

ELLIOTT-AUTOMATION

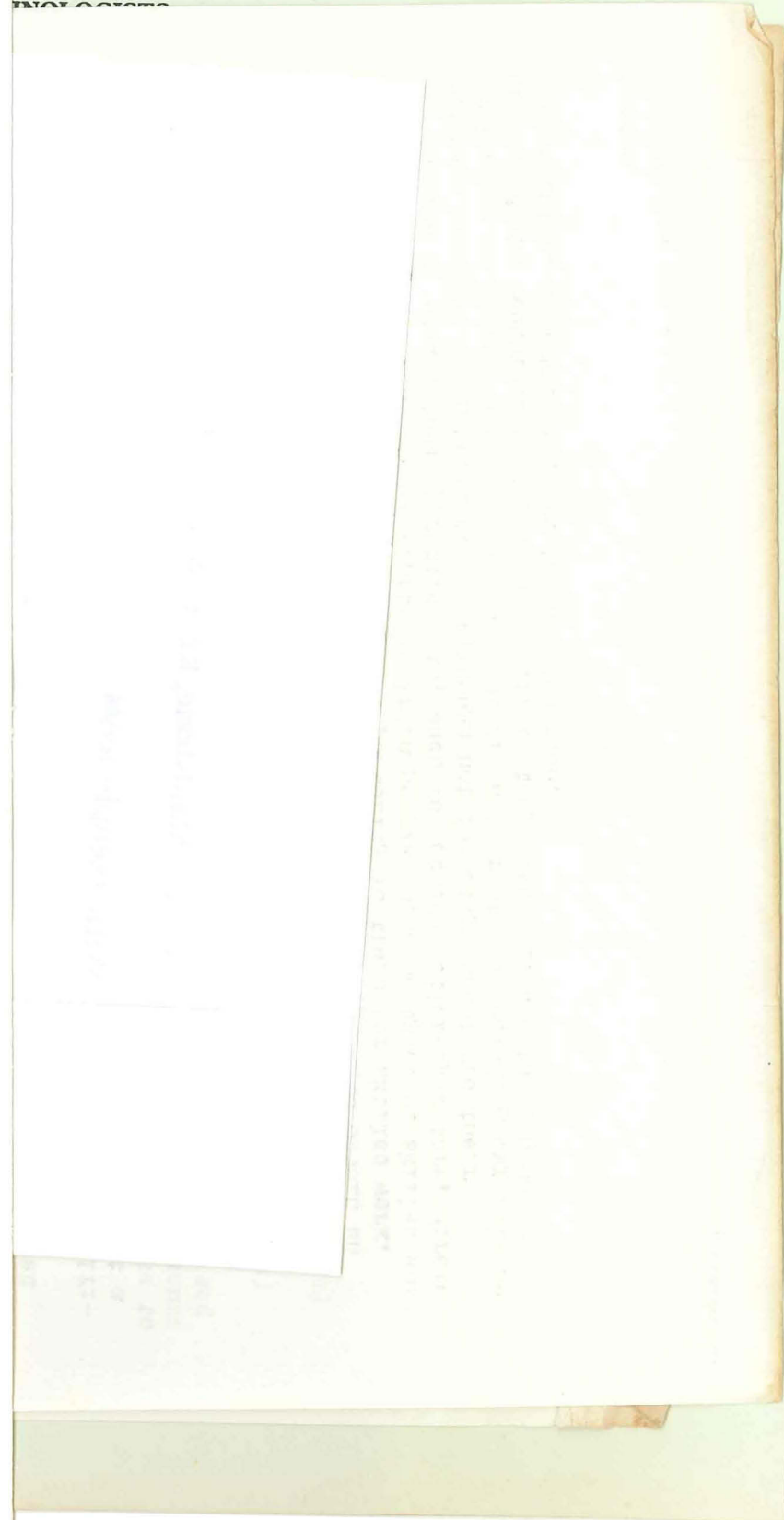
FIRST

IN

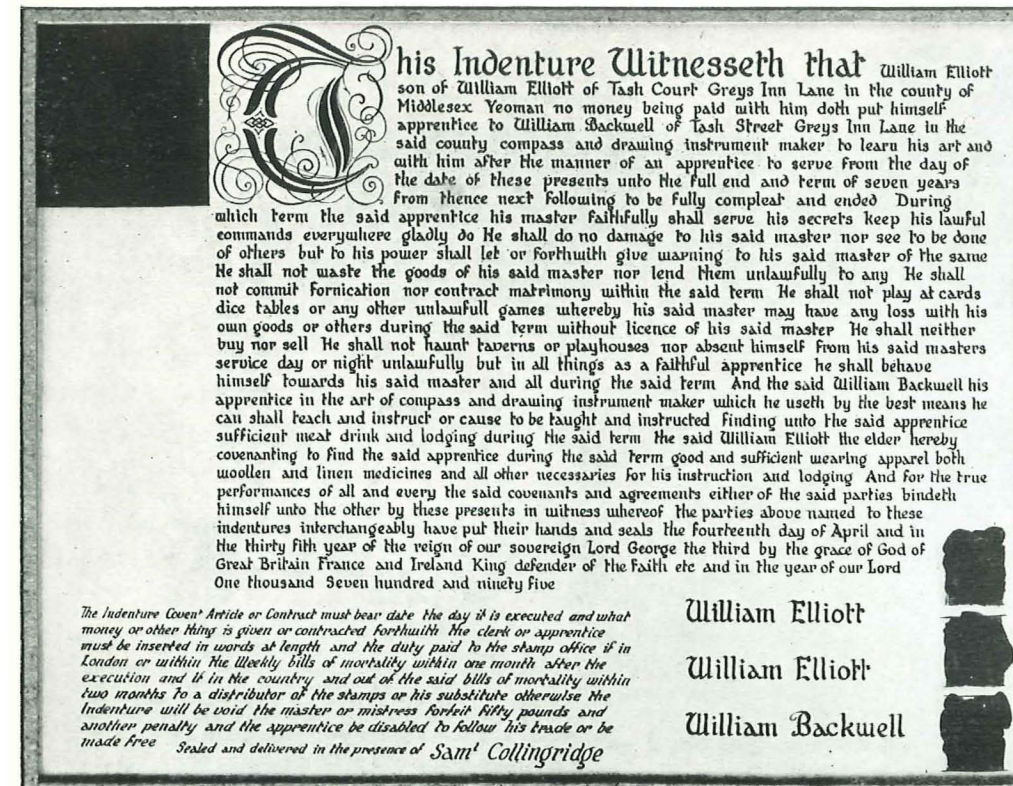
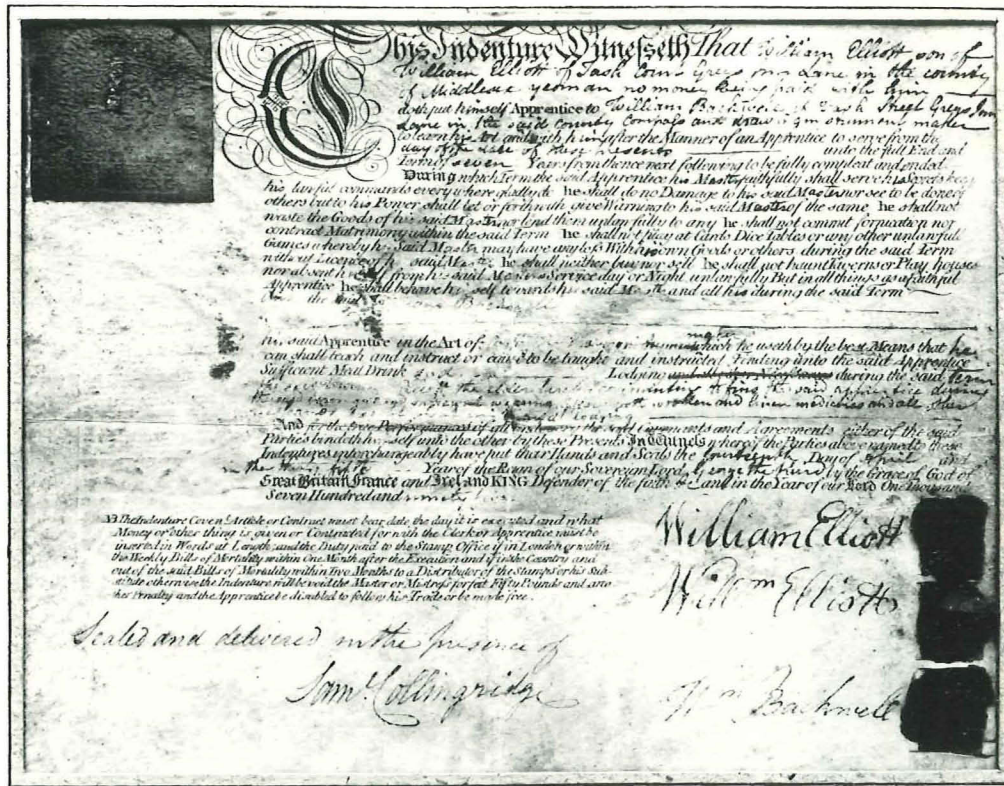
AUTOMATION

ORTUNITIES IN ELLIOTT-AUTOMATION

NOLOGISTS



FIRST IN AUTOMATION



The indentures of apprenticeship of William Elliott, original (left) and transcript (above), who started business as an instrument maker in 1799. His two sons continued the business as Elliott Brothers (London) Limited which carried out work for such notable scientists as Faraday, Babbage and Rayleigh.

