

Lathe Operation Work Instruction Example

1. Purpose

This document provides standardized instructions for operating the lathe safely and efficiently to manufacture cylindrical components.

2. Scope

Applicable to all operators tasked with turning, facing, and drilling using the lathe machine in the workshop.

3. Responsibilities

- Operator: Follow instructions and wear required PPE.
- Supervisor: Ensure machine readiness and operator competency.

4. Equipment & Materials

- Lathe Machine
- Workpiece Material
- Cutting Tools
- Caliper or Micrometer
- Cutting Fluid
- Personal Protective Equipment (PPE)

5. Safety Precautions

- Wear safety glasses and protective clothing at all times.
- Remove jewelry and secure loose clothing or long hair.
- Ensure the workpiece and tooling are securely mounted.
- Never leave the lathe unattended during operation.

6. Procedure

1. Inspect the lathe and work area for cleanliness and hazards.
2. Verify the correct tooling and workpiece are loaded.
3. Set spindle speed and feed rate as per workpiece requirements.
4. Securely fasten the workpiece in the chuck.
5. Position the cutting tool and verify clearances.
6. Start the lathe and perform a dry run.
7. Apply cutting fluid if needed.
8. Begin machining operation, monitoring progress continuously.
9. Stop the lathe and measure the workpiece as required.
10. Deburr and clean the finished part.
11. Turn off and clean the lathe after operations.

7. Inspection Criteria

Parameter	Specification	Inspection Method
Outer Diameter	$\hat{A}\pm0.02\text{ mm}$	Micrometer
Surface Finish	$Ra < 1.6\text{ }\hat{I}\frac{1}{4}\text{m}$	Visual / Roughness Tester
Length	$\hat{A}\pm0.05\text{ mm}$	Vernier Caliper

8. References

- Lathe Machine Operation Manual
- Workshop Safety Guidelines

9. Revision History

Revision	Date	Details
1.0	2024-06-01	Initial issue