

NSU

A Series of Factory Visits by JOHN THORPE Commences with a Review of the World's Largest Moped Works

A MOPED factory capable of producing 1,000 machines every day.

A factory which in its vast area includes its own gasworks; has its own railway, with a 600-ft. covered-in loading bay; in which the 3,112 machine tools alone represent a capital expenditure of £3,000,000; which employs 6,000 people; which has produced a moped capable of 122 m.p.h.; which . . . but the list is endless.

A visit to NSU, in Neckarsulm, Germany, is indeed a voyage of discovery.

It proves just how an industry can react to the stimulus of unhampered trade, and more than justifies the British moped factories' plea to be allowed an unfettered home market. Though demand is now falling—the great initial market provided by a booming, post-war Western Germany having been fully tapped—a sale of 600,000 Quickly mopeds since the autumn of 1953 is indicative of the kind of money which is to be found in the personal transport field. Equally, the extent of the production lines which NSU have laid down indicates the kind

of money which must be invested to reap the rewards!

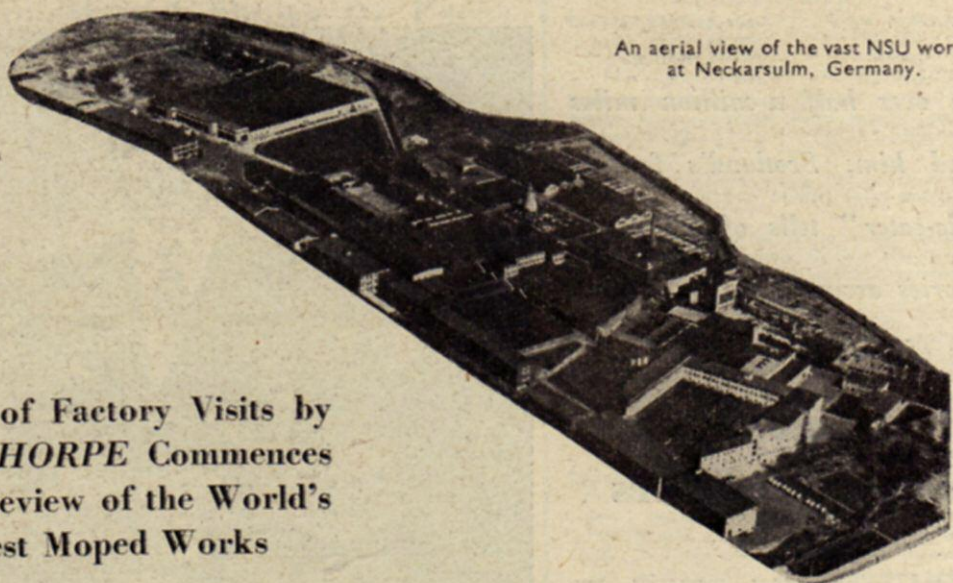
In the central machine shop—the former cycle assembly shop, converted at a cost of £100,000—I saw 150 different machine tools at work, some of them fully automatic and capable of carrying out up to 32 operations without attention. High-precision instruments were engaged in the making of dies and tools for the other departments, for NSU long ago discovered that delay resulted from reliance on outside sources. They promptly installed all the necessary equipment for making their own tools, dies, castings, pressings and so forth, and are now masters of their own destiny!

