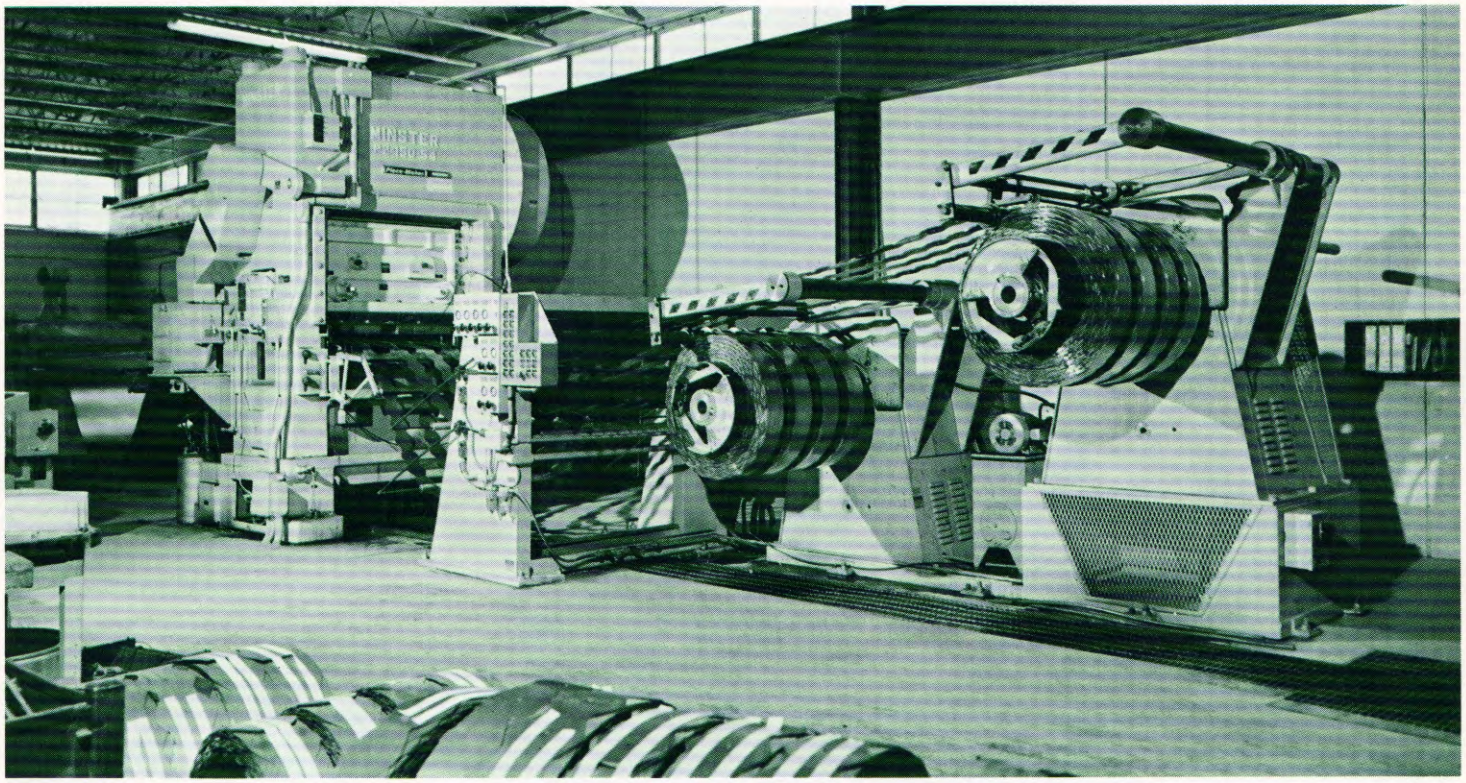
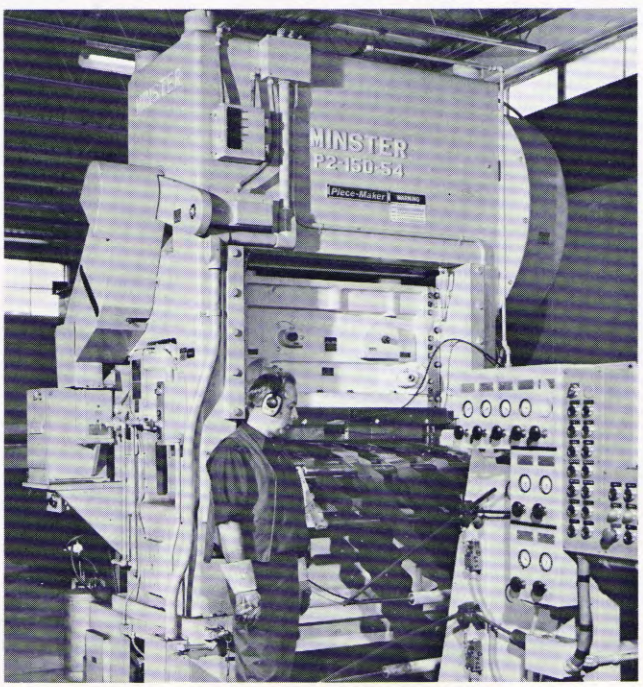


Scroll Press, two level tension stand and dual rewind recoilers, handle up to 9 scroll cut strips.