ELLIOTT-AUTOMATION



Elliott-Automation has been awarded the Queen's Award to Industry for Technological Innovation in Automation and for Export Achievement

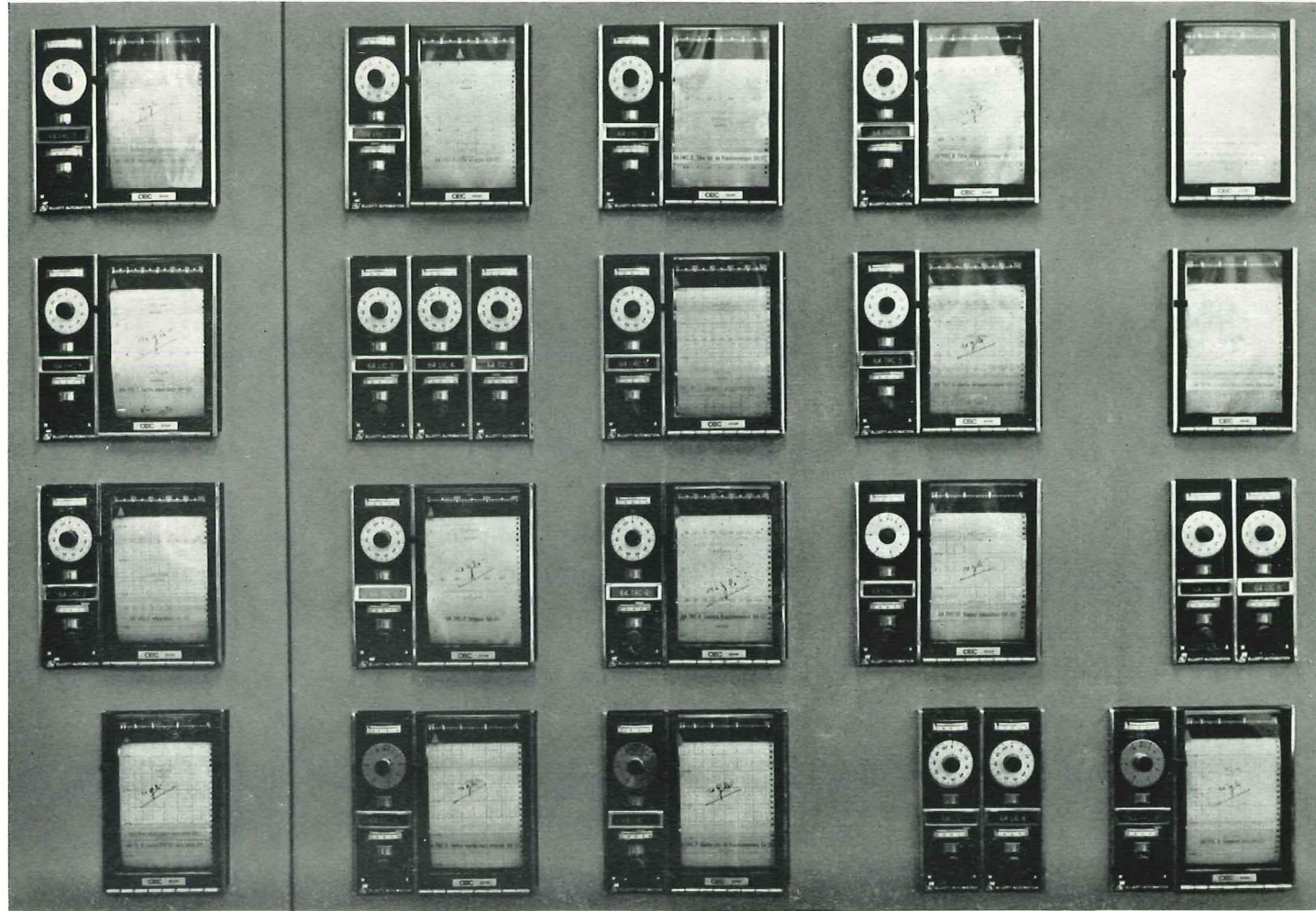
co-ordinates the activities of the subsidiary companies in Australia, Austria, the Irish Republic, South Africa, Sweden, Switzerland and the United States and Elliott-Automation (International) handles the expanding trade with Russia and the Eastern European countries. Agents represent the Company in almost every other country in the world.

This booklet illustrates some of the Company's principal fields of activity. New prospects are opened up by the merger with English Electric and it can confidently be predicted that in its new environment, in which it will both give and gain strength, Elliott-Automation will continue to grow and pioneer new advances in the whole field of automation.



The electronic digital computer is the most important single element in all true automation systems. This Elliott 'on-line' computing system, which controls a paper making machine, has increased throughput by 15%.

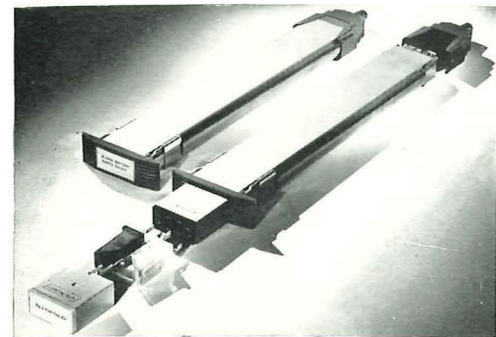
Instruments



Process Instruments: Elliott instruments at a refinery. The company handles entire instrumentation contracts for the largest industrial projects.

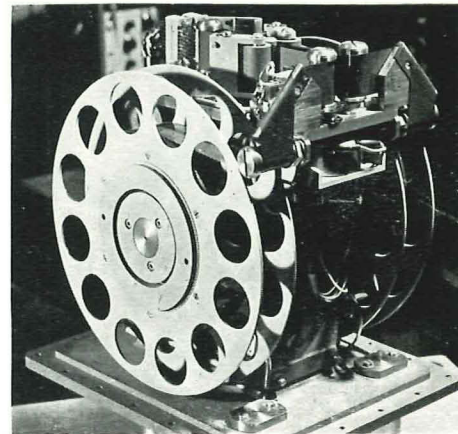
In addition to process instrumentation of all kinds, electrical measuring instruments and analytical instruments, using advanced scientific techniques such as chromatography and X-ray fluorescent spectroscopy, the Company also designs and manufactures a wide range of aircraft instrumentation—from engine instruments to gyros—microwave instruments, nucleonic instruments, and many others.

It manufactures a wide variety of transducers and instrument accessories, servo-components, relays and photoelectric apparatus and offers a range of magnetic tape systems and tape-to-tape translation equipment to meet all requirements for the recording and analysis of instrument data.



Alarm Systems: modular alarm warning units for industrial and marine control systems.

Servos: extremely accurate servo devices supplied mainly for aircraft systems.



Magnetic Tape Systems: this airborne unit, developed for recording in-flight test data, is one of a range of high quality magnetic tape instrumentation recording systems.



Industrial Automation



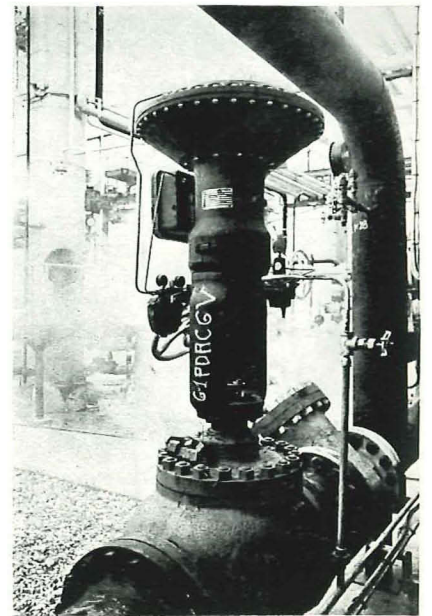
Power Generation: the electronic control room of a 1400-megawatt power station at Tilbury, one of the new stations in Britain for which Elliott-Automation has supplied complete automatic control systems.

Elliott-Automation manufactures all the hardware required for even the most complex industrial automation systems—data transducers, signal transmission equipment, indicators, recorders, quality control and analytical instruments, computers and data loggers. It is the largest manufacturer of automatic control valves in Europe and produces a comprehensive range of flow meters and flow measuring systems.

The Company has an unrivalled range of applications experience, accumulated on projects in almost every branch of industry and in process plants in all parts of the world.

This unique combination of "know-how" and equipment enables the Company to design, manufacture, supply, install and commission integrated systems of automatic control for even the largest plants.

Its systems specialists are engaged on projects in many application areas including oil and petrochemicals, gas, power generation, reactor control and nuclear propulsion, metals, rubber, plastics, food processing and mining.



Valves: Elliott-Automation is the largest manufacturer of automatic fluid control valves in Europe.