The Hands Are Important

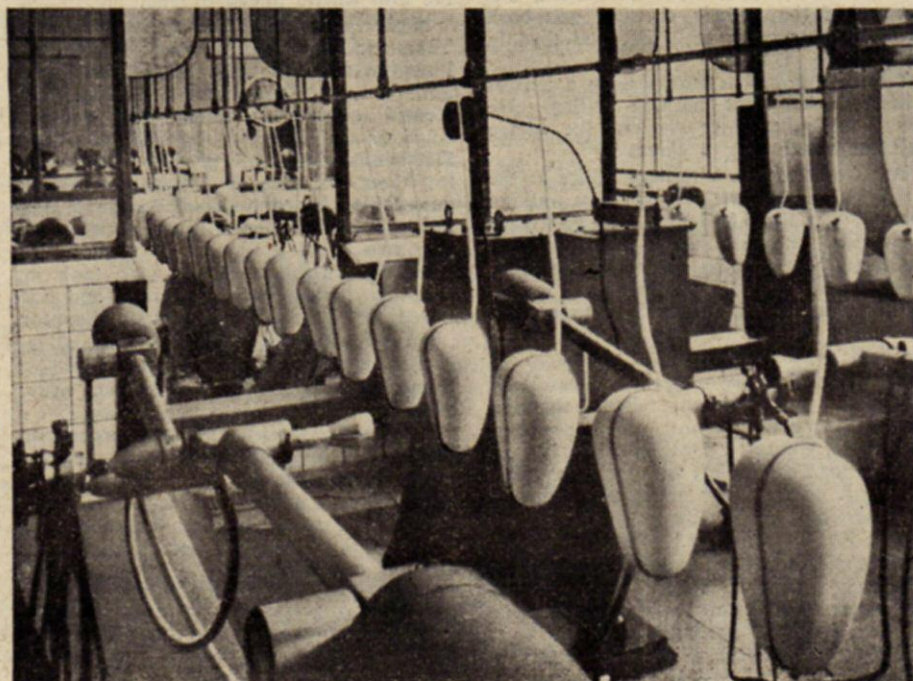
The NSU gasworks provides all the gas needed for the hardening processes. Parts which have been treated pass through equalizing furnaces, at a temperature of 750 deg. Centigrade, and then every single item is checked by an inspection department. Tests here vary from measurement by precision instruments to the simple file test, dependent upon the touch of the operator. Even blind men are employed on this work, for it is the hands, not the eyes, which are important.

Three hundred people work in the engine assembly shop, but even here mechanization can be seen. A special furnace heats 150 crankcases at a time, so that bearings may be shrunk into place, and the conveyor-belt assembly line is set to provide just the right amount

Electro-static spraying . . . in an atmosphere that resembles that of an operating theatre! This process is entirely automatic.



An aerial view of the vast NSU works at Neckarsulm, Germany.

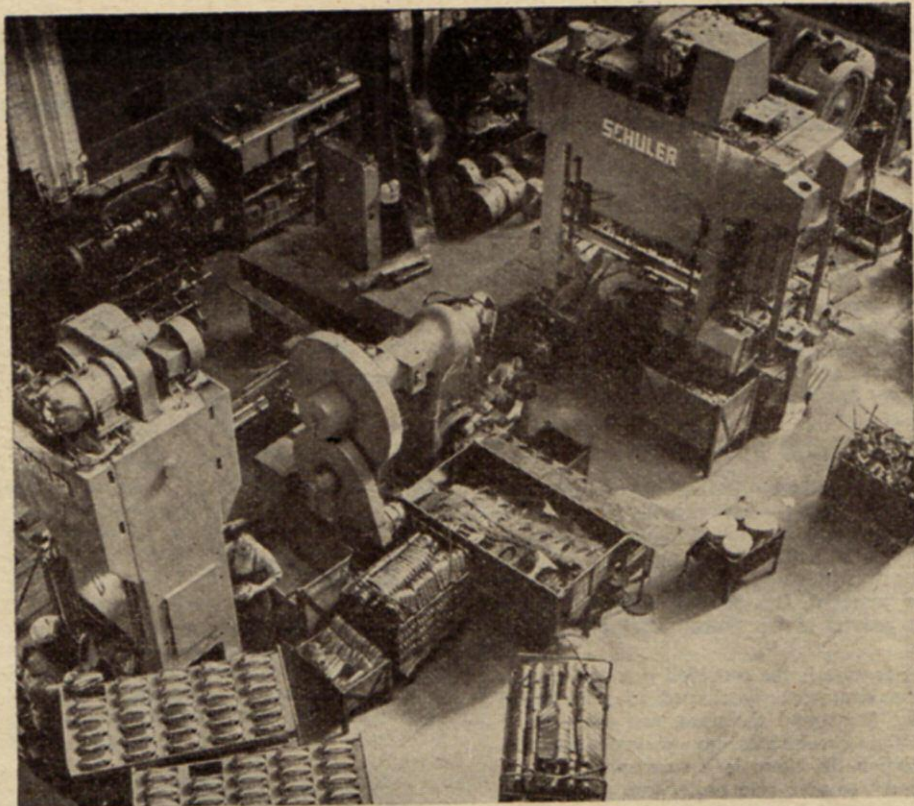


of time for each of the various assembly operations. In another corner of the shop, an engineer with a sensitive micrometer matches barrels and pistons. The barrels, with their chromium-plated bores (a process carried out in NSU's own vats), show minute variations, and are consequently classified in 23 different sizes, progressing by steps of one-hundredth of a millimetre, with each piston carefully matched to suit. After assembly, each engine goes straight from the bench into a test shop, where for 15 minutes it runs at 600-1,000 r.p.m. before passing on to the store, and thence to the main assembly line.

