



Approval Signature	Department	Area	Effective Date
	MAINTENANCE	MACHINE SHOP	11/10/2021

1. Scope

This document details requirements, equipment and procedures for ultrasonic testing of casing and tubing. The requirement of this procedure is to be followed when U.T. Testing is specified on the Estvold work order.

2. Personnel Qualification

- 2.1. Personnel performing this procedure must be classified, as a minimum, Trainee or greater.
- 2.2. Trainees shall be under the supervision of an onsite Level II or Level III inspector.
- 2.3. Personnel performing this procedure must be able to distinguish j-l letters at 12 inches on a Jaeger eye chart and have no color vision impairment.

3. Definitions/Acronyms

Refer to RP5A5 for definitions used in this procedure.

4. Responsibilities

Job Title	Responsibilities
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5. Hazard Identification

N/A

6. Controls

N/A

7. PPE

N/A

8. Equipment/Tools

Equipment used in this specification shall consist of:

- Pulse echo Ultrasound
- Transducer
- Couplant
- Step Block

- Calipers

9. Pre-Job Tasks

N/A

10. Ultrasonic Testing Procedure

- 10.1. Apply a sequence number to each length of pipe to be U.T. tested.
- 10.2. The external pipe surface where the readings are to be taken shall be cleaned to bare surface.
- 10.3. Field calibration shall be verified at the following frequency:
 - At the start of each inspection
 - After every 25 lengths
 - When a measurement indicates a reject able piece
 - Each time the instrument is turned on
 - When the gage is suspected of having damage
 - When probe, cable, operator, or pipe has changed
 - Upon completion of job
- 10.4. The field (step block) shall verified using calipers to be within $+0.002 / -0.002$.
- 10.5. The parting line between the transmit and receive elements on the two-element transducer shall be held perpendicular to the longitudinal axis of the pipe.
- 10.6. After couplant application, thickness measurements shall be taken around the tube circumference in 1-inch maximum increments.
- 10.7. Readings shall be taken within 1 foot of the center on each tube. Additional readings may be taken in the same manner at any other areas selected by the inspector or customer representative.
- 10.8. The inspector shall scan with a 1 inch radius of the lowest reading to conform or modify that value. The lowest reading shall be recorded.
- 10.9. If determining remaining body wall around a pit or cut. Take the thickness measurements around the defect and average the thickness and minus the defect.

11. Post-Job Tasks

N/A

12. Evaluation and Identification

If the thickness of pipe fails to meet the specific thickness required, the pipe is to be downgraded accordingly.

13. Recordkeeping

- 13.1. Reporting of U.T. testing is to be included on the final report.
- 13.2. Records shall be kept for a minimum of 5 years.

14. Training/Qualifications

N/A

15. References

The following documents are referenced in this procedure.

- API. Specification 5CT
- API. RP5A5

16. Attachments/Appendix

N/A

17. Revision History

Rev.	Date	Modified by	Description
01	11/10/2021	James Carter	Quality Manager Review