



Glasgow 1965

XIV international apprentice competition

Message of welcome by HRH The Prince Philip, Duke of Edinburgh, KG, KT

This is the age of science and a time of great technological progress in every field of human activity. This means that traditional as well as new crafts and skills are immensely important to the changing and growing requirements of modern industry.

I am sure that the young people who are gathered in Glasgow in friendly rivalry will demonstrate that they can meet any demands which the future may make of them.

You have come to Glasgow to display your skill and to represent your country but I hope you will take back with you a wider understanding and many new friendships.



Foreword

The attention of no fewer than 15 countries is focused on this year's International Apprentice Competition. We are again reminded that the high standards of skill and craftsmanship, which each successive competition has produced, will be maintained only by a sustained effort in basic industrial training.

In increasing numbers each year young people from all parts of the United Kingdom and the Commonwealth are taking advantage of improved facilities for technical education in the United Kingdom. These facilities are designed to meet the demands of industry in an age which sets high value on standards of efficiency.

With the emphasis on industrial training it is fitting that Glasgow was chosen as the venue for the XIV International Apprentice Competition. With its many centres for further education set against a background of vast steel production, engineering, shipbuilding, motor car manufacture and nuclear projects, it is the ideal place for competitors to meet in a contest of skill and craftsmanship. It is expected that even higher standards will be reached this year and competitor countries will be faced with a more exacting challenge.

The United Kingdom Committee of the City and Guilds of London Institute, which is responsible for organising this year's International Apprentice Competition, join with the Scottish Advisory Committee in wishing each competitor every success. They trust that all will enjoy their stay in Scotland, a country whose natural beauty and historical interest, combined with the opportunities that it offers in a wide range of sport, make it an ideal place in which to relax after the Competition

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cover their administrative expenses. Thus, all firms, unless specifically exempted, will pay a levy towards the cost of training. Those firms actually providing training will recover all or some of the cost in the form of grants. The boards' proposals for exercising their powers have to be submitted to the Minister of Labour for approval.

The Central Training Council

A Central Training Council has been set up to advise the Minister. It will keep under review the performance of the various boards, the adequacy of training arrangements generally, and the need for research. Particular attention is paid by the Council to training for occupations which are common to many industries, such as supervisory, managerial, commercial and clerical workers, and it may recommend standards of training in these occupations for the guidance of the boards.

Soon after the Act came into operation five boards were set up covering a quarter of the working population in Great Britain. They were for the engineering, construction, wool, iron and steel, and shipbuilding industries. It is expected to have boards for all the major industries by 1968.

The first levy proposals by the boards vary from $2\frac{1}{2}$ per cent of the wage bill in the case of the Engineering Board to £7 per person employed in the case of the Iron and Steel Board. These are being regarded as pilot schemes subject to revision in future years in the light of experience. Boards are adopting differing methods of calculating grants, but they all have the same result – to increase and improve industrial training. Firms which do more than their fair share of training may get back in grant all or more than they pay in levy.

The Government's Part

The Government is actively participating in two aspects of the new training drive. The Act empowers the Minister of Labour to make payments of up to £50 million
6 in grants and loans to the boards. At the outset, the

Government's contribution is mainly being used to meet the initial administrative costs of the boards and to aid the training of the considerable number of new training officers that industry requires. Secondly, a vast programme of doubling the number of Government Training Centres has been carried through in order to provide sufficient places for the retraining of workers whose skills are becoming outdated by reason of technological change and for the training of those who missed the opportunity of apprenticeships in their younger days. These centres cover the whole of the country, and training is given in about 40 trades. Among the many steps being taken in Great Britain to meet economic and technological change there is none more vital than the training and retraining of the country's most valuable asset - its manpower.





Technical Education for all

As scientific and industrial progress opens up new horizons, technical education becomes of paramount importance. New industries based on the application of scientific discovery are developing fast. Their success depends on the opportunities given to young people to acquire new skills and to put them to use in the development of these new industries.

The organisation of technical education differs in the various parts of the United Kingdom. In England and Wales the responsible Government department is The Department of Education and Science (known until 1964 as the Ministry of Education). In Scotland the responsibility rests with the Scottish Education Department and in Northern Ireland with the Ministry of Education for Northern Ireland. The provision of technical colleges is mainly a responsibility of local education authorities in the various cities and counties. Technical colleges have high priority in the building programme; for example, in the city of Glasgow alone there are nine large technical colleges and a further twelve at various stages of planning.

