

Approval Signature	Department	Area	Effective Date
	MAINTENANCE	Machine Shop	mm/dd/yyyy

1. Purpose

To inform how to machine threads on to tubing / casing.

2. Definitions/Acronyms

Term	Definition
Machining process	Manufacturing process that uses machines and tools to shape a work piece by removing material

3. Responsibilities

Job Title	Responsibilities
Machinist Shop Hand	Perform procedures in this SOP as described.

4. Hazard Identification

Hazards

- Caught Between/In
- Caught On
- Slip / Trip
- Struck By

5. Controls

CNC machine control panel

6. PPE

Required PPE

- Eye Protection- Safety Glasses
- Hand Protection-Cut Resistant Gloves
- Hearing Protection- Department Specific
- Steel toed boots

7. Equipment/Tools

Tools

- Air Grinder
- Air Hose
- Caliper

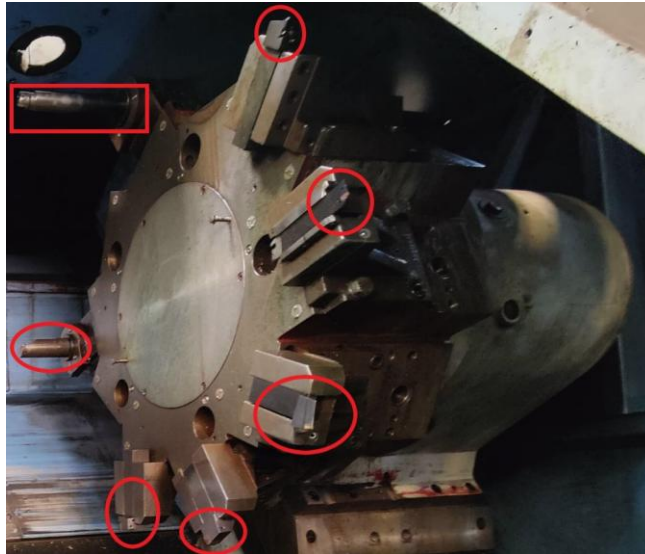
- Dial Indicator
- Mallet
- Ratchet

8. Pre-Job Tasks

Let the machine spin before starting run to warm up.

9. Machining Process

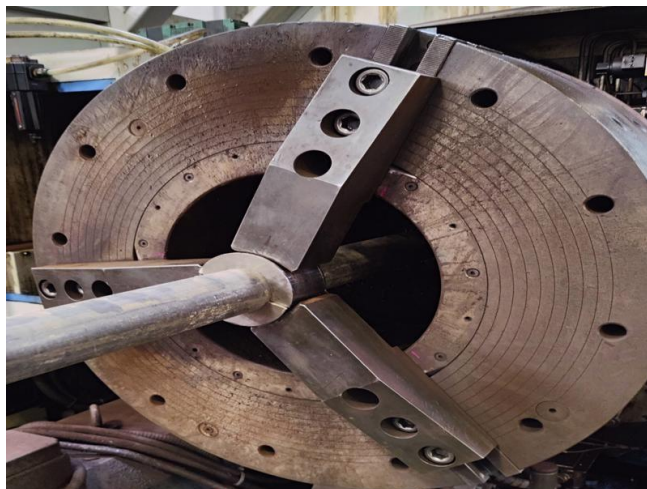
- 9.1. Check the size of tubing/ casing and check/ verify condition of the pipe.
- 9.2. Select a program that correlates to what is being cut.
- 9.3. Check the tools and inserts on the turret to verify they are in optimal condition.



