

MODERN MECHANICAL TECHNOLOGY FOR BARRELS FOR WINE

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Abstract

Mechanical wood processing technologies improve productivity and reduce costs. Our study demonstrates that in the case of barrels for wine.

Key words: barrels for wine, milling.

INTRODUCTION

Manufacturing process is made for more technological lines, corresponding to the categories of operations and basic types of elements that make up a barrel staves: mantle, staves give back, circles, as follows:

- Cutting raw staves;
- Processing line staves mantle;
- Processing line staves bottom;
- Processing line circles.

In addition to these three lines in the manufacturing process are:

- Line skirt barrel assembly and processing;
- Assembly and finishing line of barrels;
- Line drying and impregnation barrels.

MATERIAL AND METHOD

The oak is severed the length, then split into quarters.



Fig. 1. Splitting quarters



Fig. 2. Stacking staves

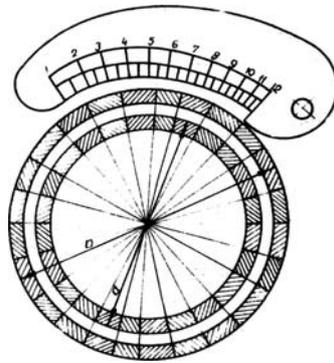


Fig. 3. Pattern formation using the egg shell section of the barrel, the belly of the diameter Z and the ends of the diameter d . (Bulboaca, 1959)

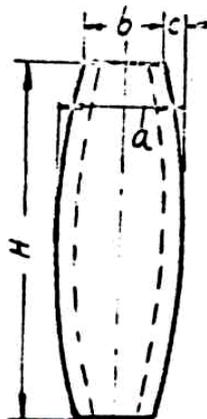


Fig. 4. Form processing staves resulting edges (Bulboaca, 1959)



Fig. 5. Milling edge angle

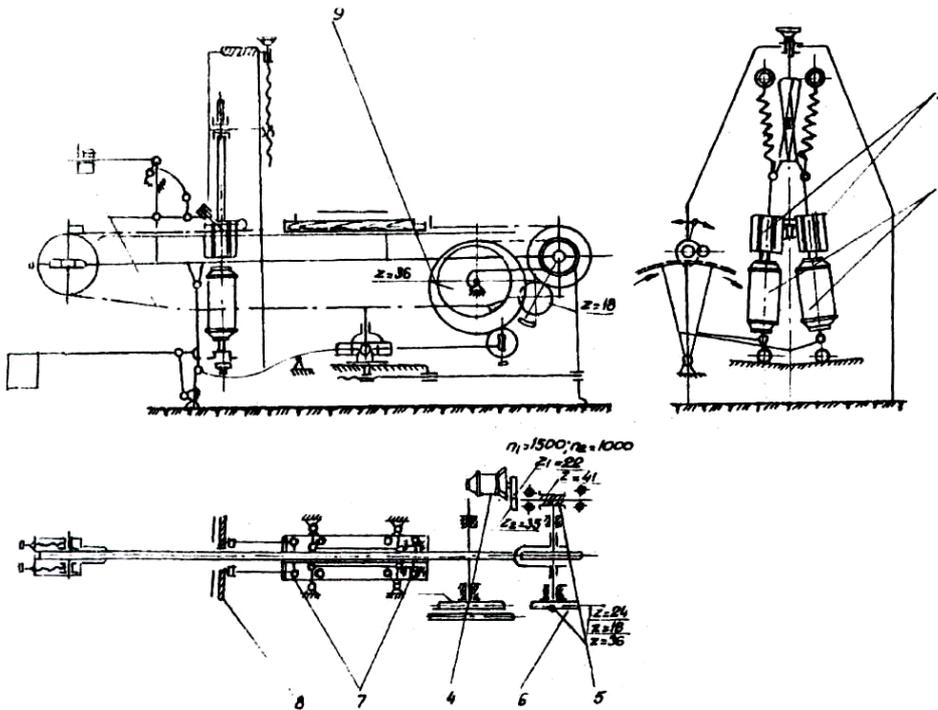


Fig. 6. Kinematic scheme of the router on the edge of the staves (Bulboaca, 1959)

After splitting staves are processing both the quantity and the thickness. Planing concave-convex staves running using knives concave-convex profile and devices tailored to milling operations in milling machine (Figure 6). As a result of the surface-generating radius must be equal to the radius of curvature of the barrel.

During installation, use metal hoops made mechanically (Figure 12). It also measures the machining precision of the concave-convex milling and the milling spindle of the staves and the edge inclined at an angle (Figure 3 and 4).



Fig. 7. Placing the ring staves



Fig. 8. Tightening staves



Fig. 9. Finishing and milling heads croze channel



Fig. 10. Execution bottom



Fig. 11. Sanding barrels



Fig. 12. Running rings



Fig. 13. Securing rings press

RESULTS AND DISCUSSION

Due to the space requirement of the finished product and tightness compelling technologies currently trying to meet these goals. Main operations are analyzed, and dimensional verification methods and edge inclination. The device also milling spindle adapted to the processing of edges staves.

CONCLUSIONS

Machining operations to manufacture barrels for wine above a decisive contribution to labor productivity growth in an industry mainly artisanal.

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