

## REPORTS AND INQUIRIES

### The Training of North African Metal Workers in France

*The French Union of Metallurgical and Mining Industries has recently issued a study of the problems raised by the employment of North Africans in metal works. The chief problems are concerned with the observance of safety rules, hygiene and training.*

*In the following pages are reproduced the parts of the study concerned with training—data concerning the degree of skill acquired by North African workers, based on an investigation in a number of undertakings, and some conclusions concerning the conditions necessary to facilitate quicker promotion for these workers. The first experimental attempts to make up for the lack of basic education among North African workers and to prepare them for employment provide the material for a series of general observations on the curricula and organisation of vocational training for North Africans.*

*The interest of this study goes beyond the particular field to which it directly relates, for the introduction into highly mechanised industry of workers belonging to non-industrial regions gives rise to similar situations in all parts of the world.*

#### DISTRIBUTION OF NORTH AFRICAN PERSONNEL IN CERTAIN METAL WORKS

A detailed investigation conducted in the Paris area during 1951 in 385 establishments employing 272,000 persons, of whom 33,500 were North Africans, revealed that the North Africans were distributed as follows: supervisors and skilled craftsmen, 4.42 per cent.; semi-skilled workers, 52.08 per cent.; labourers, 43.5 per cent.

#### *An Automobile Construction Undertaking in the Paris Area*

This undertaking employs 43,000 persons in its workshops and offices combined (35,000 at hourly wage rates, 8,000 on a monthly basis). Rather more than 10 per cent. of the wage earners (3,922 persons) are North Africans; there are only about 15 North African salaried employees. The latter are clearly differentiated from the manual workers and are entirely europeanised.

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<sup>1</sup> UNION DES INDUSTRIES MÉTALLURGIQUES ET MINIÈRES: *La main-d'œuvre nord-africaine et son emploi dans les industries des métaux* (Paris, 1952).

Eleven of the salaried employees have elementary school-leaving certificates (including one from a "higher elementary school"), one has graduated from a secondary school, two have accountants' certificates, and one has been through the national vocational school and attended courses at the Institute of Arts and Crafts. Furthermore, among the executive personnel there is a North African mining engineer.

The 3,922 North African manual workers are distributed as follows: skilled craftsmen, 3.5 per cent.; semi-skilled workers, 66 per cent.; labourers, 30.5 per cent.

If the proportion of labourers is compared to that of North Africans with less than a year's service (35 per cent.) it may be concluded that a labourer is promoted to the semi-skilled grade in less than a year (the average is eight months).

The distribution of North Africans in the various departments of the undertaking is as follows:

*Foundry department*: 25 per cent. of all North Africans employed in the undertaking; 27 per cent. of the total personnel of the department. The jobs most commonly allotted to North Africans are those of moulder, caster, fettler, wheeler, loader and general labourer. Some, however, have more responsible jobs (one is employed as a convertor man).

*Coach work assembly department*: 18 per cent. of all North Africans; 15.5 per cent. of personnel of department.

*Sheet-iron shaping and assembling department*: 10 per cent. of all North Africans, about one-third of personnel of department.

The remaining 47 per cent. of the North Africans in the works are scattered among the other departments (hand sheet-iron working, rubber, cutting (9 per cent. altogether), engine machining (9 per cent.), chroming, cables, maintenance (electricity), trucking.

### *An Engineering Undertaking in the Paris Area*

At the beginning of 1949 this undertaking was employing 1,222 manual workers, including 146 North Africans. By 1 September 1951, there had been an increase to 1,358 and 232 respectively, equivalent to a rise in the proportion of North Africans from 11.9 to 17 per cent.

In the same period the number of skilled and semi-skilled North Africans increased from 20 to 81. Members of these grades thus represented (in 1951) 35 per cent. of all North African personnel, as against only 14 per cent. at the beginning of 1949.<sup>1</sup>

The distribution by grades of the 232 North African manual workers on 1 September 1951 was as follows: skilled craftsmen, 1, or 0.4 per cent. of all North Africans; semi-skilled workers, 80 (senior grade 24, junior grade 56), or 34.5 per cent.; labourers, 151, or 65.1 per cent.