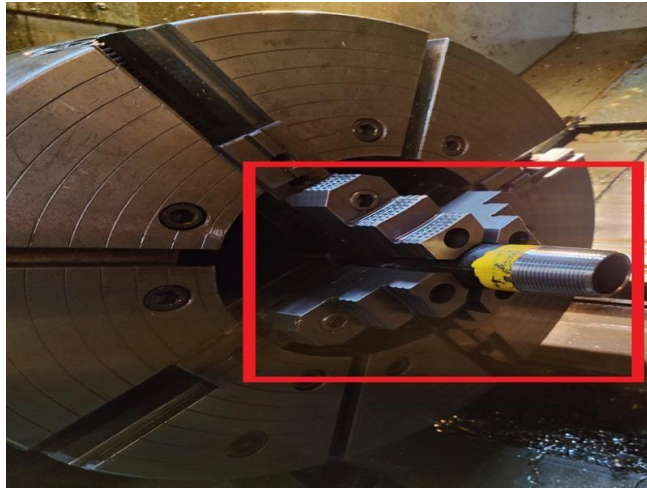
- 9.4. Move the tubing/ casing onto conveyer by hand or crane.
 - 9.4.1. Move pipe into machine using rollers.
 - 9.4.2. Raise the steady rest to support pipe.
 - 9.4.3. Lower the rollers of the conveyer down.



9.5. Once part is in machine close back chuck to secure pipe in place.



9.6. Tighten the front chuck using speed ratchet.

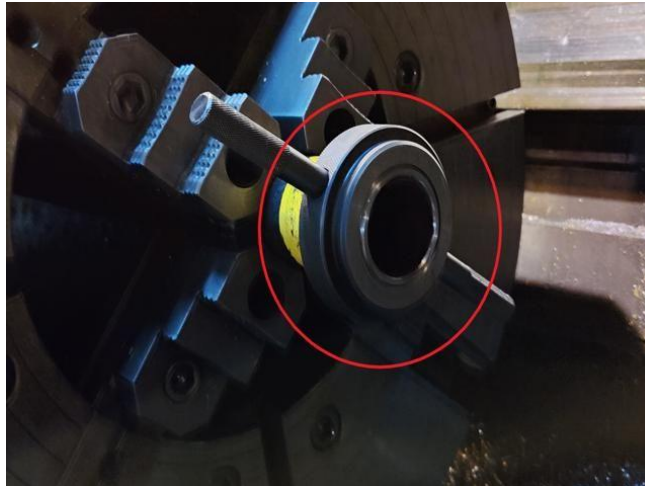


- 9.7. Indicate part on the threads while part is spinning.
 - 9.7.1. Spin the part inside machine.
 - 9.7.2. Verify it's not hitting against any part of machine.
 - 9.7.3. Verify part is secured and straight.
- 9.8. Before running double check the program and reverify part is secure in the chuck.
- 9.9. Start the program.
 - 9.9.1. Adjust the speed for correctness.
 - 9.9.2. Monitor the tools.
- 9.10. Check on the part during optional stops
- 9.11. When finished debur the sharp edges from the part.



9.11.1. Visually inspect the threads.

9.11.2. Gauge the part.



9.12. Place thread protector on pin side to protect the threads from possible damage.

9.12.1. Open front chuck.

9.12.2. Open the back chuck.



9.12.3. Remove the pipe out of the machine using rollers.

9.12.4. Remove thread protector.

9.13. Transfer pipe by hand or crane.

9.13.1. To bucking unit for prep for coupler or

9.13.2. Send to outbound rack for loader operator for storage.

10. Post-Job Tasks

Clean and organize machine and station.

11. Emergency Response

911

12. Recordkeeping

Turn in documentation to admin.

13. Training/Qualifications

Knowledgeable in CNC controls and oilfield threaded connections.

14. References

Policy #	Policy - Title	Reason
<u>EST-HSE-506</u>	RIGGING AND MATERIAL HANDLING POLICY	Required — task-specific handling steps for moving and securing pipe to reduce movement hazards
<u>EST-HSE-113</u>	HAND AND POWER TOOL SAFETY POLICY	Recommended — Criticality overlap: Required inspection / verification

EST-HSE-115	MACHINE GUARDING POLICY	Recommended — pre-start verification of setup and securement before running rotating machinery
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Table 1: Policy Reference Table

15. Revision History

Rev.	Date	Modified by	Description
01	03/17/2024	Malcolm	Initial Draft
02	04/16/2025	Angel/Brian	Revised draft