**Exercise 3.2**

**USING A PLANER**

|  |  |
| --- | --- |
| Completed | **Procedure** |
|  | 1. Review the Planer Safety Rules. |
|  | 2. Obtain 3 pieces of rough sawn stock. Note that 1 piece is “square”, 2 are “flat”. 1. 4/4 (1” nominal) x 4” x 15” 2. 8/4 (2” nominal) x 2” x 15” 3. 4/4 x 2 x 15 |
|  | **Piece A (4/4 x 4 x 15)**  1. Joint one face of piece A on the jointer and mark. |
|  | 2. Measure the MAXIMUM thickness of the flat exercise stock. Set the Planer to remove the 1/16” from the thickness. (Note: The Planer scale indicates the FINISHED THICKNESS of the piece, unlike the jointer scale, which indicates the DEPTH OF THE CUT.) |
|  | 3. Switch the machine and feed the stock through, flat side down. Continue surfacing the piece, raising the table each time approximately 1/16”, until the stock is ½” thick. One complete turn equals 1/16”. |
|  | 4. ½” is the minimum thickness allowable on the Oliver planer. To go thinner, switch to another planer, or obtain a Planer backing board from the instructor. Measure the thickness of the backing board and also the thickness of the thin exercise stock. |
|  | 5. Lower the table and set the bed rolls in the proper position. Place the backing board on the table. |
|  | 6. Set the machine to remove 1/16” from the thin stock as it is fed through. (Setting would be the combined thickness of the backing board and thin stock, minus 1/16”.) |
|  | 7. Feed the stock through the machine. Continue surfacing the stock until the stock is 3/8” thick. (Hint: turn the stock over with each pass, so that material is removed evenly from each side.)  **This completes the work on piece A** |

## Completed Procedure

|  |  |
| --- | --- |
|  | **Piece B** (8/4 x 15)  1. Take the “square” exercise stock to the jointer, and using the procedures you have learned, joint 2 adjacent sides smooth and square with each other, as shown. |
|  |  |
|  | 2. Mark the 2 jointed sides with chalk or soft lead pencil to indicate that they are machined. |
|  | 3. Measure the piece to determine the maximum thickness. Set the Planer 1/16” less than that, and feed the piece through with a smooth marked side down. Feed the piece through on the same setting, but with the other marked side face down. |
|  | 4. Continue surfacing the two adjacent unmarked sides until the piece is 1½” square. You have now completed the second part of this exercise. |

## This completes the work on piece B.Completed Procedure

|  |  |
| --- | --- |
|  | **Piece C** (4/4 x 2 x 15)  1. Using the second flat piece, joint one surface and one edge and mark. |
|  | 2. Rip stock to 1 5/8”. |
|  | 3. Set the Planer to remove 1/16” from your stock or 1 9/16”.  Note: If using the Oliver Planer, install the correct size edge guide to keep the material square to the table. | |
|  | 4. Turn on planer and feed stock through. Decrease the thickness by 1/16” and surface other edge. You have now completed the planer exercise. Final width should be 1½”.  5. Plane the face of the piece to ¾”.  **Final dimensions of these surfaced pieces should be within + 1/64”. Use a caliper to check your work as you proceed**. | |
|  |  | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Scoring Guide:** √ = Criteria metΟ = Criteria not met | | | |
| Thickness of piece A (.375")  *1 point* | Thickness & Width of piece B (1.5” x 1.5")  *½ point ea*. | Squareness of piece B  (Edges 1 & 2)  *½ point ea.* | Thickness & Width of piece C (.75” x 1.5")  *½ point ea.* | | Minimal Tearout or Burning  (*2 points*) – Typical of all pieces | \*Dimensional Accuracy +/- 1/64" |
| Quality  *1 point* | Quality  *1 point* | Squareness of piece B  (Edges 3 & 4) *½ point ea.* | Quality  *1 point* | | Quality:18-22 KMPI, minimal snipe, no feed roll marks |

**Total: \_\_\_\_\_\_/10** (min score: 8/10)

**Comments:**