Distribution by service was as follows: movement, 107 (46 per cent. of all North Africans, 39 per cent. of the personnel of the service), 82 per cent. of whom were labourers; foundry, 49 (21 per cent. of all North Africans, 36 per cent. of personnel of the service), 50 per cent. of whom were labourers. The remaining 33 per cent. of all North Africans were distributed as follows: boiler tubes, 8 per cent.; boiler work and framing, 8 per cent.; forges, 4 per cent.; material inspection and main-

<sup>1</sup> On 1 January 1952 the corresponding figures were: total personnel, 1,322; North Africans, 241 (18.2 per cent.); skilled and semi-skilled North Africans, 101 (41.9 per cent. of all North Africans).

tenance, 4 per cent., etc. It should be noted that the only North African skilled craftsman is in the maintenance service, and that two-thirds of the North African semi-skilled workers are in the foundry and movement services.

The rise in the percentage of North African skilled workers proves that North Africans have been appreciated, particularly in the production departments, such as the forges, foundry and welding and boiler tube shops. The following jobs, ranking as semi-skilled (senior grade), have been entrusted to them: foundry caster (3), crane man (2), normal gauge tractor driver in the movement service (2), tube maker (1), press operator (1), welder (4), etc.; as well as jobs as loader, fettler, etc., which rank as semi-skilled (junior grade).

#### *A Steel Works in North France*

This works includes a Martin steel plant, a bar mill and ancillary services to these production departments—roll-lathes, maintenance (machinery), maintenance (electricity), construction and movement.

Of the 547 manual workers, 216 (40 per cent.) are North Africans.

The distribution by service is as follows: production services, 340 workers, including 159 North Africans (73.6 per cent. of all North African personnel, 47 per cent. of total personnel of these services); ancillary services, 207 workers, including 57 North Africans (26.4 per cent. of all North African personnel, 28 per cent. of total personnel of these services).

Distribution by grade is: production services—skilled craftsmen, 43 per cent.; semi-skilled workers, 24 per cent.; labourers, 32 per cent. These percentages are similar to those for the whole personnel (North Africans and Europeans together) of the production services.

However, this distribution varies from one service to another. The situation is particularly striking in the Martin steel plant, where North Africans account for 78 per cent. of the total personnel (74 per cent. of skilled craftsmen, 95 per cent. of semi-skilled workers and 74 per cent. of labourers).

In the maintenance services, on the other hand, the position of the North Africans is much inferior to the general average. Of the 57 North Africans in these services, 51 have remained labourers, five have become semi-skilled and only one is a skilled worker, junior grade; and it should be noted that he is only capable of doing a certain type of repairs in a highly restricted sector (travelling cranes).

#### *A Steel Works in East France*

The only statistics provided relate to distribution of North Africans by grade: semi-skilled workers, senior grade, 18 per cent.; semi-skilled workers, junior grade, 32 per cent.; labourers, 50 per cent.

The promotion of North Africans, though gradual, is still slow. Although some are now attending training courses for the trade certificate (production), there is not a single North African craftsman in the factory.

#### *Other Undertakings*

Other less complete investigations have revealed the following information.

In a steel works in the north of France North African workers (115) amounted to 10 per cent. of the total personnel; 35 per cent. were skilled and semi-skilled workers.

In another steel works in the north the North African workers (412) amounted to about 30 per cent. of the total personnel ; 8.5 per cent. were semi-skilled workers, junior grade (Martin ovens).

In a steel works in central France (Loire), the North African personnel included practically no skilled craftsmen, but North Africans belonging to the semi-skilled grades were employed as furnacemen at boilers and ovens, foundry keepers and roller-mill hands. Attempts at the rapid vocational training of skilled welders, turners and fitters have failed. Very few North Africans have been able to reach the grade of craftsman after long training on the job.

The above figures show clearly how wrong it would be to regard North African workers as no more than a large reserve of irretrievably mediocre unskilled and semi-skilled workers. The examples indicated show that the North African is capable, in some conditions, of reaching successively the grades of semi-skilled worker and of skilled craftsman.

