality Assurance or Service Representative or an approved Licensee. Hunting personnel or Licensee are the only persons that have availability to the proprietary gages to which the products are manufactured.

6.0 THREAD/STORAGE COMPOUND

6.1 Upon completion of visual thread inspection verify appropriate thread or storage compound is being applied to both ends of the tube. The approved thread/storage compound shall be as stated in the applicable **"FIELD RUNNING AND HANDLING PROCEDURE".**

NOTE: Notify Hunting Northpoint, Houston, Texas, Quality Assurance Department immediately if thread/storage compound being applied is not listed in the applicable "FIELD RUNNING AND HANDLING PROCEDURE".

7.0 REJECTION

7.1 Any thread that does not meet the specified requirements, shall be considered a reject.

7.2 All rejects shall have the entire thread area painted red.

7.3 All rejects shall be clearly identified as "reject" to protect against out-of-tolerance material being shipped as prime material.

7.4 Rejection may be reworked by removing the defective condition and re-threading the parts within the appropriate tolerances.

7.5 Any discrepancies shall be clarified and dispositioned by Hunting's Q.A. Department before any further processing or delivery.