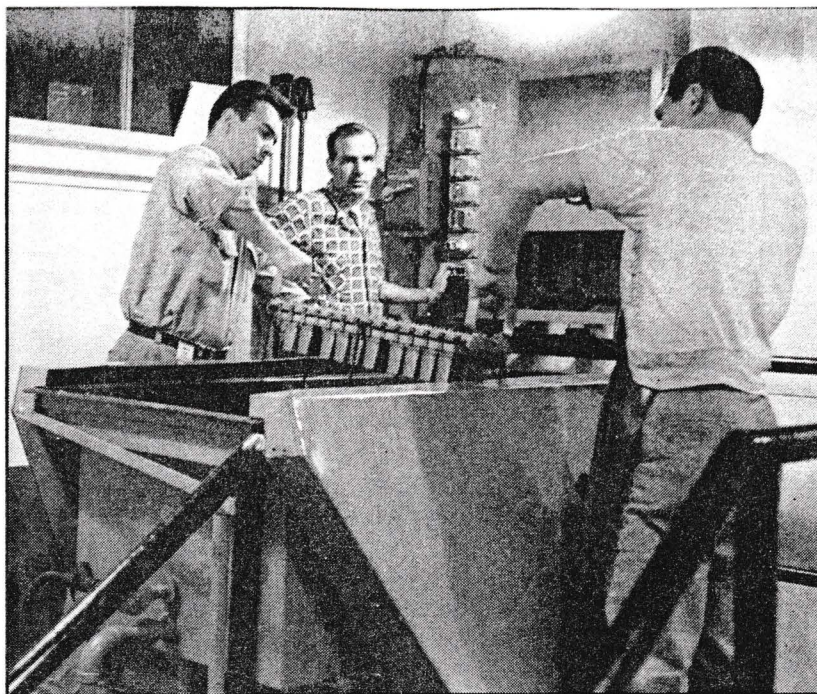


Right, lowering rack of aluminum compressor blades into lacquer tank for dipping. Process is unusual in that lacquer enters tank at bottom and rises to cover airfoil section of blades, then is drained away before blades are removed from tank. Controls on panel control the process automatically.



A Jet Blade Anti-Corrosive

A NEW silicone lacquering process to increase the corrosion resistance of aluminum jet engine blades has been employed since May by Orenda Engines Ltd. Developed jointly by Orenda's Materials Control Laboratory and Production Tool Design, the process wraps the airfoil section of the blade in a coating of silicone lacquer approximately .0002 inches thick. Previously the blades were only chromic anodized. This is still done. However, by adding the lacquer, it is explained, the corrosion resistance of the blade is improved by

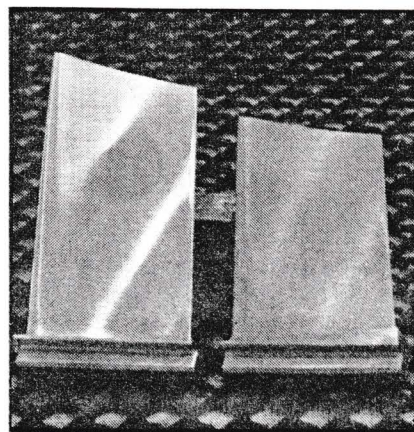
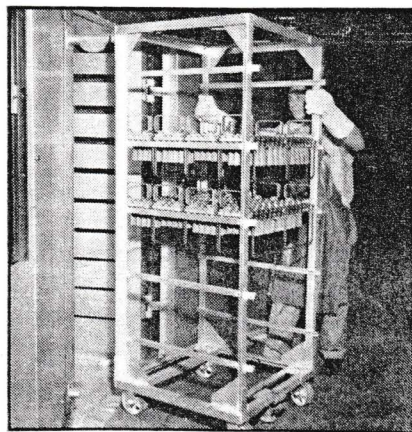
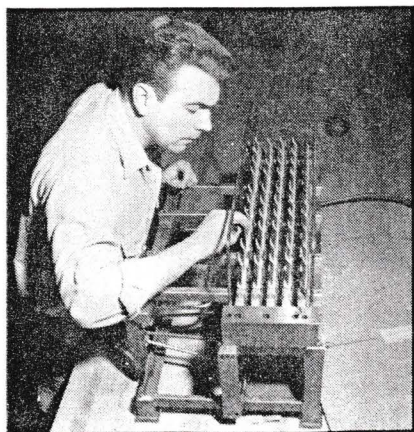
250 per cent.

Briefly, the process calls for pre-heating the blades for one hour at 250°F. before placing them in the lacquer bath which is held within four degrees of 70°F. For ease of handling, the blades are placed airfoil down in a special rack designed to grip them at the roots. This rack is placed in the lacquer vat and lacquer level allowed to rise until the airfoil sections of the blades are completely immersed. The thickness of the lacquer coating is governed by the temperature of the lacquer and the rate in which the

lacquer is drained from the tank.

This process, which is electronically controlled throughout, is done in an air-filtered, dust-free room 11 by 16 feet, where an overhead exhaust system removes flammable and toxic fumes generated by the lacquer. In case of fire the exhaust system automatically shuts off and a carbon dioxide fire extinguisher system and a overhead water sprinkler go into action.

Blade corrosion has long been a prime governing factor in the life of turbojet engines, particularly where salt air is encountered.



Picture at left shows the Orenda aluminum compressor blades being mounted in the pneumatic fixture preparatory to lacquering. Blade platform and root does not get lacquered. In the middle photo is shown a rack of

lacquered blades being wheeled into a drying oven. At right, a lacquered and an unlacquered blade may be compared for visual difference. Lacquer-coated blade is one on left. Process was developed by Orenda engineers.