

THE
MANUFACTURE OF CALCIUM CARBIDE
AND
NITROGEN PRODUCTS,
WITH A DESCRIPTION OF
THE WORKS AT ODDA, NORWAY,
OF THE
ALBY UNITED CARBIDE FACTORIES, LIMITED;
NITROGEN FERTILISERS, LIMITED;
AND THE
NITROGEN PRODUCTS AND CARBIDE COMPANY, LIMITED.

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1914.

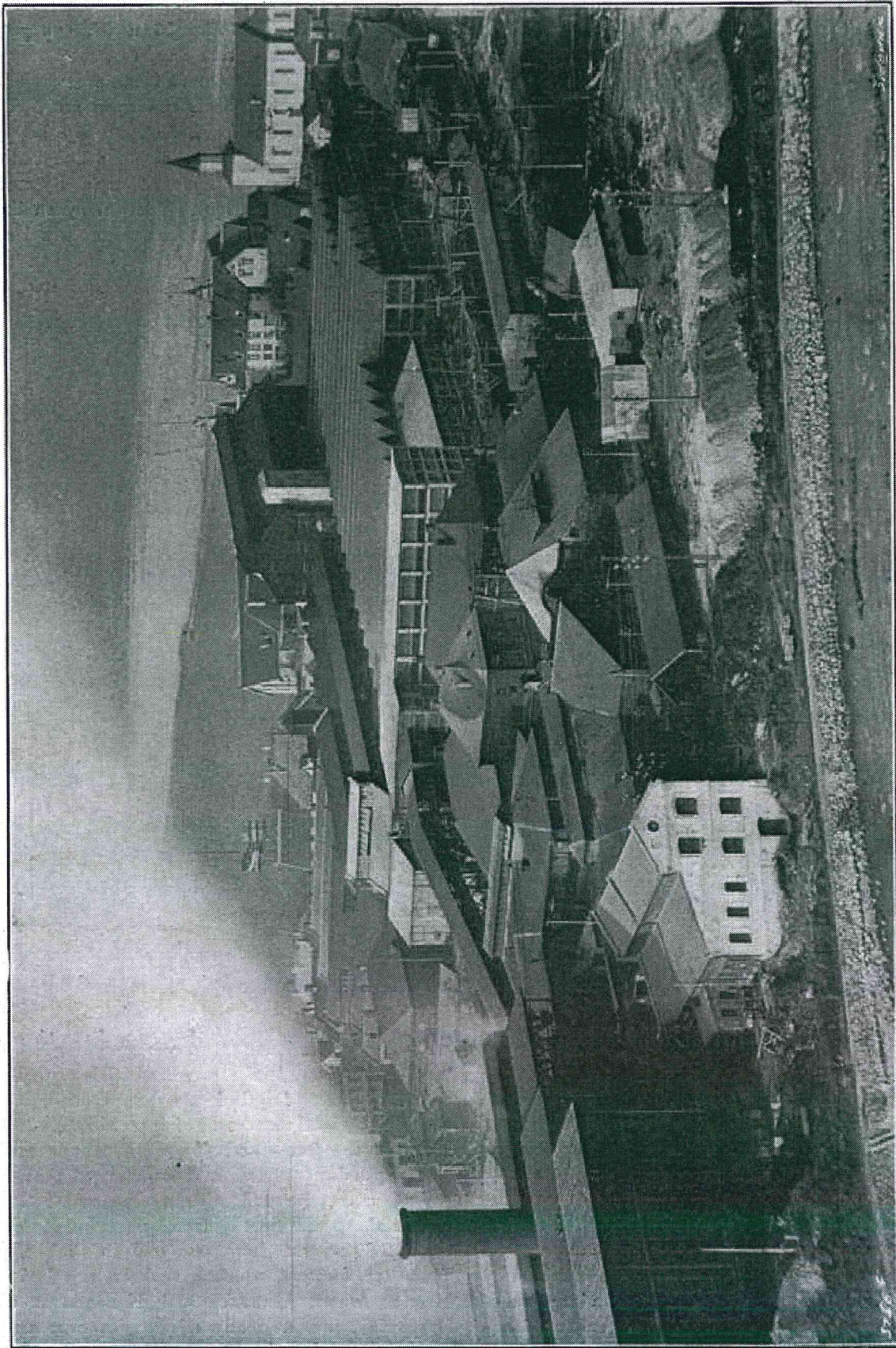


FIG. 51. GENERAL VIEW OF THE CYANAMIDE FACTORY AT ODDA OF THE NITROGEN PRODUCTS AND CARBIDE COMPANY, LIMITED

The works at Odda. Engineering 1914.

and with cut-outs, in order to disconnect one range between two towers for repair.

The switch-house at the Odda Carbide Works has two floors. On the upper one the arriving lines are connected with four large switches, each able to break the 50,000 horse-power in case of short-circuit. Here the choking-coils are placed, further lightning-arrester, the volt and ammeter transformers, and the first bus-bars. On the first floor are the measuring instruments, all the switches for the transformers, and distributing bus-bars which form two ring systems connected with each other. Between the bus-bars on the first floor and the second floor are four connections, two of which are strong enough to take the whole of the 50,000 horse-power.

