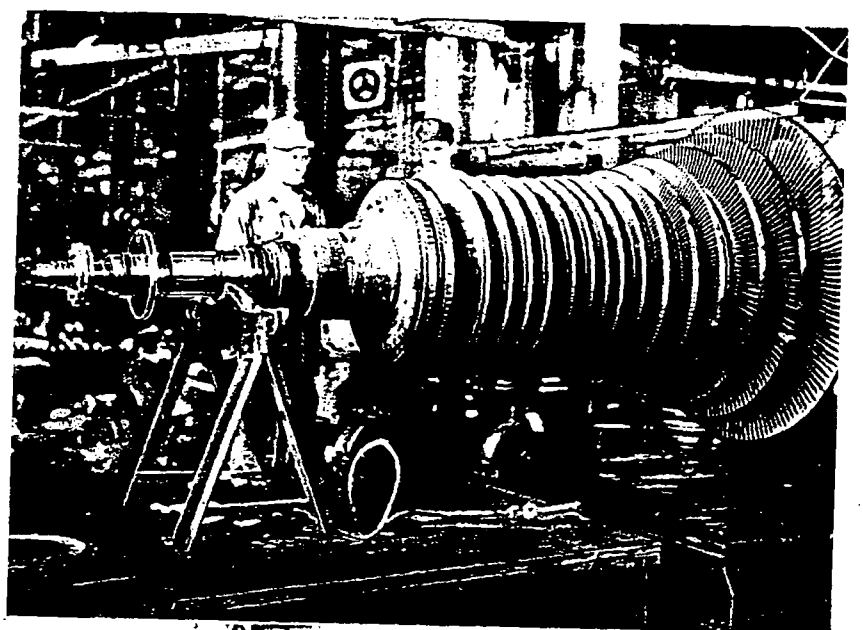
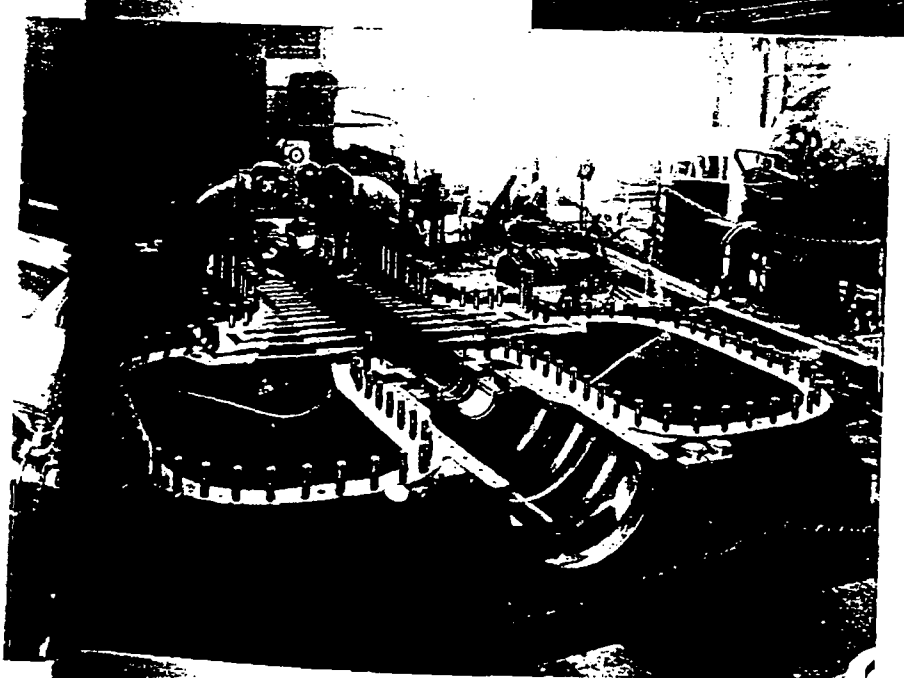
A lot of precise and interesting problems occur in the manufacture of a multi-stage turbine. A turbine of this type is a precision job and it must be built with such reliability that it can operate for years at a time, 24 hours a day, without shutdown. From among many photographs of shop operations, we select the four shown here, hoping you may find them of interest.



Along with the many physical and chemical checks on material going into the finished rotor is the final inspection after shake-down run at rated speed and overspeed on the test block. While material control during each step in manufacture minimizes the hazard of test operational failure, the final proof of the rotor lies in black-light inspection for cracks in all highly-stressed parts.



In a turbine, alignment is everything. At left the initial factory alignment of bearings, shaft seals, and diaphragms is being checked and recorded so that it can be reproduced in the field, and so that design clearances established on assembly can be maintained in operation.