

Stock Acquisition Detail

Upon completion of this activity, the student will have:

- Used various lay-out tools and techniques for simple lay-out.
- Used various hand and power tools for cutting stock to rough length and squaring the ends.
- Displayed proper work habits within the lab. (safety and attitude)

In this activity each student will obtain three pieces of stock (rough) that will be used in the construction of the hammer and try-square projects. Give below are the dimensions of each piece and the machining process that will be used to obtain them. Please note that *at this time* and unless otherwise stated, all dimension are rough, meaning that tolerance should be held to within 1/8".

Step Exercise / Hammer Handle

Machine : Horizontal Bandsaw

Procedure:

- Measure and scribe a line on the 1.125" / / " Diameter CRS stock to a length of 8.250" / / "
- With the saw in the lowered position, measure and set up the dead stop to 8.250" / / ".
- Slide the 1.125" / / " dia. round stock through vise to within .125" " of the blade.
- Firmly position movable vise jaw on to stock and *double* lock vise.
- Set the blade guard wide enough to completely cut through the stock.
- Raise the saw head and lock it in position approximately 1" above stock.
- Unlock the vise and slide the 1.125" / / " dia. round stock through vise, under blade and to the dead stop.
- Firmly position movable vise jaw on to stock and *double* lock vise.
- Holding on to saw head, unlock and position blade 1/16" " above stock.
- Check lay-out mark to saw blade, if it appears off, double check both dead stop and lay-out measurements. If aligned, proceed to next step.
- Swing dead stop from the end of the stock to be cut.
- Raise saw head 1" above stock and lock in position, power up the saw, holding the saw head, unlock, and gently lower into stock. Once cutting has started, let go of the saw head.
- When the cut is complete, the saw should shut-off automatically, if not, shut off saw by pushing the RED button.
- Move the dead stop to the end of travel and position in a downward fashion.
- If excess stock is not to be used by others, remove from saw and place it in the stock room. (Smaller pieces in baskets under buffer)

- Be careful when removing your rough sawn stock as it may be warm/hot and sharp edges may exist from the saw cut. (make sure blade has stopped)

- Try-Square Head

Machine : Horizontal Bandsaw

Procedure:

- Measure and scribe a line on the .750" / " x 1.250" / " HRS Bar stock to a length of 4.250" / " (Lay-out dye will be needed)
- With the saw in the lowered position, measure and set up the dead stop to 4.250" / ".
- Slide the stock through vise to within .125" / " of the blade.
- Firmly position movable vise jaw on to stock and *double* lock vise.
- Set the blade guard wide enough to completely cut through the stock.
- Raise the saw head and lock it in position approximately 1" above stock.
- Unlock the vise and slide stock through vise, under blade and to the dead stop.
- Firmly position movable vise jaw on to stock and *double* lock vise.
- Holding on to saw head, unlock and position blade 1/16" . " above stock.
- Check lay-out mark to saw blade, if it appears off, double check both dead stop and lay-out measurements. If aligned, proceed to next step.
- Swing dead stop from the end of the stock to be cut.
- Raise saw head 1" above stock and lock in position, power up the saw, holding the saw head, unlock, and gently lower into stock. Once cutting has started, let go of the saw head.
- When the cut is complete, the saw should shut-off automatically, if not, shut off saw by pushing the RED button.
- Move the dead stop to the end of travel and position in a downward fashion.
- If excess stock is not to be used by others, remove from saw and place it in the stock room. (Smaller pieces in baskets under buffer)
- Be careful when removing your rough sawn stock as it may be warm/hot and sharp edges may exist from the saw cut. (make sure blade has stopped)

Try-Square Blade

Machine: Vertical Bandsaw

Procedure:

- Measure and scribe a lay-out line on the .125" / " x 1.500" / " CRS bar stock to a length of 8.000"
- Before powering up the Bandsaw, adjust the saw guide to a safe distance above the stock.
- Making sure your fingers are not lined up with the blade area, free hand cut the material to rough length.

- When finished with the cut, shut off the bandsaw and wait for it to come to a complete stop.
- When blade has stopped, lower saw guide to the table.

Try-Square Blade

Tools : -Scale , Combination Square, Letter Punches, Hammer, Lay-out Dye, Hack-saw, Files(double-cut, single-cut and mill file)

Procedure:

- Using the files in correct order (2-1-mill), file one end of the blade square to all sides of the stock.
- Once square and checked by the instructor, apply lay-out dye to the filed end of the piece.
- Using the scale and combination square, scribe a line $.0625'' \underline{\quad} / \underline{\quad}''$ and $.250'' \underline{\quad} \underline{\quad}''$ from one end. (making sure dye has had time to dry).
- With the Letter Punches, stamp your initials on the $.0625'' \underline{\quad} / \underline{\quad}''$ lay-out line.
- Using the hack-saw, remove $.250'' \underline{\quad} / \underline{\quad}''$ from the end of the stock by using the $.250'' \underline{\quad} / \underline{\quad}''$ reference line. Save this piece to be handed in at a later time.
- Again, using the files in succession, file both ends of the workpiece square to all sides of the stock.

Step Exercise/Hammer Handle and Try-Square Head

Tools: Files (double-cut, single-cut and mill file), 1" Abrasive cloth (80&120), combination square, cutting oil.

Procedure:

- Using the files in correct order (2,1,mill), file all the ends of both pieces of stock square.
- Once the try-square head is filed, polish all the sides of the workpiece with abrasive paper (Start with 80 grit) making sure to use cutting oil to lubricate the cutting action of the paper.
- When finished, have the instructor check your work.

Note: When filing all pieces, use both straight filing and draw filing practices and be sure to clean the file with the file card periodically to obtain the best finish.