The Press Shop

Here, I broke the sequence of my visit to peek into the press shop, where stand 50 automatic presses, capable of stamping out 1,500 frames every day. Tanks, engine covers, mudguards . . . all are made here. A sheet of trimmed metal is inserted in the press, a lever pulled, and a giant piston descends. Pressure is held on for a few seconds, and then the press opens, revealing a frame half, where previously there was but a flat sheet of steel. The cost of one 500-ton press—£25,000—could decimate the profits from over 1,000 mopeds. That's not so serious when it represents but one day's production; when, as in the case of the British industry, it may mean a whole month's work the situation is rather different. . . .!

The casting shop was fascinating. Here have been installed the very latest pressure-casting machines, which—exerting a pressure of 500 tons—can make a



(Above), A corner of the huge press shop. The parts are Quickly crankcase covers. (Left), Sorting barrels into their 23 categories is this man's job.

to read this sentence, and then watched another put through the spot-welding machine which, in less than two minutes, completes the requisite 42 spot welds at the press of a button. A man with a welding torch would need half an hour for the job!

Paint Spraying

A quick visit to the ultra-modern electro-static paint spraying department proved to be one of the most interesting calls of the tour. No paint was visible—just a line of tanks passing, on an overhead conveyor, past smart, shining aluminium nozzles, and miraculously emerging, on the other side, a different colour! My guide explained that the rotating nozzles "fire" at the tanks paint so finely atomized that it is invisible to the naked eye. This paint is charged positive with electricity; the tanks carry a negative charge, imparted from overhead wires. As a result, the paint particles are attracted to the metal, and adhere tenaciously. The tanks are then sent into an infra-red furnace, which completes the process with a thorough hardening of the paint. The system is fully automatic, requiring only two operators, and can work continually, day and night.



complete cylinder barrel, or a "star" of half a dozen pistons, in less than a minute. From here, I went to the welding shop, where 10 electrical welding machines were lined up. I saw a Quickly frame automatically seam-welded in about the time it will have taken you

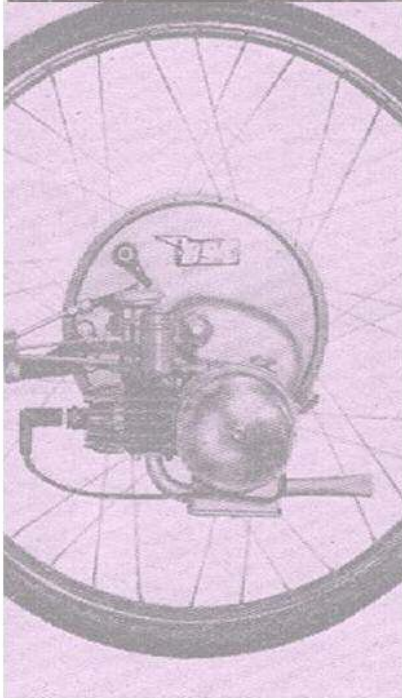
The main floor of the assembly shop is shared by Quickly mopeds, pedal cycles—of which NSU produce 40,000 annually—scooters and motor-cycles. Again, there is a moving-belt system of progressive assembly. When complete, the machines are hitched to an overhead rail conveyor and proceed underground to the huge packing department, across the road. On one side of this is the long railway loading bay; machines are wrapped, labelled, and wheeled straight into the waiting wagons, for delivery to every part of the globe.

Back To 1873

Here, then, is NSU—an object-lesson in modern factory layout. It was founded, however, in 1873 as the Neckarsulmer Strickmaschinen Union—a firm for the construction of knitting machines—and gradually entered into cycle and motor-cycle production at the turn of the century. Half destroyed during the war, it has risen to new heights since 1945.

Last year, 5,000 of NSU's Quickly mopeds came to Britain. This year, the estimate is 15,000. Thus there exists considerable ties with this country, but there is one unexpected NSU import which surprised me. Believe it or not, in this land of beer and wine and coffee the NSU canteen serves a million cups of tea a year. A million! Why, it's just like home. . . .!

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