It should, however, be noted that—

(1) the percentages of North African semi-skilled and skilled workers are considerably larger in metallurgy proper (production of steel and other metals) than in engineering construction, electrical construction, etc. ; in certain manufacturing undertakings (automobile construction, for instance), the North African skilled and semi-skilled worker is employed mainly in the raw material processing departments, such as foundries and forges ;

(2) North Africans generally succeed in the production services, where they secure promotion very much at the same rate as the French ; foundries, forges and rolling mills provide them with the most favourable opportunity ; maintenance services are—at least at present—much less suited, since the North African has not the proper vocational background ;

(3) within the production services, the promotion of North Africans slows down considerably once they have reached the junior semi-skilled grade, and they only very exceptionally reach the lowest skilled grade ; it is more difficult for North Africans than for French workers to acquire the skill and knowledge corresponding to this grade because of the North African's imperfect grasp of the French language and his lower level of general education ;

(4) training "on the job" appears at present to be the commonest avenue to promotion ; however, it is so slow as to suggest that there must be scope in the vocational training system for a more rapid and scientific approach as well as one better suited to the needs and characteristics of the North African.

The number of North Africans promoted to supervisory posts is still very small. The skill and the aptitude required by a chargehand, and still more by a foreman, are as a rule acquired by the North African only after a long stay together with a long period of stable employment in the undertaking. This necessary qualifying period is longer than the time yet spent by most North African workers in metropolitan France.

It is clear, however, that the North African worker generally has the qualities which will enable him to reach grades above those of labourer and semi-skilled operative ; but promotion to supervisory posts or to

functions involving responsibility above the purely technical level is more difficult because it requires a degree of development seldom reached by recent immigrants. Furthermore, it remains subject to a sufficiently long stay in France.

#### ESSENTIAL REQUIREMENTS FOR THE NORMAL PROMOTION OF NORTH AFRICAN WORKERS

Better training and promotion for North African workers depend on various factors; the most important are discussed below.

##### *Man and Job Selection*

Systematic selection at the recruiting stage should eliminate candidates unfit for industrial employment. Aptitude tests are of great importance for vocational training, since they provide an indication of the most suitable jobs and teaching methods.

Subsequently systematic medical, psychotechnical and instructional supervision should play a vital part in the promotion or transfer of North African personnel as their capacities develop. It has often happened that poor or average workers achieve excellent results if transferred to another job in their department better fitted to their aptitudes.

Inquiries into the conditions of employment of North African workers have shown that they succeed more easily and quickly in the iron and steel trades and generally in large-scale metal works and raw material processing departments and that they find promotion easier in general services than in maintenance departments.

Such conclusions should not, however, be considered final. They are based on an analysis of factual situations, the various elements of which are not by any means immutable. While they can serve to indicate some of the conditions of employment now offered to North Africans in accordance with their present aptitudes, they are not in any way a measure of their future possibilities.

As an instance, an iron and steel undertaking in north France has prepared a list of jobs considered suitable for North African workers; according to this list they are employable in blast furnaces as keepers' assistants and chargers, in steel works as smelters' assistants, gasmen and especially as pit workers and masons, in rolling mills as rollers, heaters, repairers and shearers, in foundries as packers, chippers and fettlers, in movement services as engine drivers, stokers and onsetters, and as loaders throughout the undertaking.

##### *Stability of Employment*

Subject to such transfers within a works or service as their physical development or attitude may render necessary, North African workers should be given some degree of stability in their jobs. In favourable circumstances a semi-skilled worker takes something like 12 months to train, and several years' apprenticeship are needed before a worker can be promoted to the higher grades.

##### *Minimum Knowledge of French as the Working Language*

North Africans employed in industry experience difficulties through their insufficient knowledge of French. In matters of industrial safety

the consequences of this handicap can be disastrous and it is obviously an almost insurmountable obstacle to a North African's higher training and promotion. It may, however, occasionally escape attention. There are undertakings in which North African chargehands are entrusted with the new recruits. The advantage of this system is that the men are given their initiation and settle down more quickly, as most of the difficulties arising from an often total ignorance of French are overcome. It cannot, however, be more than a temporary solution. The skill acquired by a North African worker kept too long in such surroundings will at best be very elementary, and progress in French will be virtually nil. In the long run, his chances of promotion are more liable to suffer than to be enhanced by such a system.