Minster Scroll and Tandem Lamination Press Line Gives Canadian General Electric High Speeds, Extended Machine Life and Material Savings.

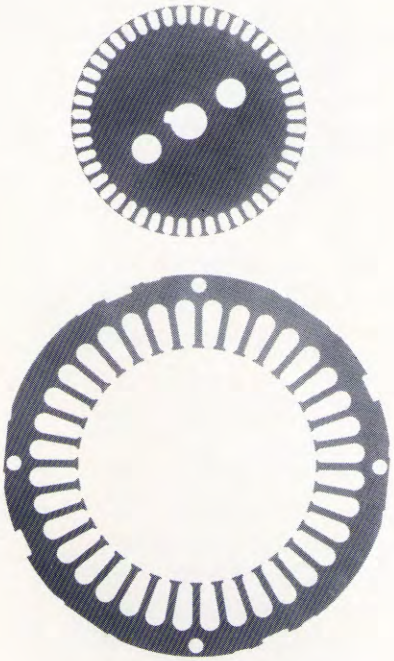


Close-up of Minster 150 ton capacity Piece-Maker Scroll Cutting Press. Double lock-up on slide (auxiliary adjusting screw locking nuts).

The Trenton, Ontario, electric motor plant of Canadian General Electric Company Ltd. produces motors for appliance applications. In addition, a large volume of laminations are made here and sent to the company's Peterborough, Ontario, plant to be used in the manufacture of general purpose motors such as fans, blowers and pumps.

In considering a new Scroll Cutting and Lamination production line, Mr. W. A. Bradley, Manager of Advanced Manufacturing Engineering and Wage Mgt., worked closely with Roy Rogers, Manager of Manufacturing, and Dave Johnstone, Project Technician. A thorough study of the presses required for the scroll line was made. Minster Machine Company was selected for a number of reasons.

Mr. Bradley prefers cast iron frame members for stability and vibration dampening and, in this case, Minster could provide them, plus the special bed and legs needed to provide



Tandem P2-100 lamination presses run in synchronization producing stator-rotor sets from scroll cut strip steel.

increased floor to bottom of bed clearance. CGE also wanted presses that could be taken up to higher speeds on production as experience and die technology increased. Minster P2-100 Piece-Maker® Lamination presses with a 0-500 spm speed range, offered the working range wanted for immediate production as well as for anticipated future speed increases. They also had the reputation for retaining close clearances and precision slide to bed alignment, needed for high speed progressive blanking and punching over years of production.

Dave Johnstone, Project Technician, left, and W. A. Bradley, Manager Advanced Manufacturing Engineering and Wage Mgt. Mr. Johnstone had direct responsibility for setting up the Minster line.

Another feature of Minster which was a factor in the selection was the "double lock-up" mechanism on the slide adjusting screws. This arrangement uses secondary combination worm gear nuts to pull and lock all thread clearances out of the press connection screws. This design feature reduces die penetration and wear of die and press parts caused by snap-thru shock of material fracture loads. Die life is greatly extended.

Mr. Bradley says, "We liked working with Minster in several ways. We can bring ideas to Minster and they listen, can understand, and will make a real effort to supply equipment to meet our needs."

SCROLL CUTTING LINE

The Scroll Cutting line includes a 15,000 lb. capacity single end coil reel, a stock straightener with 240″ to 1440″ per minute capacity; the Minster P2-150 press with cam driven fixed feed length feed, 2″ stroke, a Minster "Die-Flote" bolster and MonitorFlow® lubrication system. Speed range of the press is 0 to 250 spm. A maximum of 9 scroll cut strips are handled by two-level tension stand and dual rewind recoilers. The scroll cut method, with its interlocking pattern, provides the greatest possible material savings. The customer can produce a variety of different lamination sizes, locating lamination configurations in alternating, side by side patterns in the scroll dies. The scroll press operates on one 8 hr. shift.

TANDEM LAMINATION PRESSES

Scroll cut strip material is .026″ thick electrical steel. It is fed into the first lamination press from a double end coil reel, through an 8 roll straightener and cam driven single roll feed. The tandem 100 ton Minster P2 Piece-Maker presses have a common motor drive for synchronized operation. The first press produces rotor laminations and the second press completes the stator laminations. Present production speed is approximately 250 spm with expectations of gradual increases as experience builds. Presses have speed range 0-500 spm. The lamination presses are giving a production of 70,000 stator-rotor laminations per 8 hr. shift. Laminations leave the progressive die presses in chutes, ready for stacking.

Dave Johnstone states, "We feel we bought not only presses but a lot of experience in the field because of Minster's knowledge of lamination press application."