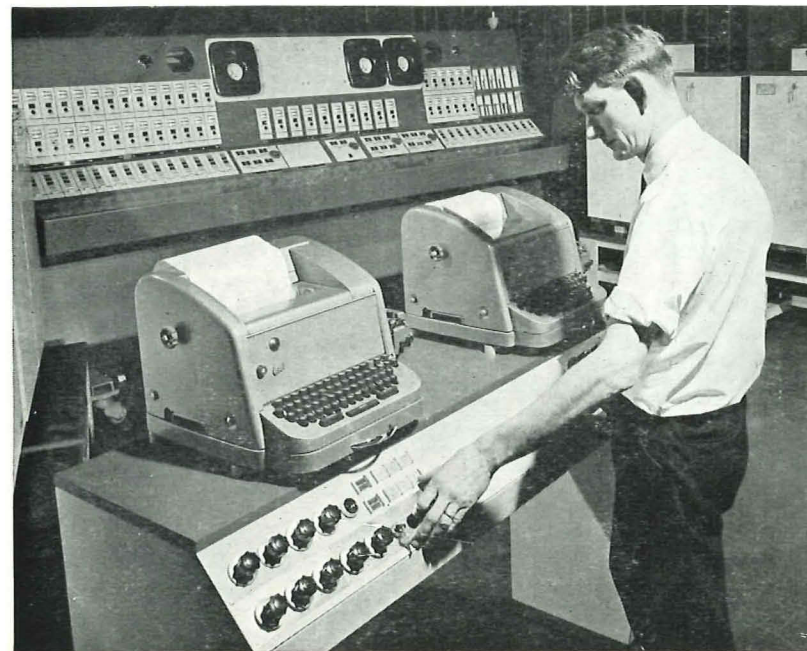
INDUSTRIAL AUTOMATION—continued



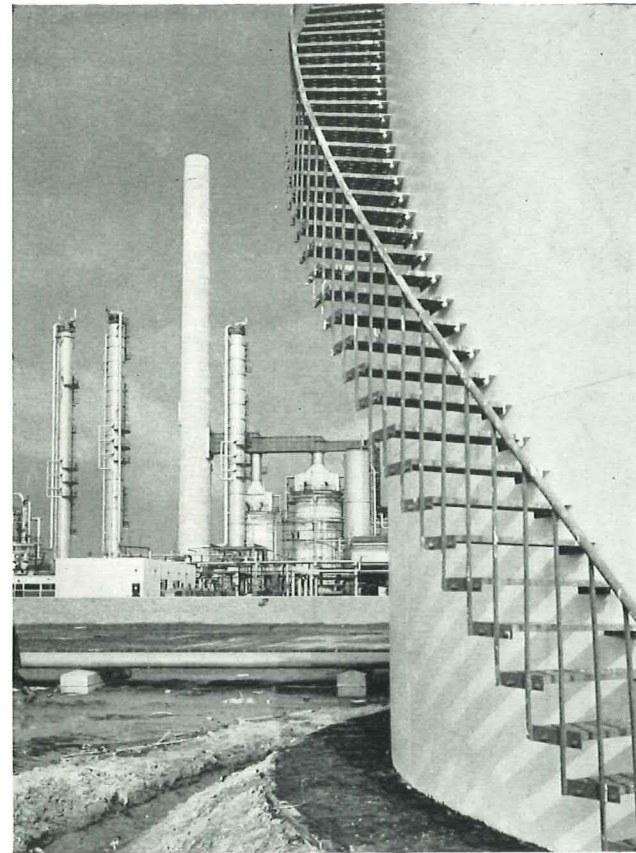
Metals: the entire zinc-smelting process at the new plant of the Imperial Smelting Corporation, under construction at Avonmouth, will be controlled by an ARCH 2000 computer. Altogether the company has orders worth nearly £1 million for this plant, including the supply of a large materials handling system.



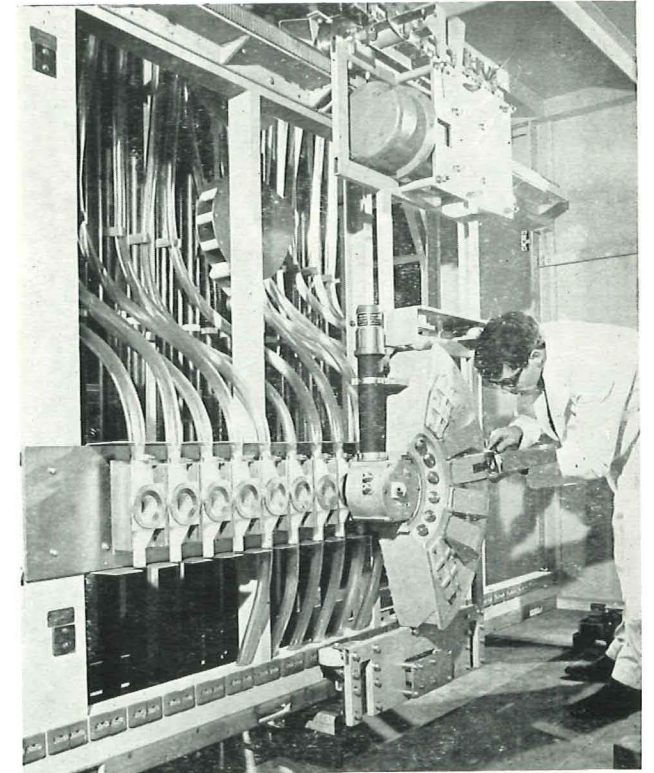
Mining: Huwood/Elliott conveyor controls are used in coal mines all over Britain.



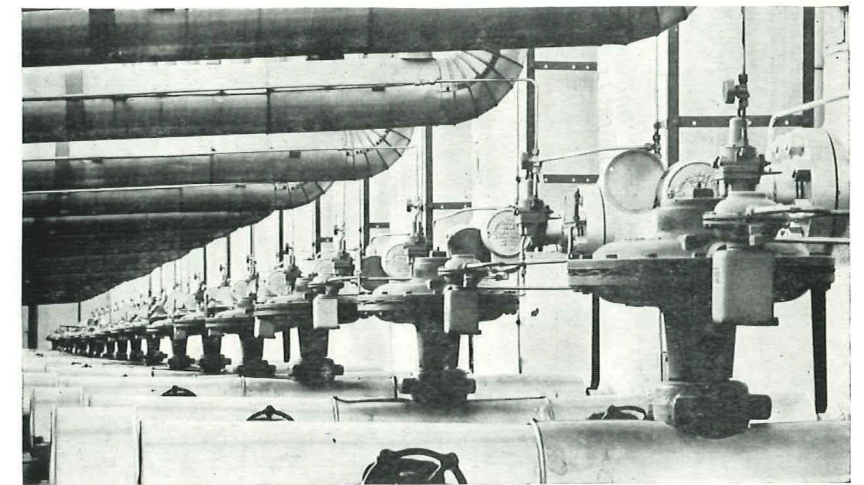
Chemicals: ARCH 102 computer system for direct digital control of penicillin fermentation vats. Self-optimising programmes, which enable computers to adapt constantly their operating patterns as plant conditions change, are being developed for chemical process control.



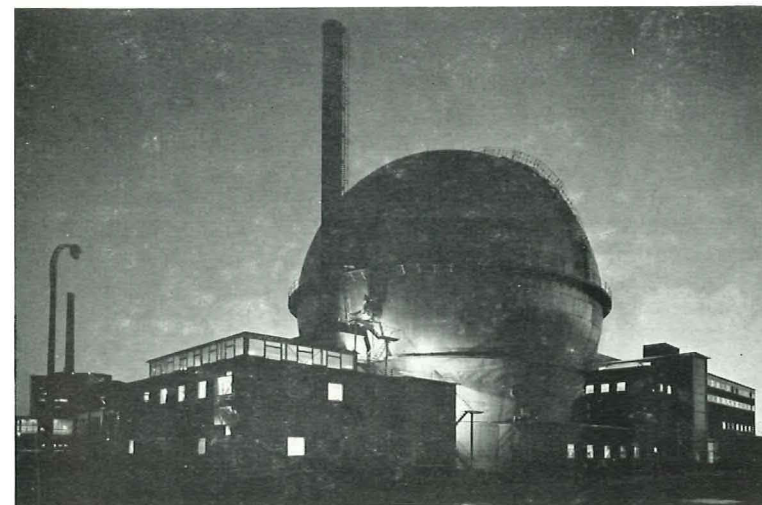
Oil: part of the Esso Refinery at Rotterdam. Elliott products, from single instrument control loops to comprehensive automatic control systems are installed in refineries all over the world.



Quality Control: an X-ray fluorescent spectrometer for on-stream analysis in a mineral ore processing plant. The company has built up a unique range of instrumentation for on-stream analysis and quality control.



Gas: automatic regulators installed at a natural gas processing station in Austria. The gas industry is an extremely important growth market for the company's products.



Nuclear Power: the company has supplied reactor controls for nearly all Britain's nuclear power stations and is an important supplier of instrumentation for the AGR programme.

Computers



Low-Cost Computers: Elliott 900 series computers are used by research departments, engineers, universities; for air and road traffic control, typesetting, medical automation and defence on land, at sea and in the air. '900' Series machines have been applied in a wider variety of applications than any other computer in the world.