### *Supervisory Staff*

The decisive influence of supervisory staff on the output of North African workers is everywhere apparent and the good will and ability of such staff are of paramount importance for the adaptation and improvement of the workers' training.

### *Prospects*

This problem is as much related to psychological factors as to material considerations such as wage increases. Several undertakings have lost staff who, having acquired a considerable degree of skill, felt they were not receiving a recompense proportionate to the efforts they had had to make and to the services their new abilities enabled them to offer.

The vocational training of North African workers raises a number of further problems. One concerns the age of the workers to be trained. Immigrant North African labour, while generally fairly young<sup>1</sup>, includes persons of widely varying ages and mentalities. Workers of 20 and 40 years of age will quite certainly not be equally fitted to follow and benefit from classroom teaching, and teaching methods and even training programmes will necessarily have to vary.

Another problem is that of the cultural level of immigrant North African workers. Most of them have never been to school and, apart from their imperfect grasp of French, they are but little acquainted with the rudiments of such subjects as arithmetic. It is often necessary, therefore, to give them some general education before starting any vocational training proper.

## PROGRAMMES AND THE ORGANISATION OF COURSES

The varied needs and facilities of undertakings inevitably mean a diversity of types of training. This is not the place to study the various systems so far used, some of which are in any case only at the experimental stage. A few general conclusions may be drawn, however, respecting the vocational training programmes for North African workers and the way they have been organised.

Those for whom this training is most generally designed can appreciate anything that brings a quick reward but if, in training which

<sup>1</sup> Such incomplete inquiries as it has been possible to make reveal that less than 10 per cent. of North African workers are over 50 years of age. It is probably safe to say that about half of them are within the 25-40 age group.

demands a good deal of attention and additional work, they fail to perceive any immediate advantage, they tire of it perhaps even quicker than a metropolitan Frenchman. There can be no doubt that, as yet, North African personnel do not always clearly see exactly where their interest lies and it is the duty of management—and also to its advantage—to see that they are guided by their fellow workers and by the supervisory staff. Some undertakings have followed up persuasive action of this kind by granting attendance bonuses to North African workers who attend upgrading courses.

### *Programmes*

French language courses and elementary training in the theory and practice of industrial hygiene and safety have to be so organised as to cover the maximum number of North African workers. Such instruction should not be limited to those who will probably become highly skilled, since their object, which is to ensure industrial safety and generally to adapt the men to their surroundings, goes far beyond pure vocational training and promotion.

Genuinely technical instruction can be limited to North Africans whom pre-selection has shown to have the necessary aptitudes and keenness.

The experience of a number of metal works would seem to show that it is possible to arrange for the various courses to be covered at two levels of instruction—an elementary programme designed for the mass of illiterates and workers without any special knowledge, to include instruction in the elements of French (a working vocabulary and exercises in everyday phrases) and in general safety rules, and a more advanced programme for workers who already possess a certain knowledge of their work and have decided on a trade, to include, in addition to courses of a purely technical nature, considerably more advanced instruction in French (syntax and general vocabulary) and in safety problems.

### *Facilities*

The choice of the person to direct the courses and of the instructors is particularly important. It is probably neither necessary nor desirable for those responsible for the vocational training of North African personnel to know the languages or dialects of their pupils. On the other hand it is indispensable that, apart from being fully competent in their subjects, they should have some idea of teaching methods and at least some understanding of the North African mentality. Excellent results can be achieved by taking instructors from the supervisory staff of the undertaking; through their daily contact with North African workers, they have often obtained a good insight into their problems and reactions.

The use of teaching aids, such as slides, films, charts, posters, pamphlets and so on, often proves extremely useful, as North Africans are most observant and frequently have a remarkable visual memory. It should be noted, however, that it is a mistake to prepare pamphlets or posters (on safety problems, for example) in their native language, as the vast majority of North Africans can read even less Arabic than French.

