

SCIENTIFIC MANPOWER

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Industry and other main users of scientific manpower have reported to the Ministry of Labour and National Service that they require over 30,000 more qualified scientists and engineers in the next three years. The Scientific Manpower Committee of the Advisory Council on Scientific Policy estimates that as least 85,000 more will be required in the next ten years - an increase of 63 p.c. over the numbers employed today.

Features of Latest Survey

This information is given in a report on scientific and engineering manpower issued jointly last week by the Ministry of Labour and National Service and the Advisory Council on Scientific Policy (H.M.S.O. 1s. 6d.), and which embodies the results of an inquiry by the Ministry of Labour and National Service, with the help of the Social Survey, into the present numbers, distribution and early future demand for scientists and engineers; and a study by the Committee on Scientific Manpower of the likely trend in the long-term demands. The main purpose of the Report has been to set a goal for the Universities and technical colleges.

The new data provided by the Ministry's inquiry on which the Committee's analyses have been based, constitute the most reliable information yet available about the numbers employed as scientists and engineers in Great Britain. In the field covered by the inquiry * there were 119,700 qualified scientists and engineers - 51,230 scientists and 68,470 engineers. It was estimated that a further 15,000 were in other employment, making a total of 134,700 qualified scientists and engineers employed in Great Britain at present - 56,230 scientists and 78,470 engineers.

Current Employment Estimates

Of this last-mentioned total about 43 p.c. were in manufacturing industry, 12 $\frac{1}{2}$ p.c. in the nationalised industries, 21 p.c. in teaching, 10 p.c. in central government, 5 p.c. in local government and 8 p.c. in miscellaneous occupations. Nearly half the qualified scientists were engaged in teaching, and three-quarters of the qualified engineers were in industry.

The number of qualified scientists and engineers in Great Britain represented approximately 0,6 p.c. of the total working population. In addition, there were slightly over 30,000 engineers with no higher qualification than Higher National Certificate, Higher National Diploma or the equivalent, nearly all employed in industry.

Of the 48,800 qualified scientists and engineers in the manufacturing industries, the chemical industry employed 8,300. Of the qualified scientists and engineers employed in manufacturing industry about 45 p.c. were engaged in research and development, 47 p.c. in production, maintenance and installation, and 8 p.c. in "other work".

Near-Future and Long-Term Demand

The demand by 1959 in the industries covered by the inquiry was estimated

* - Manufacturing and building and contracting industries (excluding establishments with less than 100 workers); nationalised industries; central government departments, local authorities, industrial research associations, and educational establishments.

at 150,000, as increase of 26 p.c. The demand for scientists was expected to increase by 18,5 p.c. to 60,700 and for engineers by 30 p.c. to 89,300. Manufacturing industry wanted an increase of 37 p.c., building and contracting 22 p.c., research associations 24 p.c., nationalised industries 22 p.c., central government 14,5 p.c., local authorities 27 p.c., and teaching 11 p.c. Amongst scientists the greatest demand numerically in the next three years was for chemists. Amongst engineers the greatest demand in numbers was for mechanical and electrical engineers, but an increase of 47 p.c. was required in chemical engineers and 48 p.c. in metallurgists.

In their assessment of the number of qualified scientists and engineers that will be needed in industry, teaching and administration ten years hence, the Committee on Scientific Manpower has assumed that industrial production as a whole will continue to increase at the rate of 4 p.c. per annum, with greater proportionate increases in some industries, for example, chemical and engineering; and that in each major industrial group the ratio between the increase in numbers of scientists and engineers employed and the increase in output is roughly in the proportion of 1:1.

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