

## TRAINING YOUNG PROCESS WORKERS

### Aims and Progress of National Scheme

By H. A. Collinson

The total number of what might be called process workers as distinct from tradesmen engaged in the chemical industry is around 150,000, approximately half being employed by one company, the other half being shared among some 300 companies. The number of male juveniles in this category employed is something like 3-4,000, and female juveniles 4-5,000, the male juveniles representing 3 p.c. of the total male employees, and the female juveniles accounting for 20 p.c. of the total female employees. The number of girls continuing in the industry is small.

### The Problem in Perspective

Throughout the chemical industry generally there is a high proportion of graduate chemists, scientists and laboratory assistants, many of the latter being of the same age as the juvenile process workers and earning roughly the same wages but having an apparently higher social status. The numbers of tradesmen vary considerably in different factories and in different branches of the industry; in some plants there are as many maintenance as process workers, and at the other end of the scale very few, but in general between 15 and 20 p.c. of the total labour employed is engaged in maintenance. The young process worker thus finds himself one of a group of basically unskilled workers rubbing shoulders every day with skilled tradesmen on one side and shift chemists and laboratory assistants on the other. This social environment is important in considering the problem of education.

The need for training young chemical workers and raising their status was fully appreciated by the Association of Chemical and Allied Employers, and they set to work to devise a scheme of training for Qualified Chemical Operators, and in this work they were ably assisted by those Unions representing them on the Chemical Joint Industrial Council.

### "Qualified Chemical Operators"

The scheme is a national voluntary one for boys and adults, whereby after training and examination the successful candidates will have the skilled status of "Qualified Chemical Operator". In the long term it aims solely to train the juvenile workers, but for the first few years adults are being permitted under certain circumstances to take a shortened course. Boys normally enter the scheme at 16 and undergo training for five years. The theoretical training follows the City and Guilds syllabus for Chemical Plant Operators, and employers are encouraged to allow day release to enable this work to be carried out.

The practical training provides experience of 32 unit operations, to be gained whenever possible, in the works, with the specialist bias of the firm by which the youth is employed, but arrangements may be made locally for the interchange of trainees.

Normally candidates are selected by the employer, who arranges either an apprenticeship by indenture or an exchange of letters between parent and employer. The names of all trainees are registered with both the employer's

association and the youth's Trade Union. The scheme is administered nationally by the National Training Committee of the J.I.C. and locally by Area Committees of employers operating the scheme and of Trade Unions concerned, with the assistance of the local offices of the Ministries of Education and of Labour and National Service.

#### Post Training Efficiency

It is considered that, after training, a Qualified Chemical Operator will be able to perform adequately the following tasks: (a) Operate and control complicated plant; (b) act upon written or oral instructions for the purposes of (a) above; (c) read instruments, keep records and make short reports on the performance of plant; (d) make calculations on input and output and simple operational and quality tests; (e) deal with minor operating troubles; (f) learn to operate unfamiliar plant after a short period of instruction; (g) instruct and co-ordinate less skilled operators; (h) understand safety regulations and work in accordance with them.

Facilities for the theoretical part of the training already exist in 15 towns, and at present 197 youths have registered for the full course since the scheme began in 1953. In addition to these, 46 adults are registered for the full course and 512 adults for the shortened course.

#### Needs of the Smaller Firms

Where a small chemical firm is in one of the industry's strong localities it can benefit from the larger firms around it and also join with other firms of a similar size in the training programme. There are, however, companies situated away from any allied industry, and they are obviously unable to organise any proper course for training the few youths they may employ, but much can be done in these circumstances by the employer without any great cost or inconvenience. It is possible and practicable to produce a modified training scheme whereby the youth for example by working under a chemist in a laboratory or on a pilot plant, is able to learn something of the theory lying behind the chemical operations in use; a little instruction from the maintenance foreman on the operation of a valve or instrument clears the air and enables him to take better care of it and help reduce maintenance costs; if all this is followed by an oral examination by a senior member of the staff, preferably a director, the industry has obtained a better worker and a more useful member of the community.

"Plus rate" payments for responsibility are normal in the industry, and by linking these with a simple examination the employer obtains value for his money and the employee pride of status and achievement.

#### Human Factors Involved

The importance of the human factors must not, however, be overlooked. The juvenile worker's reaction to the education scheme is decided mainly by the following factors; a sense of mastery, being someone who counts and a sense of security.

In the chemical industry the young worker, although he is among a class described as "unskilled", has nevertheless around him a substantial number of tradesmen, laboratory assistants, chemists and professional scientists. These provide him with a spur and give him a chance to realise that he can understand some of the things they talk about. In this environment, technical knowledge is the mark of men in authority. The feeling of "counting" or having a "status" is

very important, and when fostered in the right way provides a very real incentive to the young worker to acquire some degree of skill or knowledge, however limited. A specialised knowledge or the mastery of a trade will go a long way to engendering a reasonable degree of security.

The most powerful force in creating this desire for education is, however, money, and it is therefore necessary to see that those who take advantage of the opportunities and give their efforts to make something of themselves should be suitably rewarded. My final point on the human factors involved is that it is very helpful to an employer to know something of a boy's background and home life, and a visit from the father is of real value in assessing a young man's outlook and getting some idea of his future potentialities. It may be an old-fashioned thing to say, but a boy coming from a good home with "respectable", "hard-working" parents stands a better chance of making a success than one from a home where the parents are not interested in his future.

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