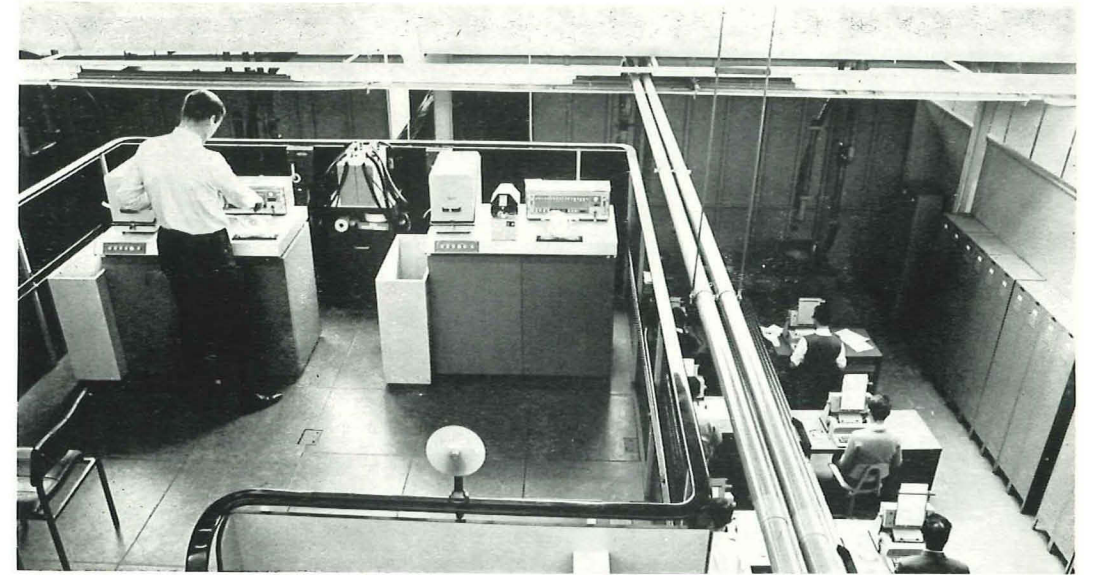
The electronic digital computer is the heart of all true automation systems. For this reason, the Company has fostered the growth of an independent computing capability within all the principal sections of its business. For example, its process automation company is responsible for computers for industrial process control, its flight automation company for airborne computing applications and its space and weapon automation company for computers in the defence environment, trainer and simulator systems and for space research.

Amongst other important on-line applications are those concerned with the use of computers to control road and rail traffic, for typesetting of newspapers, books and magazines, for engineering design, laboratory automation and medicine.

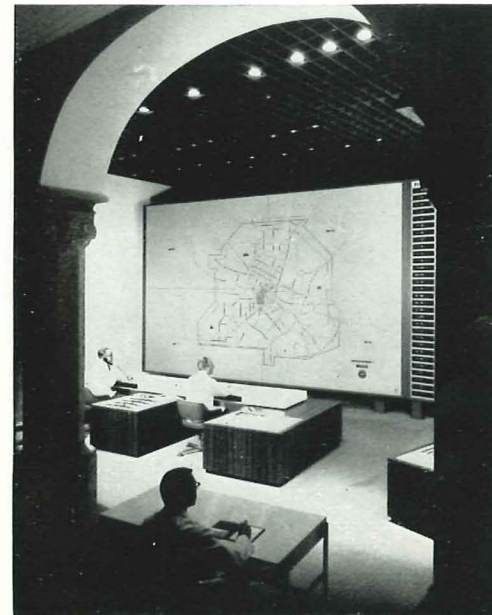
Microminiature Computers: the miniature 920M is a version of the '900' Series computer manufactured from microminiature integrated circuits. First applications are for defence purposes and space research.



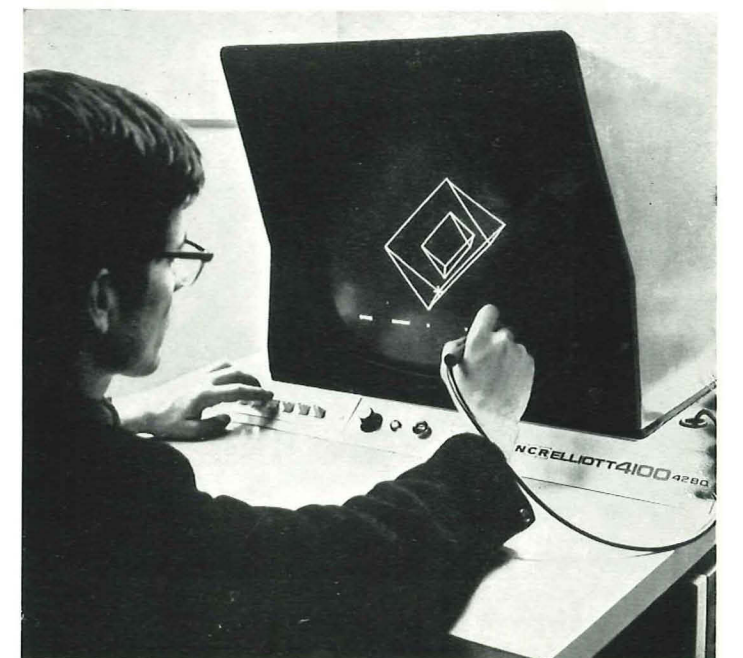
Typesetting: 900 Series computers are used for the automatic typesetting of a number of newspapers. These machines are also proving extremely successful for setting books, magazines and mathematical copy.



Process Control: commissioning-on-site an ARCH 2000 computer direct digital control of a large process plant.



Traffic Control: two Elliott computers control traffic in the city of Munich. Orders are in hand for similar traffic control systems for Madrid and Barcelona. A 900 Series computer will control traffic on the M4 motorway linking London to Heathrow Airport.



Design Automation: advanced graphical displays and associated software are available with Elliott computing systems. This light-pen display is the most up-to-date in Britain.

Space



Major current developments in the Company's space activities are the digital inertial guidance system for the ELDO "Europa" launch vehicle and a propane attitude-control system for satellites. The five nation European Satellite Team has been formed by Elliotts to undertake development of complete satellite projects.

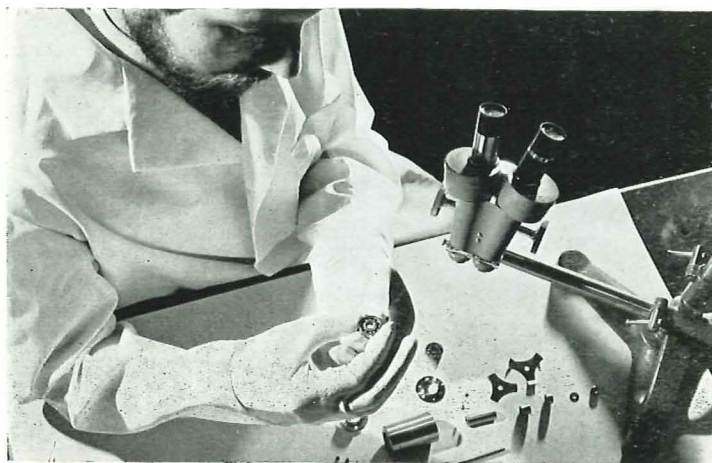
The Space Laboratories have been responsible for development and production of an unrivalled range of attitude controls for Skylark sounding rockets, for development of long-life, lead-lubricated bearings for vacuum environments, and for the construction of mechanical and electronic experiments for British and American satellites.

Inertial Guidance: Elliott-Automation is the main contractor for the inertial guidance system of the ELDO "Europa" satellite launch vehicle. The system incorporates the Elliott 920M microminiature computer.



Attitude Control: preparing the attitude control section of a Skylark research rocket for vacuum tests. This Elliott-designed and developed system has enabled the Skylark payload to obtain the best ever X-ray photographs of the sun. The system controls the aiming of cameras and instruments to within seconds of arc.

Research: assembling experimental bearings used in testing special lubricants for moving parts in satellites.



Defence

At sea, on land, and in the air, Elliott equipment makes a major contribution to defence systems upon which the security of the nation depends. Mobile computers for the field army, computers for air defence, guidance and tracking equipment for naval weapons, portable radars for battlefield surveillance—these are but a few of the areas in which Elliott equipment is helping to improve the effectiveness of weapons systems.