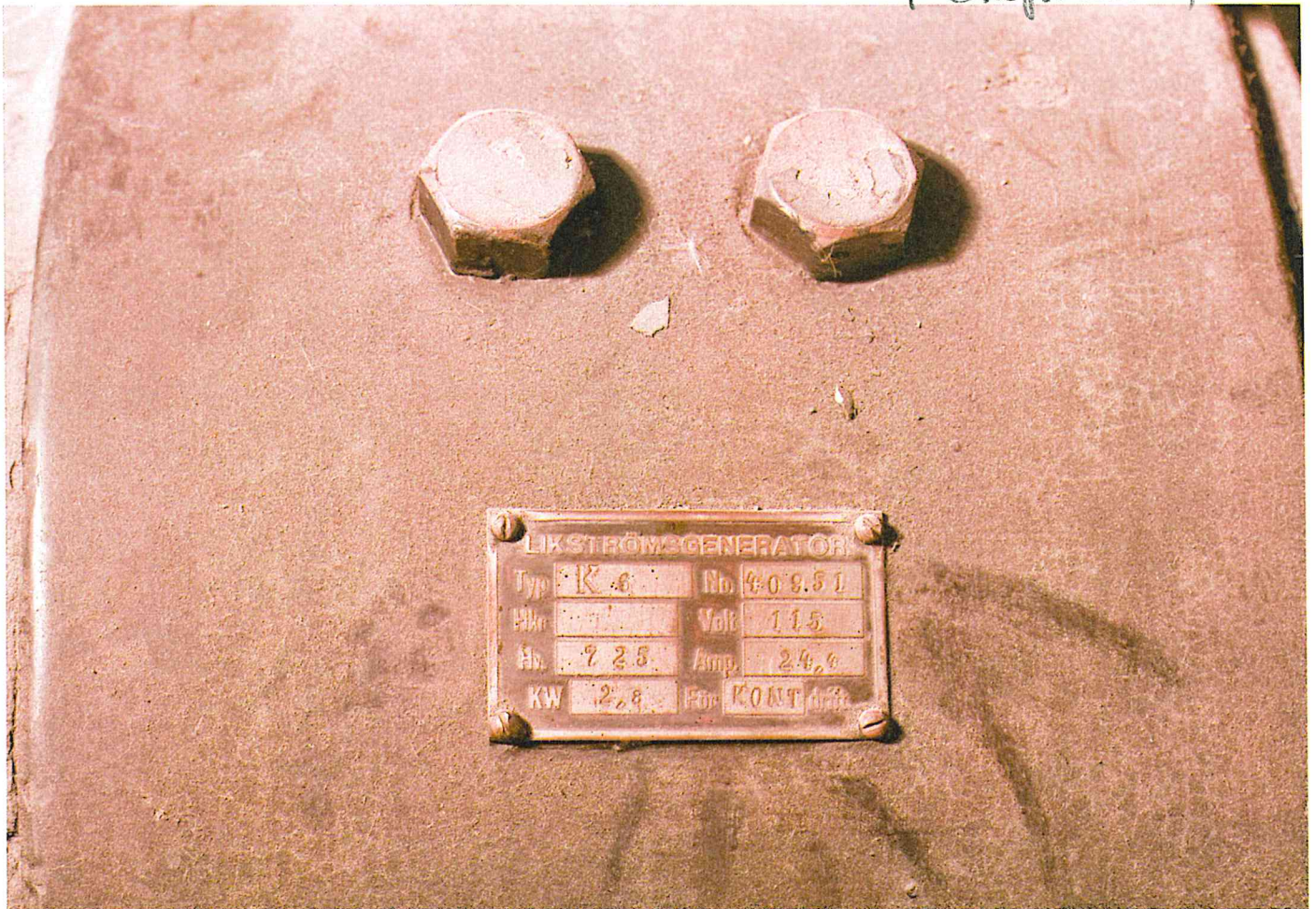
The carbide factory has about 90 different motors, with a total capacity of 2000 horse-power for 400 volts three-phase current. It is therefore necessary to have three 500-k.v.a. three-phase transformers with 4000 volts recording tension. These are placed in a special department on the first floor. In this are also placed four motor-generators—two for direct-current, 220 volts— for lighting purposes, tramways, and telpher railways. The other two transform the 400 volts 25 periods

to 2000 volts 50 periods for lighting purposes in the dwelling-houses of workers, and also for the town of Odda.

The furnace transformers, already described, are placed in special transformer-channels under the furnace-house. One transformer is placed directly under each furnace. There are for the old furnace-house twelve single-phase 1400-k.v.a. transformers, and for the new ten single-phase 3000-k.v.a. transformers. All are cooled with large air-fans. From the switch-house to the transformer-chamber underground runs a cable tunnel, also used as an inlet channel for conveying a part of the cooling air. The old transformers have a secondary tension of 60 volts. By the new transformer, as already explained, the secondary tension can be changed from 60 to 90 volts in sixteen steps, without interrupting the current, arranged by the interposition of an 'ingenious regulating system. The controller of the regulator is so arranged that the workmen at the top of the furnace can regulate the tension as desired for the best working of the furnace.

It may be added that the extension of the calcium carbide factory has been carried out under the direction of Dr. Petersson, the managing director, assisted by Mr. Rosengren.

Del-3 på Omformare 4



Del 1 på

Omformare 3

Del -2 på omformare 3



Del-1 på Omformare 4

Del 3 på omf. 3 er
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Del-2 på omformar 4

