

Glimpses of the Past

No. 8

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The new turbine shop

To facilitate production of larger (3,000kW and over) Brush Ljungstrom turbine generating sets after the first world war Brush decided to establish a purpose-built shop.

Work started on the new Turbine Shop (now 24 Shop) early in 1920 when footings were excavated on partially cleared ground alongside the present day 11 and 13 Shops. By the end of the year an assortment of brick buildings was demolished as materials were assembled on site. A new rail access to the rear of the works was already in use for transportation of materials and the old access served as what would become an internal rail feeder for the shop.

Modifications were made to the external walls of the adjacent shops and before 1920 was out the vertical steel skeleton was reaching upwards starting from the Meadows end. By mid-February 1921 the roof steelwork and overhead travelling crane track was in situ at this end together with some brickwork reaching twenty feet or more above yard level. By late March the framework had reached approximately mid-way alongside 13 Shop with some brickwork, rising to four feet, keeping pace with it.

By September 1922 the new shop structure was complete, although fitting out with equipment was still in progress in March 1923, completion took place later in the year and technical press representatives were invited to feature the Falcon Works in general for the whole world to take note. The new turbine shop was prominent in the early 1924 publications.

At the time the new shop was stated to be 504ft long, 80ft wide and 45ft high to the

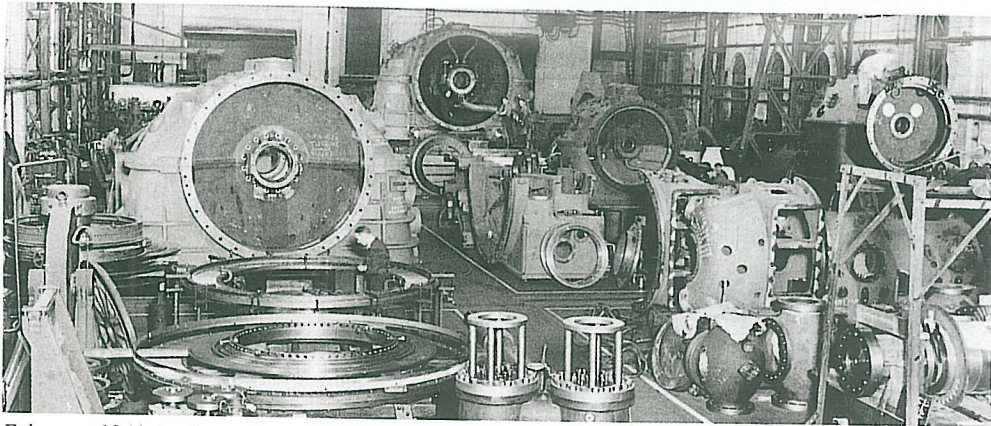
eaves. It was equipped with the overhead travelling main cranes, one of 50 tons capacity in slow gear, running on gantries, 36ft from floor level for the whole length of the shop. A further overhead travelling crane of 20 tons operated on a lower gantry for a length of 240ft from the Meadows end. In the area now occupied by HEP Test there was a 6 ton Goliath crane which ran across the shop guided by rails set into the floor.

The whole shop was designed for a series of economical movements whereby components entered the Meadows end and the completed turbo-generator was erected and tested at the other before being partially dismantled for road or rail despatch. Between the two extremes, equipment for machining, planing, boring and milling were provided. Furthermore, there was a balcony floor adjacent to 11 Shop, where smaller components were manufactured. Turbine blades and generator sections were produced in adjacent shops and introduced to the new Turbine Shop when complete.

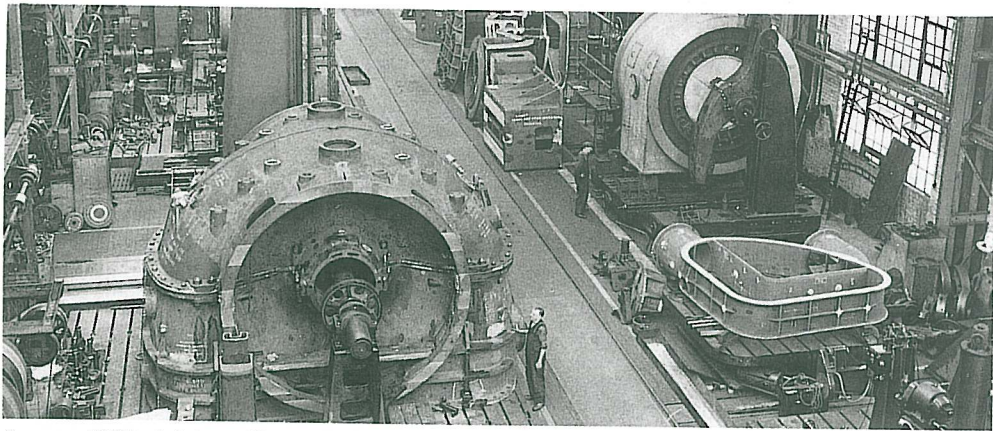
The older facility in 18 Shop continued to produce the turbines up to 1,500kW and together the two shops were able to extend production further into the export market.

Turbine production finally ceased at the Falcon Works in 1959, but the Turbine Shop continued with assembly and testing of turbo-electric alternators. Two periods saw part of the shop given over to locomotive building – once during the 1960's and again during the late 1970's.

Today DAX assembly, testing, finishing and despatch are the main activities of the great cavern-like shop. Long may this work continue.



February 1941, Wolverhampton and Swansea turbo-generator sets under construction.



January 1936, Brighton 37,500 kW turbo-generator under construction.