Since 1948 the number of students in further education establishments in the United Kingdom has trebled and now stands at 867,400. This figure represents the number of students on day-release, full-time and sandwich courses. In addition, 992,300 students of all ages attend vocational evening classes.

Technical colleges throughout the United Kingdom provide an infinite variety of courses tailored to meet local requirements. By far the majority are courses of part-time study for employees in industry, who are released for part of the working week, normally for one day. Further tuition in the evening is available and many seek this in addition to day release. Vast numbers of other students use this method to acquire added skills or to qualify in subjects often different from those by which they earn their living.

Many colleges also have full-time courses, some of which reach the level of degree and professional qualifications. In recent years also there has been further development of sandwich courses, in which periods of college study alternate with periods of industrial training. The majority of part-time day or evening courses are designed to meet the requirements of technicians and craftsmen where the demand is greatest. There has also been a rapid development of courses designed to meet the needs of those industries employing operatives whose work depends on a combination of practical ability and an elementary understanding of scientific principles. Although craftsmen have long been well catered for, courses have been further strengthened by the closer integration of technical studies of materials and processes with the relevant practical work. Courses for operatives have broken new ground by providing a background of technical knowledge for workers who, although of limited skill, often control complex and costly plant and machinery. Improved knowledge fosters greater interest which, in turn, promotes greater efficiency.

An important part has been played in these developments by the City and Guilds of London Institute, an independent body working under a royal charter. The Institute, through the medium of different expert advisory committees on which the colleges, industry and education authorities are represented, has devised syllabuses which form the basis of college courses. The Institute organises national examinations which are taken at the end of these courses and awards certificates to successful students; these awards are widely recognised as the appropriate technical qualification for that trade or occupation. In England and Wales there are, in certain areas, regional examining unions, whose work is co-ordinated with that of the Institute.

The professional institutions and the Government departments are associated in the administration of

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schemes for Ordinary and Higher National Certificates and Diplomas in various fields of engineering, construction and applied sciences. Courses leading to these qualifications are held in every technical college. They provide for the technician who has special proficiency in mathematics and science and may lead in some cases to professional status. Courses for Ordinary National Certificate and Higher National Certificate are normally organised on a part-time basis. Diploma courses are full-time or sandwich.

The number of students and the variety of courses are both steadily increasing. Developments arising from the Industrial Training Act will call for close co-operation between the Ministry of Labour, the Government departments responsible for education, local education authorities, Industrial Training Boards and the City and Guilds of London Institute. The Institute has been keenly interested in the development of technical education and training since its inception in 1878; it therefore welcomed the decision to hold the XIV International Apprentice Competition in the United Kingdom and the opportunity to co-operate with the Corporation of Glasgow in this exciting enterprise.

As the Host Country this year Britain will show the standard of technical training attained by competitor countries. with a clear indication of the minimum levels acceptable for next year's entrants. Training Officers in the United Kingdom will have an unrivalled opportunity to assess the real value of the Competition as an extension of their training programme viewed in the light of the great emphasis being placed on improving training facilities and raising levels of skill throughout this country. Many will find that a higher standard of technical skill alone will not greatly enhance their country's chances in future competitions. If teams are to be truly representative, then the sources from which nominations are drawn must cover the widest possible range of industry. The success or failure of the Competition in the future may well depend on this factor.

Many firms and organisations are already considering which of their apprentices should be nominated for the first round of selection tests for next year's Competition, and those who have not previously participated but have had the opportunity of observing this year's Competition will no doubt submit their apprentices to exacting tests before nomination.

If the levels of skill and craftsmanship are to continue at the present rate, then pre-selection tests to ensure that nominees have reached a standard equivalent to that obtained in the 1965 Contest will be a major contribution to the future. Anyone in doubt about the standard required can obtain copies of the drawings of the 1965 Competition after July.

In Britain details of the selection tests, using the metric system, will be announced shortly in the Trade and Technical Press. Selection will be held regionally to minimise travel and absence from work, and the judge's markings and observations will be embodied in a report sent to the competitor's employer.



We in Britain also appreciate that to facilitate entry into the Competition every possible assistance must be given to employers, both large and small. One aspect of this is the hope that colleges will freely offer their opinion as to the suitability or otherwise of a competitor who attends as a day release student. In many cases it is felt that without this opinion being available the smaller firms do not have a true appreciation of their apprentices' chances and some may have failed to take part for this reason. This would do much to ensure that competitors have reached the standard required as part of their normal training.