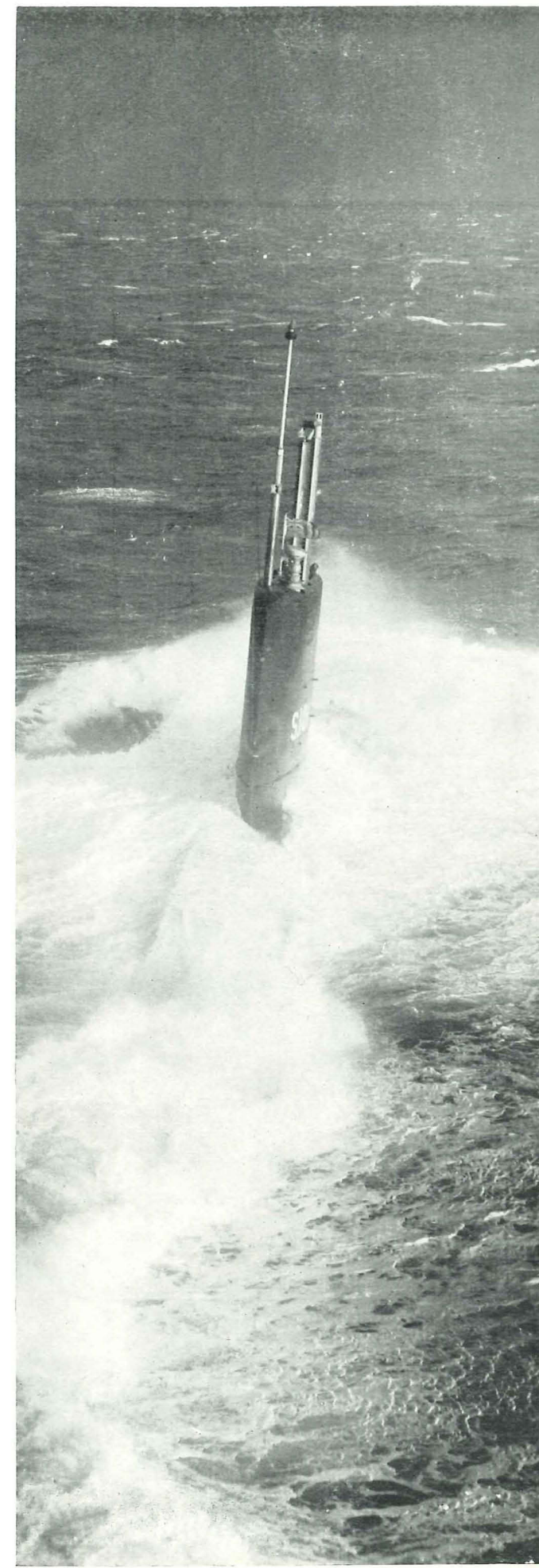
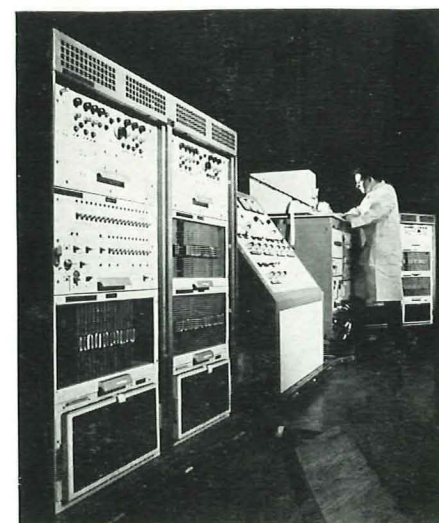
Systems developed initially for Britain's own defence forces are also being supplied to NATO and other allied nations, helping to build up an important export industry for Britain.

Navy: some of the company's most advanced work in defence is carried out for the Admiralty.

Army: the Royal Artillery is being equipped with Elliott Field Artillery Computing Equipment (FACE). FACE is mounted in the armoured battery command post and enables the guns to be got into action much faster and to fire with more consistent accuracy than ever before. The Artillery Survey and Meteorological units, which prepare regular reports for ballistic calculations by the batteries, are also to be equipped with similar Elliott computing systems.



Air Force: air-transportable computing units for the RAF's "Nomad" fighter defence control system. Each "Nomad" system incorporates a number of Elliott 920B digital computers and a high proportion of the circuitry is assembled from the company's own microelectronic logic units.



Flight Control

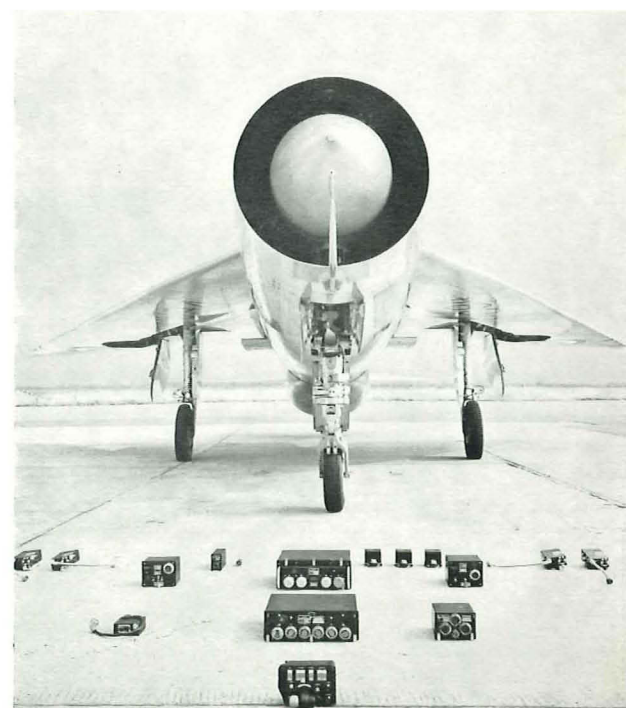


Blind Landing: VC10 flight deck during an automatic landing. Elliott failure-surviving automatic flight control and automatic landing systems are fitted in VC10 and BAC 111 airliners and have been specified for the Concorde supersonic jet airliner.

The control of aircraft in flight is one of the key areas in which advanced automation techniques are being applied. Elliott achievements in this field have won international recognition and the Company has secured important export orders both in Europe and in the vitally important North American market.

Elliott is the prime contractor for the automatic flight control system of the Anglo-French Concorde supersonic transport airliner and is also providing the autopilots and fully automatic landing system for the VC10 and the BAC One-Eleven. It has developed a number of microminiature computers and inertial navigation systems which have been ordered for airborne applications.

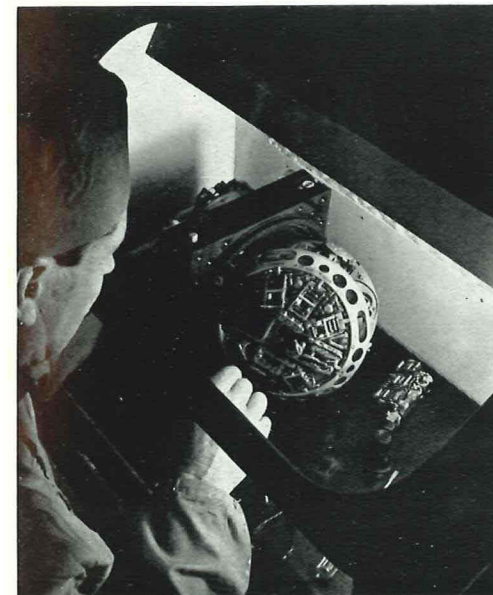
Elliott is the leading supplier of autopilots, flight control equipment and instrumentation for British and European military aircraft. It is also the first British company to supply advanced avionics equipment for the U.S. Air Force.



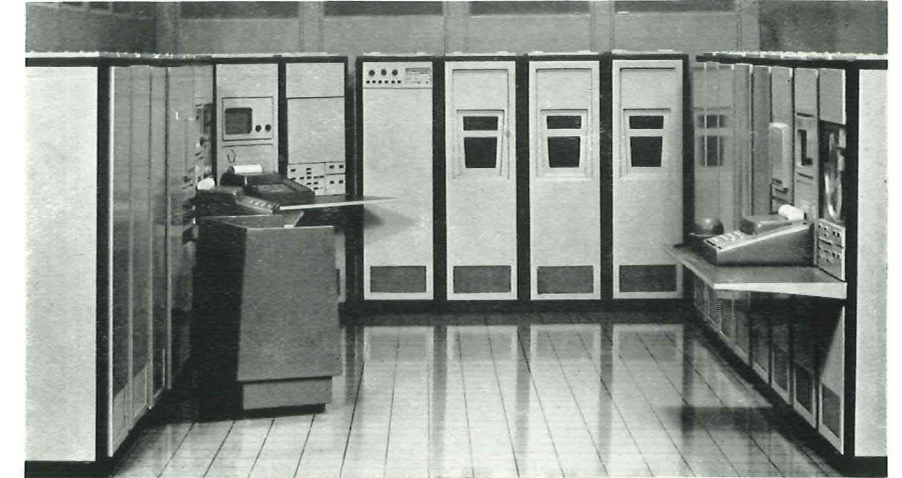
Autopilots: Elliott automatic flight control systems are standard equipment for the RAF's Lightning interceptors and for the Royal Navy's Buccaneer strike aircraft.



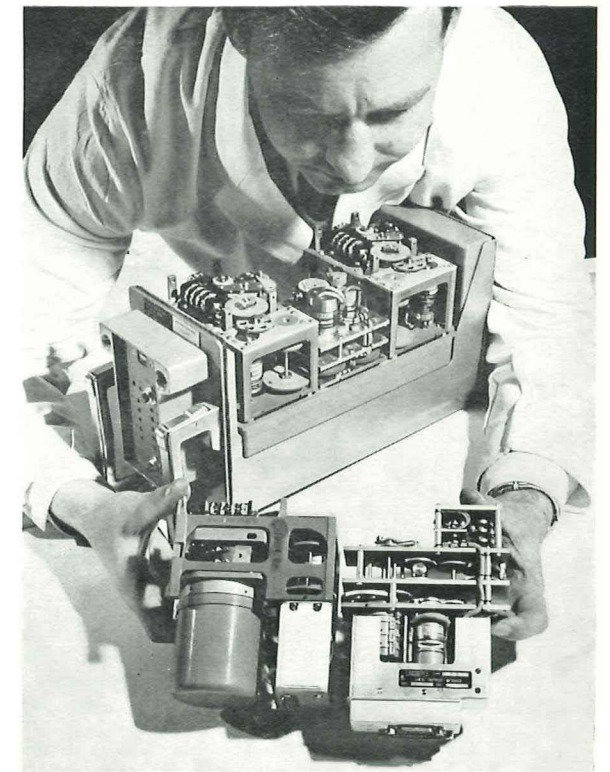
Head-up Displays: an Elliott head-up display in an RAF Belfast freighter. The company is supplying head-up displays for the Swedish Viggen J37 fighter and has developed a special unit, together with its own microcircuit computer, for the United States Navy.



