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| **TASK** | CNC Machine |
| **HAZARDS** | Flying debris |[ ]  Heat / cold |[ ]  Electricity |[ ]
|  | Cuts / laceration |[x]  Dust |[ ]  Rollover |[ ]
|  | Pinch / crush  |[x]  Noise / vibration |[x]  Plant interaction |[ ]
|  | High pressure |[ ]  Entanglement |[x]  Fire |[x]
| **PPE REQUIRED** |   |
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| **PRE-START CHECKS** |
| 1. Ensure all personnel are trained and authorized to operate the CNC machine.
2. Inspect the machine for any visible damage, loose components, or signs of wear.
3. Check that the workpiece is securely clamped to the machine bed or fixture.
4. Verify that the cutting tool is properly installed and secured in the spindle.
5. Ensure that the machine is properly lubricated and that all fluids are at the correct levels.
6. Confirm that fire extinguishing equipment is readily available in case of emergency.
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| **SAFE OPERATING PROCEDURE** |
| 1. Wear appropriate personal protective equipment (PPE) including safety glasses, hearing protection, and closed-toe shoes.
2. Power on the CNC machine and initialize the control system according to manufacturer's instructions.
3. Load the CNC program and verify the toolpath, cutting parameters, and safety features.
4. Start the machining process and monitor the operation closely, ensuring that the cutting tool follows the programmed path accurately.
5. Be aware of any unusual noises, vibrations, or odors during machining and investigate the cause if necessary.
6. If any issues or errors occur during machining, stop the machine immediately and troubleshoot the problem before resuming.
7. After machining is complete, power off the CNC machine and remove the finished workpiece carefully to avoid damage.
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| **POST-OPERATION PROCEDURE** |
| 1. Inspect the machined part for quality and completeness, making any necessary adjustments to the machining parameters for future reference.
2. Clean up the machining area, removing any chips or debris from the machine and work area.
3. Dispose of any waste material or coolant properly according to company guidelines.
4. Perform routine maintenance tasks such as cleaning the machine, checking for wear or damage, and lubricating moving parts.
5. Store the CNC machine tools and accessories in a designated area, ensuring they are protected from damage and unauthorized use.
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