1. Scope

This procedure provides direction and guidance for field inspection and repair classification on pipes or accessories fitted with STS-6 connections. The recommendations below apply to field inspection of both new and used products. Pipe straightness, Tong marks etc shall be evaluated in line with Customer or API requirements.

Field Inspection is by Visual Inspection only with additional caliper check for Over-torque at:

- OD of Pin adjacent 30°Seal
- OD of Box adjacent 30°Seal
- Intermediate Torque Shoulder

This procedure does not apply to re-cuts carried out in a machine shop.

2. Introduction to characteristics of the STS-6

- **Threads** on the connection are straight, non-tapered, and non-interference. The threads are set on two separate diameters, small & large, they do not provide a sealing function.
- **The Primary Internal Pressure Seal** is a 14° metal-to-metal seal at the pin nose and the back of the box.
- The **Primary Torque Stop** is set at 30° at the rear of the Pin and front of the box. As a secondary function it provides a metal to metal seal for external pressure.
- A **90° Intermediate Shoulder** is positioned between the smaller and larger diameter. The primary function is to prevent over-torque.

3. Procedure

3.1 Identification

Confirm that all pipes items to be inspected are properly identified.

Where it is not possible to determine the original manufacturing identification of each pipe or accessory a sequential number shall be identified on each item to provide traceability throughout inspection & repair process.

3.2 Preparation

Remove thread protectors and all traces of storage compound.

A high pressure washer is recommended. Non-chlorine solvent may also be used provided all traces of the solvent are removed prior to inspection.

The connections shall be clean and dry to facilitate the inspection.

Note:

1. Wire brushes and coarse abrasive methods **shall not be used** on the threads and seal areas
2. Protectors must be cleaned and dried prior to refitting

3.3 Equipment Required

i. Caliper
ii. Pit Gauge

iii. Fine Tooth Triangle File (small)
iv. Emery Paper – 'Super Fine' Grade

3.4 Connection Inspection General

Inspection shall be carried out by personnel competent in the visual inspection of STS-6 connection only.

Visual inspection shall evaluate the zones of each connection as detail in Appendix 1 & 2. The following imperfections which may commonly arise in the field are addressed within this document.

- Rust
- Pitting
- Scratches
- Galling
- Dents
- Tong Mark
- Over-torque

Any alternate imperfections detected should be brought to the attention of STS for assessment and guidance.

3.5 Identification

Both acceptable connections and connections categorised for repair shall be positively identified on the product as to their status and the results noted on the inspection report against the corresponding identification of the item.

A single Red band is recommended for field repair and two red bands for recuts.

Reject product shall be physically segregated from acceptable product to ensure exclusion from running operations.

3.6 Hand Repairs

Hand Repairs must be performed by competent personnel.

Any connection which has been hand repaired, will only be considered acceptable if the damage has been completely removed and hand repair has not significantly changed the shape of the repaired area.

If after repairing, the connection is not acceptable, the product shall be classified as "Recut" and shall be sent to a STS licensed Facility repair.

If after repairing, the connection is acceptable the application of Molycote type spray, prior to applying the thread compound, is recommended.

3.7 Post Inspection/Hand Repair

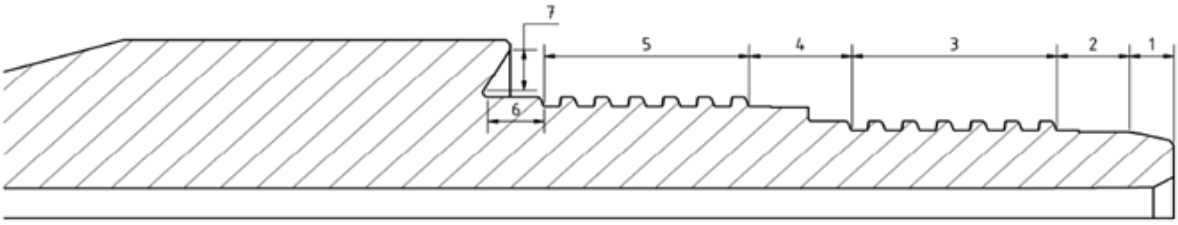
Acceptable connections shall have the required running compound or storage compound as applicable applied.

Clean dry thread protectors shall be filled unless running is imminent.

3.8 Records

Records shall be maintained of all items inspected together with the result and status. Hand repairs shall be documented.

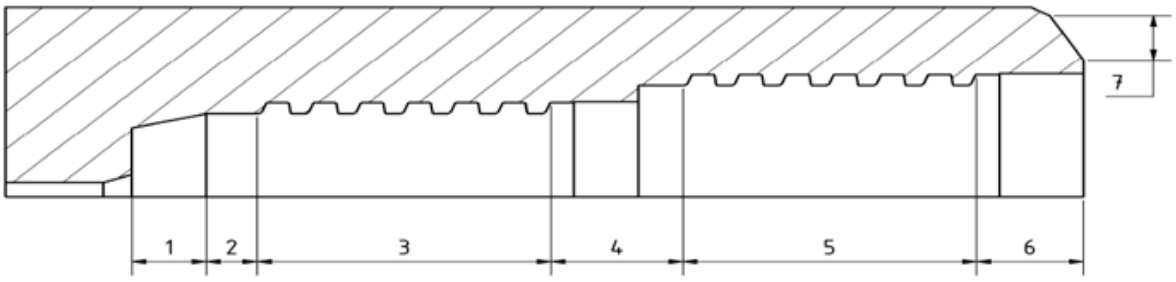
APPENDIX 1
PIN EVALUATION



Imperfection	Zone	Evaluation Criteria	Action
Rust Pitting Scratches Dents	1 & 7	Reject	Recut the thread at STS Licensed Facility
	2, 3, 4, 5, & 6	Minor imperfection < 0.004" (0.1mm)	Hand Repair with Emery Cloth
		Imperfection > 0.004" (0.1mm)	Recut the thread at STS Licensed Facility
Galling	1, 4 & 7	Reject	Recut the thread at STS Licensed Facility
	2, 3, 5 & 6	Minor galling may be repaired by hand only if results have < 0.004" (0.1mm) deformation on original shape	Hand repair by emery cloth of small file
		Galling > 0.004" (0.1mm) before or after hand repair	Recut the thread at STS Licensed Facility
Over-torque	Pin OD & 4	Reject	Recut the thread at STS Licensed Facility

APPENDIX 2

BOX EVALUATION



Imperfection	Zone	Evaluation Criteria	Action
Rust Pitting Scratches Dents	1 & 7	Reject	Recut the thread at STS Licensed Facility
	2, 3, 4, 5, & 6	Minor imperfection < 0.004" (0.1mm)	Hand Repair with Emery Cloth
		Imperfection > 0.004" (0.1mm)	Recut the thread at STS Licensed Facility
Galling	1, 4 & 7	Reject	Recut the thread at STS Licensed Facility
	2, 3, 5 & 6	Minor galling may be repaired by hand only if results have < 0.004" (0.1mm) deformation on original shape	Hand repair by emery cloth of small file
		Galling > 0.004" (0.1mm) before or after hand repair	Recut the thread at STS Licensed Facility
Over-torque	4 & Box OD (Zone 6)	Reject	Recut the thread at STS Licensed Facility