

# MAKING TUBES IS EASY...

*If* YOU KNOW HOW!

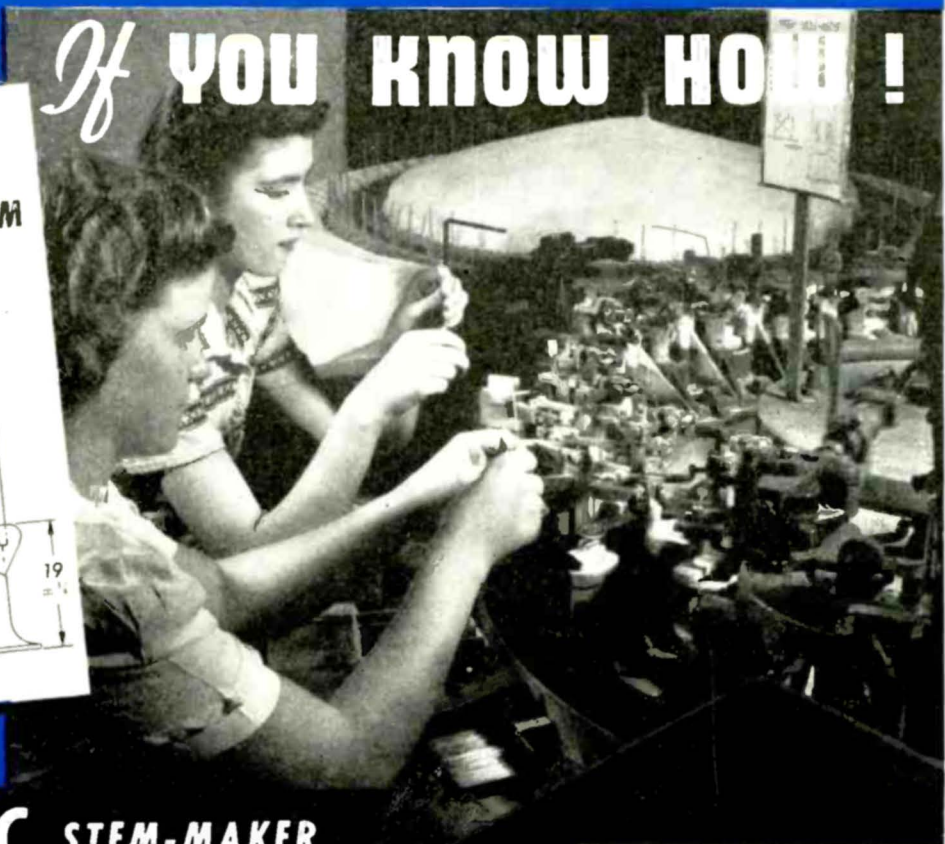
**STEM 35Z5GT-45Z5GT  
FLARE 19X24 42A1-A2  
EXHAUST TUBE '18BX101MM**

WELDS:  
#1 3048-163  
#2-5 2013-1612-2054  
#6 3048-1612-2054

1st OPERATOR + FLARE  
2nd OPERATOR

MACH SPEED 800/2  
RATE 703

19



## AUTOMATIC STEM-MAKER

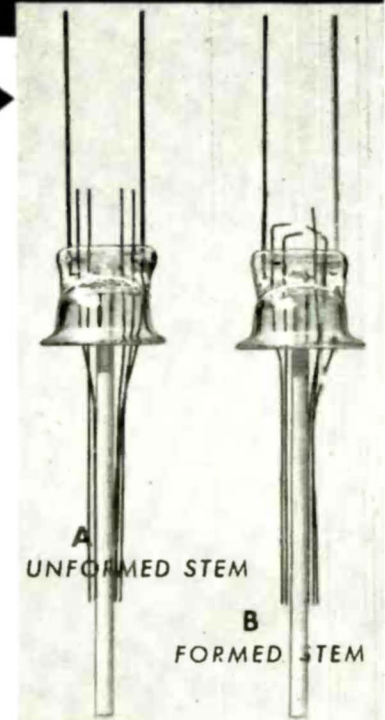
**GIVES YOU MORE AND BETTER TUBES**

Making a radio tube stem is apparently easy. By gas flames, one merely seals stem wires and exhaust tube into a glass flare. High-speed production, however, raises problems of know-how. Expert adjustment of temperatures and timing is vital. To give you trouble-free performance, there must be absence of glass malformation, strains, cracks—air-tight wire seals—strict adherence to dimensions.

Two girls produce daily 5600 35Z5GT stems on the illustrated stem-maker—essentially a rotating steel turret with 25 automatically indexing heads. Working as a team, they insert into a jig the 6 stem lead wires, and drop over them the glass flare. Each stem wire is fabricated of butt-welded nickel (for support), dumet (for glass seal), and copper (for connection). The exhaust tube is automatically inserted. Gas flames gradually melt and form the flare at 13 consecutive positions—at 2 positions, jaws press and seal stem wires into the flare.

Compressed air blows clear the exhaust tube inlet. The stem is lifted automatically into the rotating annealer. Strains vanish as distorted glass molecules resume normal positions. The annealed stem rolls onto the inspector's table. A stem former cuts, shapes, and nicks its wires to support the 35Z5GT's internal elements.

As you watch these intricate operations, you are impressed by controlled quality at high speed. Again you realize the know-how built into millions of Hytron tubes pouring out to you.



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