Inertial Navigation: assembling an Elliott E.3 Inertial Platform. E.3 platforms have been ordered in quantity for the Nimrod maritime reconnaissance aircraft. E.3 together with the Elliott 920M microminiature computer and a moving map display form a new Inertial Navigation System with considerable export potential.



Automatic Test: computer-controlled automatic test system of the type which the company is supplying for the RAF's Nimrod aircraft. Many of the flight simulators for new RAF aircraft will also include Elliott computers.

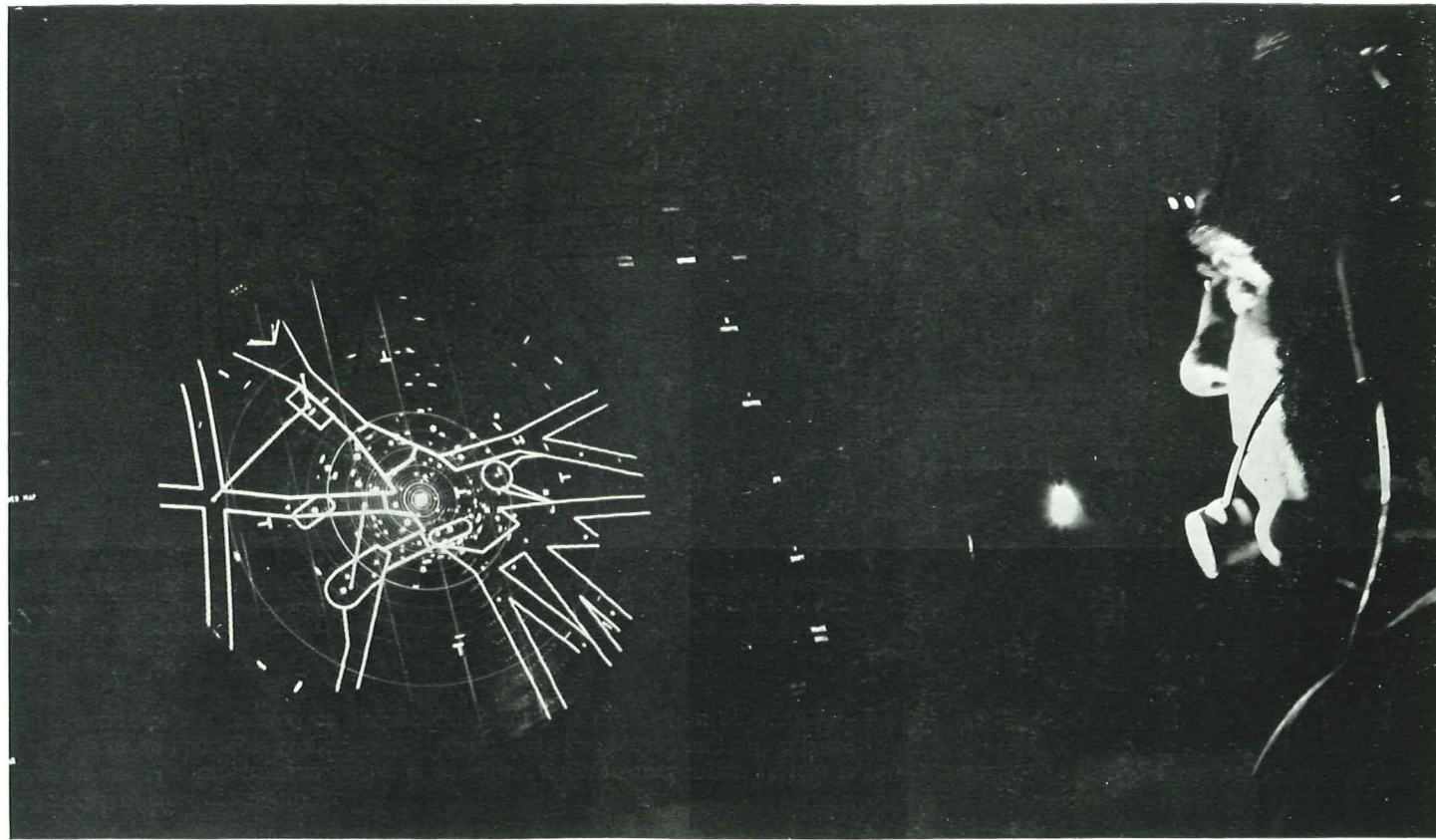


Air-data Systems: Elliott air-data computer. The company is supplying this equipment, which integrates the aircraft's external sensing instruments with the autopilot and cockpit instruments, for the giant Lockheed C5A transport and for the Anglo-French Concorde and Jaguar projects.



Low-Level Strike: during low-level strike missions the Elliott head-up-display fitted in the Buccaneer enables the pilot to read his instruments at normal eye level.

Radar and Communications



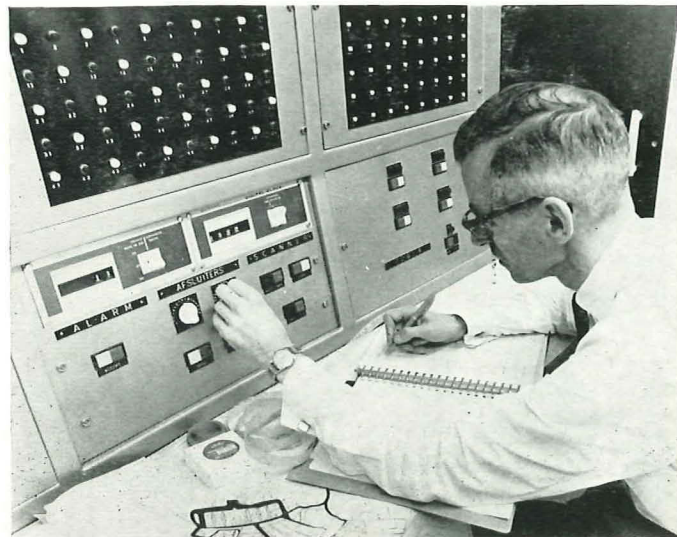
Aircraft Identification: Elliott-Automation is a major British supplier of decoding systems, some of which require full-scale digital computers, for Aircraft Identification Radar (A.I.R.). A.I.R. is fast becoming one of the most important elements in air traffic control.

Radar activities are centred on the development and production of small air-borne radars and portable ground radars, particularly for security and surveillance applications. A complementary seismic detection and intruder alarm system is an important new development.

The Company has been responsible for much original radar research and particularly for the development of the "Cassegrain" aerial. It also supplies components such as microwave power sources, waveguides, attenuators and amplifiers to other manufacturers of radar systems.

Activities in the communications field range from computer-controlled message switching systems, for both civil and military applications, to computer-based networks for the control of gas, oil, water and electricity distribution.

The Company is also engaged on projects in space communications, satellites and research into laser applications.



Telemetry: an ARCH telemetry computer in remote control of natural gas distribution in Holland. A telemetry system being supplied for the British North Western Gas Board incorporates no less than six Elliott on-line computers.



Battlefield Radars: Elliott man-portable battlefield surveillance radars have been ordered in quantity for the British Army.

Microelectronics

The company has played a major role in the development of Britain's microelectronics industry and has built up important production and research facilities at Glenrothes, Fife. The laboratory has designed and produced a range of Metal Oxide Silicon Transistor circuitry and has developed the first 'beam-lead' connections from microcircuits outside the United States.

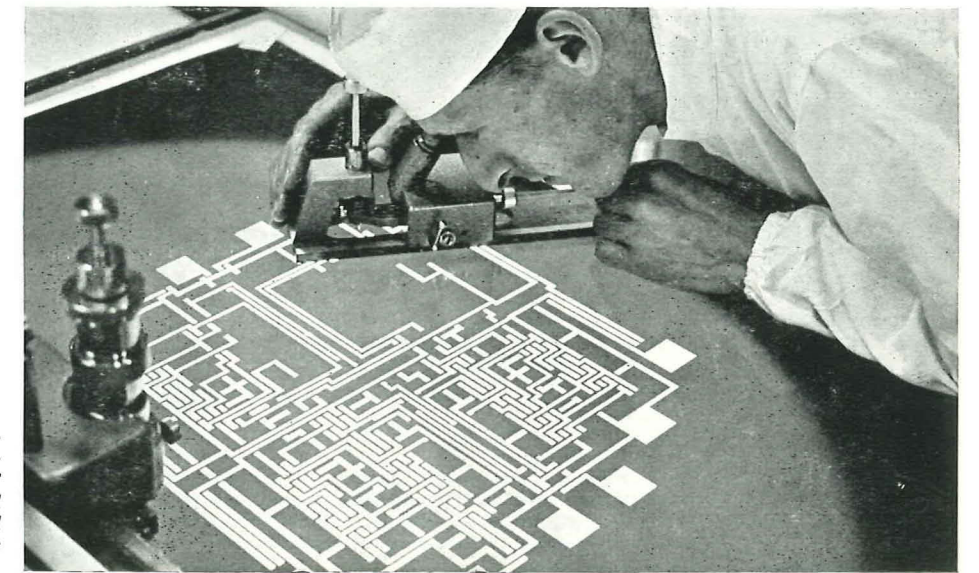
Elliott-Automation is already making extensive use of microcircuit technology in its computers, such as the 920M, in defence equipment and in industrial process control.



