






Injury & Illness Prevention Program Job Safety Analysis

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Picture of task/equipment:	Task:	Hammer Drill
	Name of Shop or Dept:	Civil Construction Engineering Management
	Location(s):	EN3-119 Construction Methods Lab
	Analyzed by:	M.HOM
	Date:	03/10/17

Required PPE:	
safety glasses	safety gloves
	

Required/Recommended Trainings:
Read & understand operator manual, Power tool safety class, Hand tool safety class, First aid class.

TASK	HAZARDS	CONTROLS
1. WORK AREA SAFETY	1a. Cluttered or dark areas 1b. Power tools create sparks which may ignite the dust or fumes. 1c. Distractions can cause you to lose control.	1a-1. Insure the work area is free of clutter, and is will lit. 1b-1. Do not operate power tools in explosive atmospheres. 1c-1. Keep bystanders away while operating a power tool.
2. ELECTRICAL SAFETY	2a. Power tool plugs must match the outlet. 2b. Increased risk of electric shock if your body is earthed or grounded. 2c. Do not expose power tools to rain or wet conditions. 2d. Do not abuse the cord. 2e. Damaged or entangled cords increase the risk of electric shock. 2f. When operating a power tool outdoors.	2a-1. Never modify the plug in any way. 2a-2. Do not use any adapter plugs with earthed (grounded) power tools. 2a-3. Unmodified plugs and matching outlets will reduce risk of electric shock. 2b-1. Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. 2c-1. Water entering a power tool will increase the risk of electric shock. 2d-1. Never use the cord for carrying, pulling, or unplugging the power tool. 2d-2. Keep cord away from heat, oil, sharp edges, or moving parts. 2e-1. Replace damaged cords. Do not attempt to repair. 2f-1. Use of a cord suitable for outdoor use reduces the risk of electric shock.
3. PERSONAL SAFETY	3a. Stay alert. 3b. Use safety equipment. NOTE: Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries. 3c. Avoid accidental starting. 3d. A wrench or a key left attached to a rotating part of the power tool.	3a-1. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. 3a-2. Watch what you are doing and use common sense when operating a power tool. 3b-1. Always wear eye protection. 3c-1. Ensure the switch is in the off- position before plugging in. 3c-2. Avoid carrying tools with your finger on the switch or plugging in power tools that have the switch on. 3d-1. Remove any adjusting key or wrench before turning the power tool on.

	<p>3e. Do not overreach. 3f. Dress properly.</p> <p>3g. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.</p>	<p>3e-1. Keep proper footing and balance at all times. 3f-1. Do not wear loose clothing or jewelry. 3f-2. Keep your hair, clothing and gloves away from moving Parts. 3g-1. Use of these devices can reduce dust-related hazards.</p>
<p>4. SPECIFIC SAFETY RULES</p>	<p>4a. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator. 4b. Holding the work by hand or against your body.</p>	<p>4a-1. Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.</p> <p>4b-1. Use clamps or another practical way to secure and support work piece to a stable platform. 4b-2. Keep hands away from all cutting edges and moving parts</p>
<p>5. POWER TOOL SPECIFIC RULES</p>	<p>5a. Forcing the power tool. 5b. Using the power tool if the switch does not turn it on and off. 5c. Making adjustments, changing accessories, or storing power tools. 5d. Power tools are dangerous in the hands of untrained users. 5e. Maintain power tools.</p> <p>5f. Dull cutting tools.</p> <p>5g. Use of the power tool for operations different from those intended.</p>	<p>5a-1. Use the correct power tool for your application. 5b-1. Any power tool that cannot be controlled with the switch is dangerous and must be repaired. 5c-1. Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments. 5d-1. Do not allow persons unfamiliar with the power tools or its instructions to operate power tools. 5e-1. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. 5e-2. If damaged, have the power tool repaired before use. 5f-1. Be sure that the bit is properly sharpened and the shank is lightly greased before use. 5f-2. Sharp cutting edges are less likely to bind and are easier to control. 5g-1. Use the power tool, and accessories, in accordance with the instructions and in the manner intended for this particular type of power tool, taking into account the working conditions and the work to be performed.</p>

	<p>6a. Installing Drill Bits and Chisels.</p> <p>6b. Using bits larger than the maximum recommended capacity of the drill.</p> <p>6c. Inserting bit into chuck. NOTE: Only use accessories with SDS shanks. NOTE: Use caution when handling hot bits and chisels</p> <p>6d. Adjusting the Side Handle Position NOTE: The side handle can be locked in increments of 30 degrees.</p> <p>6e. Setting the Depth Gauge NOTE: The drilling depth is the distance between the tip of the bit and the tip of the depth gauge rod.</p> <p>6f. Selecting Action NOTE: To engage the hammering mechanism, maintain pressure on the bit.</p> <p>6g. Using Forward/Reverse Lever NOTE: When drilling with hammer action, use the tool in forward rotation (clockwise) only.</p> <p>6h. Starting, Stopping & Controlling Speed</p> <p>6i. Operating</p>	<p>6a-1. Be sure that the shank of the bit is clean.</p> <p>6a-2. Dirt particles may cause the bit to line up improperly.</p> <p>6b-1. Do not use bits larger than the maximum recommended capacity of the drill because gear damage or motor overloading may result.</p> <p>6c1. Insert the bit or chisel into the nose of the tool.</p> <p>6c-2. Rotate bit slowly until it aligns with the locking mechanism.</p> <p>6c-3. Push bit into tool until it locks.</p> <p>6c-4. Check that the bit is locked properly; it should be possible to pull the bit back and forth slightly (about 1/4").</p> <p>6c-5. To remove bits and chisels, pull bit holder release collar toward the rear of tool and remove bit.</p> <p>6d-1. Loosen the clamping screw slightly.</p> <p>6d-2. Pull the side handle forward and turn it to the required angle.</p> <p>6d-3. Fit the side handle into the non-slip mounting until it adjusts into place and retighten the clamping screw securely.</p> <p>6e-1. Loosen the clamping screw.</p> <p>6e-2. Slide the depth gauge rod backward or forward until it is set for the desired depth.</p> <p>6e-3. Tighten the clamping screw securely.</p> <p>6f-1. For drilling, turn the selector lever to the drill symbol.</p> <p>6f-2. For drilling with hammer action; turn the selector lever to the hammer-drill symbol.</p> <p>6f-3. When pressure on the bit is released, the hammering action will stop.</p> <p>6g-1. For forward (clockwise) rotation, push the forward/reverse lever to the symbol.</p> <p>6g-2. For reverse (counterclockwise) rotation, push the forward/reverse lever to the symbol.</p> <p>6h-1. To start the tool, pull trigger.</p> <p>6h-2. To stop the tool, release trigger.</p> <p>6h-3. To vary the speed, increase or decrease pressure to trigger. The further the trigger is pulled, the greater the speed.</p> <p>6i-1. Position the tool, grasp the handles firmly and pull the trigger. Always hold the tool securely using both handles and maintain control.</p> <p>6i-2. This tool has been designed to achieve top performance with only moderate pressure. Let the tool do the work.</p> <p>6i-3. If the speed begins to drop off when drilling deep holes, pull the bit partially out of the hole while the tool is running to help clear dust.</p> <p>6i-4. Do not use water to settle the dust since it will clog the bit flutes and tend to make the bit bind in the hole.</p>
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