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| --- | --- | --- | --- | --- |
| **THREADING TOOLS**  **BELT SANDER** | | | | |
| **DO NOT** use any hand tool unless a teacher has instructed you in its  safe use and operation and has given permission | | | | |
|  | | | | |
|  |  | D:\bclar52\Desktop\Pictures - ITD Plant & Equip\Hand Tools\Tap & Die Group.jpgSafety glasses must be worn at all times in ITD practical workshops. |  |
|  | Foot Protection circle | Appropriate protective footwear is also required in all ITD workshops. |

**This range of hands tools will usually include the following:**

* **Taps –** *tapered, intermediate and bottoming or plug*
* **Tap wrench and “T” wrench**
* **Button dies and die nuts**
* **Die wrench or die stock**

**OPERATIONAL SAFETY CHECKS**

1. **It is important to choose the right thread cutting tool for the job. They will vary widely, and are all designed for specific purposes, for producing both internal and external threads.**
2. **Always wear appropriate eye protection when using any of the thread cutting tools.**
3. **Avoid misuse and abuse of these precision thread cutting tools.**
4. **All taps, dies and die nuts should have their thread diameter and thread pitch clearly indicated – *e.g.* the correct tool to cut a 10mm Ø thread with a 1.5mm pitch will be marked as: *M10 x 1.5***
5. **Use a suitable cutting lubricant for all tapping, threading and reaming operations. This will vary dependent on the material being cut, i.e. steel, steel alloys, cast iron, aluminium, etc.**
6. **When tapping an internal thread, the tap drill size must be calculated – *i.e.* *drill = Ø – pitch***
7. **The cutting action should be backed off every half turn to break off (and clear) the waste from the thread being created.**

**Date of last review:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Signature:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**POTENTIAL HAZARDS AND RISKS**

**■ Lacerations from sharp cutting edges ■ Pinch and squash ■ Eye injuries**

**HOUSEKEEPING**

1. **Leave the work area in a safe, clean and tidy condition.**
2. **Clean and return all threading tools to their appropriate storage containers.**
3. **Inspect all cutting edges and internal flutes for apparent damage or dullness. Poorly maintained cutting tools may seize or produce an inferior thread if they are in poor condition.**