Microcircuits: a microminiature integrated circuit on the back of a hibernating ladybird. This type of circuit is mass produced at the Glenrothes microelectronics factory.

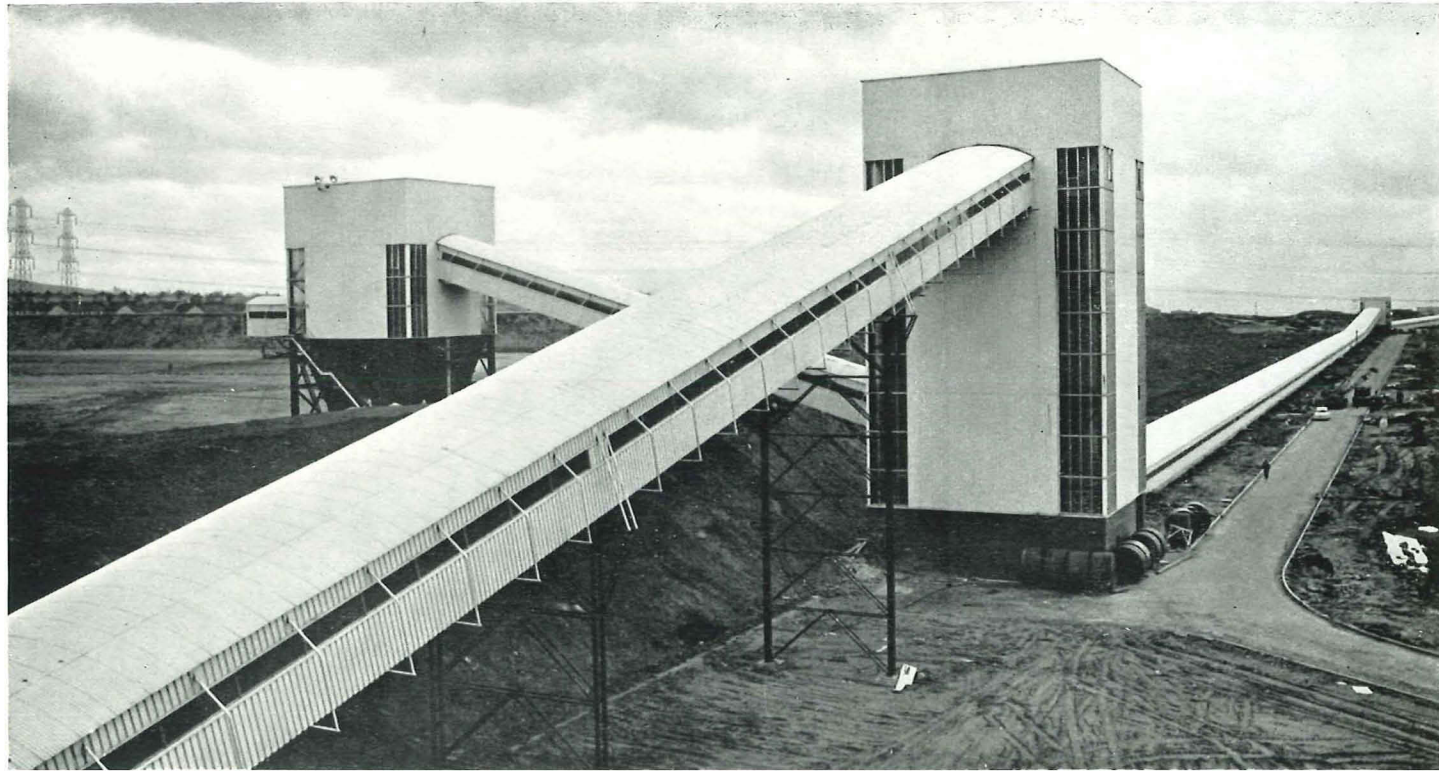


Production: a high-speed, computer-controlled, automatic testing system for microcircuits.



M.O.S.T.: preparing, under 'super-clean' conditions, the enormously enlarged master plan for a Metal Oxide Silicon Transistor (MOST) integrated circuit. MOST circuits, containing over 300 individual electronic components, are being supplied to a number of government departments and equipment manufacturers.

Materials Handling

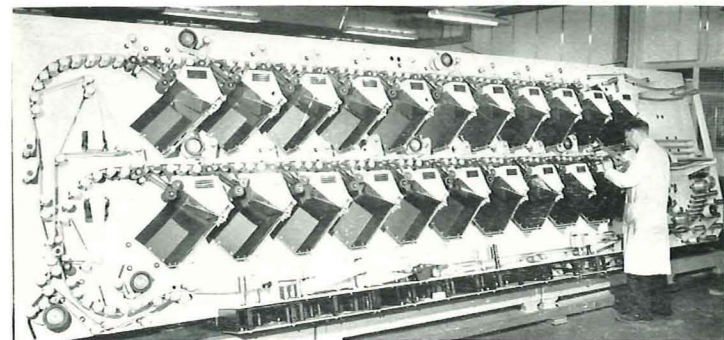


Conveyors: coal conveying system supplied by Spencer (Melksham) for a power station at Cockenzie in Scotland is typical of the large-scale projects undertaken.

The design, manufacture and installation of a comprehensive range of equipment and controls for the conveying and automatic handling of anything from bulk commodities to buttons and baggage is a major field of activity.

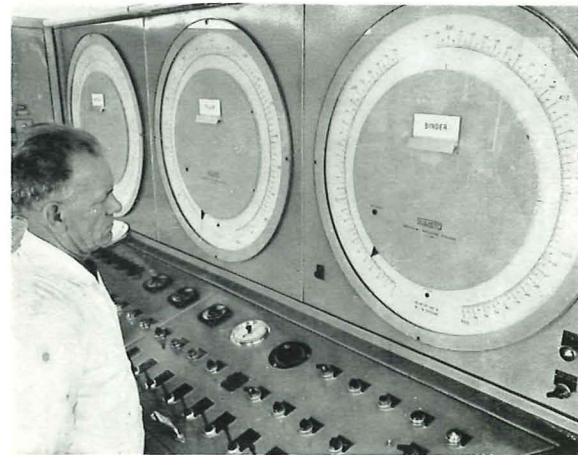
Spencer (Melksham)—around which the Company's capability in the materials handling field has been largely built—designs, manufactures and erects plants throughout the world for handling materials in bulk, bags or packages, often acting as main contractor with full responsibility for the civil engineering work and the supply, installation and commissioning of the complete plant.

Elliott automatic mail segregating, facing, coding and sorting machines are accepted as standard equipment by the G.P.O.



Mail Handling: a high-speed mail sorting machine which handles 20,000 letters an hour. Elliott-Automation is one of the main suppliers of equipment for the G.P.O.'s new mechanised sorting offices.

Air-Cushion Conveyors: "Aeroglide" is a new air-cushion conveyor system for sacks and pallets. Power consumption for the air supply is extremely low since the load is supported on a film of air which is released through special valves only when the load itself is present.



Industrial Weighing: the design and installation of advanced automatic weighing and process control systems based on the wide range of Elliott electrical load cells and associated indicating and recording instruments, is a large and expanding area of activity.



Heating and Ventilating Control

Elliott-Automation's activities in the field of control equipment and instrumentation for heating, ventilating and air-conditioning systems centre on Satchwell Control Systems Limited, which supplies controls for domestic and commercial heating systems and air-conditioning systems, and Satchwell Appliance Controls Limited which produces room thermostats, firing controls for oil and solid-fuel boilers and temperature controls for a very wide range of domestic appliances. Other products in this field include a range of solenoid valves for both oil and gas-fired heating systems and automatic safety and temperature equipment.