### *Organisation of Courses*

Where possible, the organisation of vocational training inside the works or undertaking has much to recommend it. By linking the in-

struction with the worker's daily life, it offers the greatest chance of convincing him that the extra work means better prospects of becoming more proficient and thus of gaining promotion.

The following extract may be of interest in this connection; it is taken from a report by a representative of a motor works on an experiment in teaching French in the undertaking.

This is the third year the French classes have been running. In the first two years, despite the efforts of the management, the vocational school and the instructors, the North Africans failed to show any great enthusiasm . . . even though the classes had been arranged to take place during working hours so that everyone could attend.

This year, to increase attendance, the management decided to make them more alive. The idea is not simply to make the pupils read and write but also to give short talks occasionally on some interesting topic, such as personal hygiene or first aid, and to show instructive and attractive films each month. Two shows have been given since November with films on "Under-water Fishing", and "Climbing a Rock in the Alps" as well as films on safety measures in the works, with titles such as "Wear your Goggles" and "Individual and Collective Safety Measures". These film-shows seem to have caught the pupils' imagination and have definitely helped to increase their knowledge.

Two instructors (one French and the other North African) share the elementary and advanced courses. Their methods differ, but the results are virtually the same. In writing and speaking they both make an effort to use simple, practical words that the pupils can later use in everyday conversation.

To increase attendance, it has been decided to award a number of prizes at the year-end to those who have shown the most keenness.

As a result of these measures average attendance at the classes has considerably increased.

Whether such courses are organised inside or outside the undertaking and during or outside working hours, there can be little tuition in French except by classwork, with the instructor and his pupils meeting in some suitable accommodation.

This is not true, however, of instruction in technical subjects and in safety measures. Many undertakings still have nothing but on-the-job training—often for their French staff as well as their North African personnel. Admittedly a number of North African skilled workers have received their training in this way, but very much better results could probably be obtained by organising additional instruction in the form of talks, film-shows or proper courses.

Such additional instruction can be imparted during or outside working hours through evening classes, Saturday courses or workshop talks by staff instructors or outside lecturers. The choice of system depends to a great extent on working conditions and the facilities offered by the undertaking (eight-hour day or non-stop shift work, available classrooms or instructional workshops, the distance of the workers' homes, etc.).

The educational work of various private, semi-public and public bodies should not be underestimated, but it is still to some extent sporadic and does not suffice to meet the requirements of the metal trades. This means that undertakings employing a considerable number of North Africans have to make their own arrangements for the training of the personnel they need. It is nevertheless true that the experiments made in the training and upgrading of workers by the National



Inter-occupational Association for the Rational Training of Labour have enabled various systems to be tested and have led to conclusions which cannot but benefit the organisation of vocational training within industry. The promotion of these private and public ventures will, moreover, be of considerable assistance to undertakings where the facilities or the numbers of North Africans employed do not justify the introduction of a full vocational training service.

The vocational training of North African workers is still essentially a short-course system, since the workers' ages and conditions of employment exclude any possibility of their being given a long period of apprenticeship. This does not, however, mean that the principles and systems followed for the short-course training of metropolitan skilled workers have to be systematically adopted. While several sufficiently advanced North Africans have already been admitted to a number of short-course vocational training centres for metropolitan workers, the manual skill and intuitive knowledge of most North African workers are generally very much inferior to those of the young metropolitan workers entering such centres, and their difficulties are further aggravated by their lack of French. The only solution would appear to be to combine technical instruction with more general education.

The training of North African skilled workers is still a longer and more arduous task than the training of Frenchmen and can therefore be provided only for the better elements.

It will probably be a long time before the bulk of North African workers rise to the higher grades of skilled craftsmen in the metal trades. The call for labourers and semi-skilled workers is such that a situation of this kind will not cause any difficulties, but by training a nucleus of North African skilled workers, by raising the labourer's status in the eyes of the North African and by giving anyone who deserves it a chance of further training, heads of undertakings will do much to improve the stability and output of their immigrant labour.

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