Industry generally has always been quick to accept any challenge to its technical competency and the 14th International Apprentice Competition in Glasgow must spur employers to participate over a wider span of industry. This in turn will lead to further diversification and the necessity to establish further centres for testing outside the traditional industrial belts. Many firms will have moved to new development areas and will then find that they can play a decisive role in the selection of next vear's team. The flexibility of the organisation behind the Competition lends itself to such developments and it is quite possible that in the foreseeable future we shall see self-contained regions holding their own individual selection tests with appropriate rewards for successful contestants. This will be in keeping with the aims of the contest and will itself introduce a greater element of competition.

In 1966 there will be a number of changes in the Competition. The age limit will be restricted to apprentices born either on or after January 1st 1946, and for the first time girls will be able to take part. In technical fields there are many instances both in the United Kingdom and abroad where girls are trained to the highest standards to operate complex plant and equipment. In this respect they are completely identified with technical training
12 itself and they will be welcomed as competitors. Yet

another change in the rules will allow anyone to be nominated as a competitor provided his or her application has been officially approved by the employer concerned.

It is essential that we do not lose sight of the primary aim of the Competition which is to promote apprentice skills against a background of international friendship and understanding.





A Young Man's Country

Everybody knows that Scotland is world famous for its ships, textiles, steel and heavy machinery – and whisky. But its greatest export of all has been its young men and women who have gone to the far corners of the earth, often to play a significant part in developing the country of their adoption.

Today, the young Scotsman's job is different – his task is to develop his own country, to lead it through industrial diversification and technological advance, to help forge its expanding and ambitious economy, to sell Scotland – no less.

Four new universities – Strathclyde, Heriot-Watt, Stirling and Dundee – have altered the face and prospects for advanced education. Four completely new towns are at various stages of growth, including Cumbernauld, with its revolutionary advanced factory designs and unique terraced town centre.

Transport communications are being transformed : in the west twin tunnels under the River Clyde : in the developing east the Tay Bridge and the new Forth Road Bridge, with the fourth largest span in the world and its arteries of modern approach roads. In the north is the vast breeder atomic reactor at Dounreay and great new hydro-electric schemes : in the south, huge new power stations of the conventional type or running on atomic power. More homes in Scotland get electricity from nuclear stations than in any country in the world.

Big new sectors of the motor industry have appeared. The whole structure of Scotland's steel industry has expanded into new fields, its potential vastly increased by the strip mill and other developments. The science industries are growing fast – electronics, automation equipment, precision instruments – and there are more and more opportunities for scientific work in Scotland. Our cities and towns are changing as old dwellings are swept away and new flats and shopping centres, new schools and hospitals take their place. Glasgow's urban rebuilding programme is one of the largest in Europe.

In the Highlands too there are encouraging new developments. The biggest single item is a £20,000,000 pulp mill near Fort William, the only integrated mill of its kind in Britain, which will produce fine writing and printing papers.

More and more young Scots are finding work and adventure in Scotland's Highland forests. Tourism is booming, with pony-trekking, water ski-ing and ski-ing on the snow-covered slopes of the mountains as firmly established new ventures.

New hotels are starting to spring up in the Highland tourist area. A new Government organisation – the Highland Development Board – has been planned to stimulate further growth.

Today's young Scot sees all these changes as a fine way of life in his own country, with the adventure of exciting and varied projects as an added spice of life. He sees the Scotland of the future as a young man's country. He takes off his hat to Scotland's storied past but, more important, he is taking off his coat to shape his country's future in the twentieth century.



List of Contributors

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Background to Scotland

On overlay The Forth Road Bridge opened last year has the fourth largest span in the world



Strip mill at Colville's Ravenscraig works; a major supplier to Britain's industries and an important factor in the establishment of new industries in Scotland



Production line at Rootes plant, Linwood, near Glasgow, where the popular Hillman Imp is produced for home and export markets



The ship-building yards of John Brown on Clydebank, from which many of the world's largest vessels have been launched and fitted out



Loch Earn, Perthshire. On one of Scotland's many beautiful inland lakes where water ski-ing is a growing summer sport



A huge new pulp mill at Fort William in the Highlands. The mill will provide work for about 3,500 people and use a third of a million tons of wood a year



The vast breeder atomic reactor at Dounreay which was in the forefront of Britain's developments in the atomic energy field



Cairngorms, one of the many ski-ing centres which have become increasingly popular in Scotland, has now a chairlift which goes almost to the summit of the 4,086 ft. peak



Massed pipes and drums of Scottish regiments form part of a spectacular Tattoo on the Esplanade of Edinburgh Castle. This is one of the most popular events of the Edinburgh International Festival, first held in 1946



