

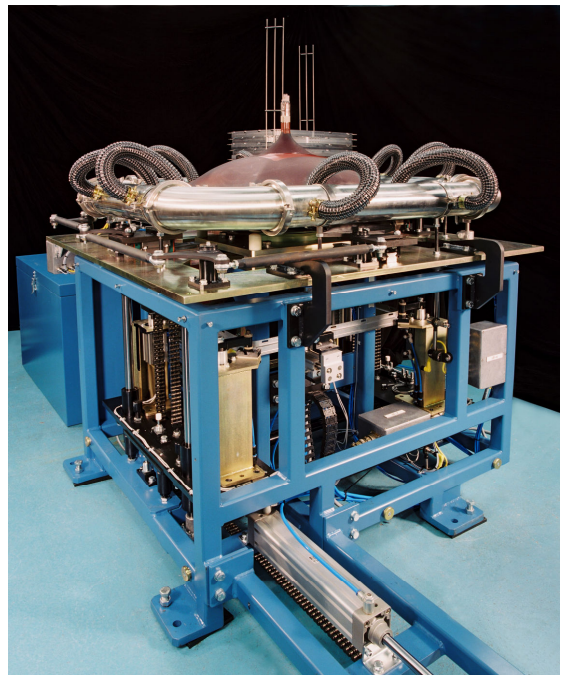
PROJECT PROFILE

Project: Rimbanders for Television Tube
Product/Process: Electrical Induction Heating Process

Summary:

NIS supplied two combined taping and rimbanding machines based on an electrical induction technique. This process allows the rimbands to be heated more quickly than with gas whilst inducing less stress due to a more even distribution of heat.

These first two units were followed by two more of a newer compact design. Each machine is capable of handling any of three rimband sizes with a high degree of process control. The work included upgrading the existing transfer gantries and rimband presentation shuttle units to suit a new tube type.



Description

The introduction of a new, large cathode ray tube into the product range at a major plant in Poland highlighted the inefficiencies of gas heated rimbanding processes employed in other factories. A Rimband is the metal ring attached to the glass picture tape that enables assembly in the TV cabinet.

NIS had already supplied two combined taping and rimbanding machines based on an electrical induction technique, developed by Petrie specifically for heating rimbands. This process allows the rimbands to be heated more quickly than with gas, whilst inducing less stress due to a more even distribution of heat.

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The temperature uniformity of the rimband is critical to the success of the shrink-on process. Developed by NIS, the induction heating system provides a high degree of temperature control together with the ability to process a number of rimband sizes without making any mechanical changes. The traditional gas heating process can generate hot spots around the rimband which degrade the aluminium coating, subsequently marking the glass during the fitting process. This, combined with the high running cost of gas, encouraged the client to look at induction for other areas of the factory.

The client awarded NIS with the contract to supply two additional machines of a new compact design. These were integrated into the taping, banding and painting line during the factory's August shutdown to replace the existing gas heated units. Each machine is capable of handling any of three rimband sizes with a high degree of process control. The work included upgrading the existing transfer gantries and rimband presentation shuttle units to suit a new tube type. This machine, ideally suited to fully automated pallet conveyor re-inforcing lines, adds yet another design to the growing NIS CPT portfolio.