|  |
| --- |
| Author Name: Alexander Lefort Title: Fabrication Research Lab Manager Date: 12/28/2022 |
| #1 Process (if applicable) | Drilling/boring holes and pockets in wooden materials.  |
| #2 Equipment | Drill Press. Powermatic PM2800B. |
| #3 Personal Protective Equipment (PPE) | Safety glasses and hearing protection, plus minimum shop PPE. |
| #4 Environmental /Ventilation controls. | Ensure equipment is secure so it doesn’t move when in use; wheels on the mobile base must be disengaged. If possible for your operation, a dust collection system should be attached in the drilling area. |
| #5 Required training or approval  | * Complete Woodshop Training with the Fabrication Research Lab Manager and be checked off as trained on the drill press.
* Review and observe general safety practices outlined in the Fabrication Research Lab Woodshop Training form.
* Refer to the manufacturer’s operating manual for all operating procedures.
 |
| #6 Inspection requirements before use | * Use the drill press fence whenever possible. If using the fence, make sure the fence is securely positioned.
* Make sure the table is at the angle desired, check with a square or angle gauge, while machine is turned off. Table should be at 90 degrees from drill bit if doing a straight down plunge.
* Before starting the drill press, ensure the table height is set properly to just above the stock and any plunge depths required are appropriately set on the depth gauge for repeatability. Shorter quill travel distances make for more accurate holes.
* After turning on the drill press make sure the emergency stop button works.
* Ensure all body parts, clothing, hair, jewelry and other objects are clear of the work area and other moving parts before starting the machine and engaging its moving parts.
* Check the area to be sure people are alert and wearing PPE.
* Ensure all work holders, clamps and vices are tightened enough to hold the stock while working.
* Ensure that all keys and wrenches are removed from the machine before starting.
 |
| #7 Safe operating procedures or precautions | * Never leave the machine running unattended.
* Always use steady force and avoid too much pressure on the material to be cut. Push steadily into the material, just enough to keep the bit teeth engaged. Pressing too hard may stall or slow the motor, while pressing too lightly may lead to burning.
* Ensure that you have steady footing to avoid slipping/falling during drilling operations.
* Never use your hands to clear debris from the bit. Use a brush instead.
* Do not stop the rotation of the drill chuck or any rotating or moving machinery parts by hand.
* Do not make adjustments to the machine while it is running unless instructions specifically say to do so (i.e. during speed adjustments).
* Do not leave tools or excess pieces of stock on the table. Clear table before turning drill on.
* All belts and pulleys must be guarded. If frayed belts or pulleys are observed, the drill press must be taken out of service and the belts or pulleys replaced.
* Avoid using the main column as a work-stop. Instead, clamp pieces to the work table.
* To avoid pieces being torn out of the grasp of the user, ensure that you are using clamps.
* To avoid blowout and ensure the cleanest holes, use a piece of scrap material under your workpiece as a backerboard.
* Before each operation, be sure to check that all locking handles , set screws, bolts, etc. are tightened and secured on the table and head.
* Stop the machine immediately if odd noise or excessive vibration occurs.
* Use the proper speeds for the bit being used and the material being cut. Consult the manufacturer’s recommendations or discuss with the lab manager. Use sharp bits and replace when necessary. Dull bits with chipped or broken teeth must be removed from service.
 |
| #8 Chemicals/ spill procedures/waste disposal | Avoid saw dust build up and clean as you go to prevent potentially hazardous situations. Check the dust collection system and make sure it is properly maintained and sawdust is removed frequently. |
| Author Signature: Date:  |