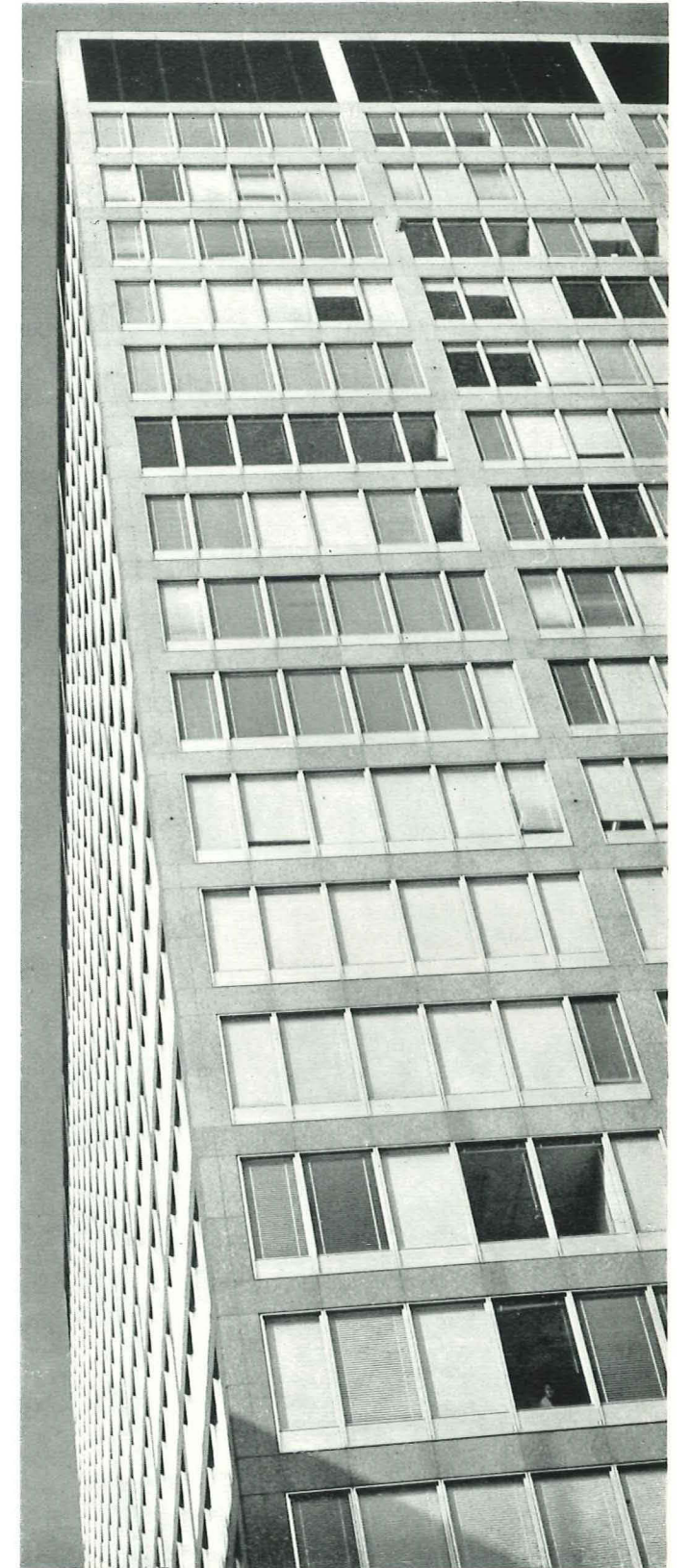
Through its South African subsidiary, Satchwell is supplying, for a major hospital complex in South Africa, the world's first computer-controlled heating and ventilating control system.



In the Home: Satchwell room thermostats are familiar in hundreds of thousands of homes.



Boiler Control: assembling Elliott "Series 75" automatic control systems for mechanically-fed coal-fired boilers of the type being installed in hospitals, schools and small factories.



Business Premises: the company is one of the world's major suppliers of controls for heating and air-conditioning systems in homes, factories and offices.

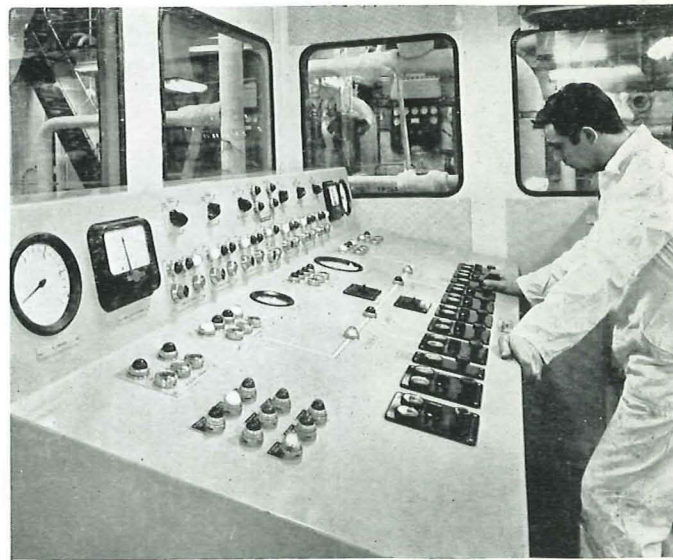
Marine Control



Giant Tankers: the 100,000 ton BP tanker "British Admiral" is one of the many modern ships fitted with Elliott automatic engine control systems.

The Company accepts full contractual responsibility for complete ship's propulsion and cargo control systems, covering all stages from systems design to the manufacture and purchase of the equipment and its installation and commissioning. The contractual procedure which it has evolved is now well established in the shipping industry and has been adopted by the British Shipbuilding Research Association as the basis for its new recommendations on this subject.

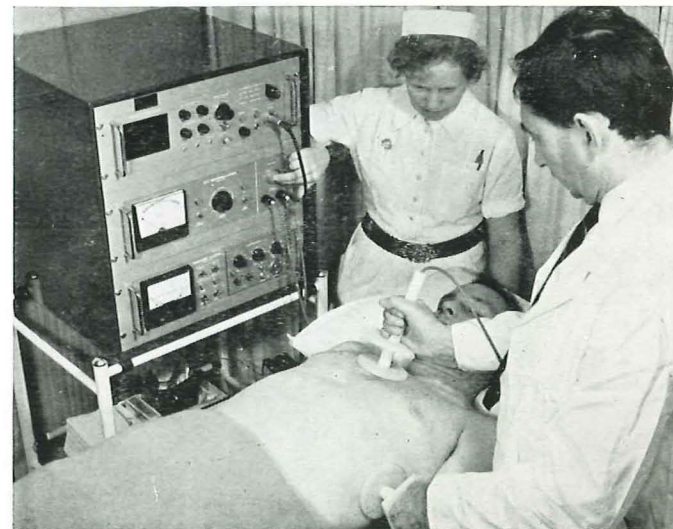
Engine Control: ship's automatic boiler and steam turbine control panel. Complete automatic control contracts for a number of merchant ships are in hand.



Medical Equipment

In addition to pioneering the use of computers in a wide range of medical applications, the Company supplies an extensive range of respiratory, isotope, cardiological, physiological and other instruments and transducers. It also markets patient-monitoring systems, automatic respirators and similar devices. It provides digital output equipment for biochemical, cardiological, isotope and lung-function equipment, as well as for electro-encephalographs and electrocardiographs, so that the data obtained from such instruments can be analysed automatically.

The Company is capable of completely designing and equipping operating theatres, intensive care rooms, recovery rooms and metabolic units, providing temperature, humidity and sterility control and any mechanical equipment necessary. Medical X-ray equipment is manufactured by a Group subsidiary, A. E. Dean (X-Ray Apparatus) Limited.



Intensive Care: heart-therapy machine for intensive-care wards and emergency resuscitation. The machine monitors the patient's heart-beat and automatically administers corrective treatment when necessary.

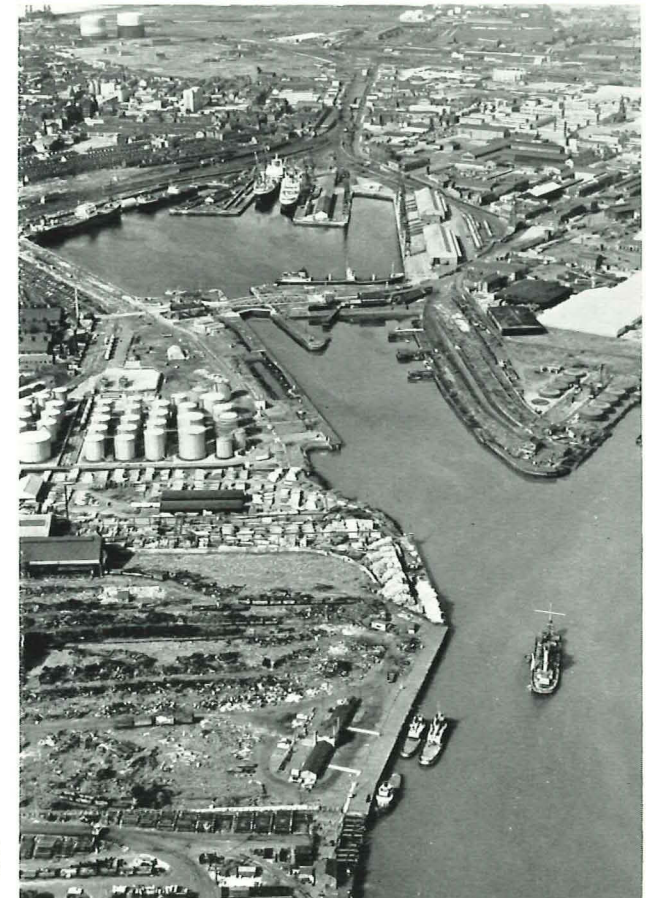
Project Management



EASAMS: E-A Space and Advanced Military Systems Ltd., staffed by specialists in system design, development and management, undertakes contracts in the defence, space and civil fields.

Feasibility and project studies for new defence systems and other complex fields, such as civil aviation and air traffic control, are undertaken in the normal course of business by a number of Elliott divisions. However, E-A Space and Advanced Military Systems Ltd. (EASAMS), was created in 1962 to undertake work in these fields on a system basis. EASAMS provides a management organisation which undertakes the expert co-ordination, monitoring, technical design and analysis, and control of system development projects in these fields.

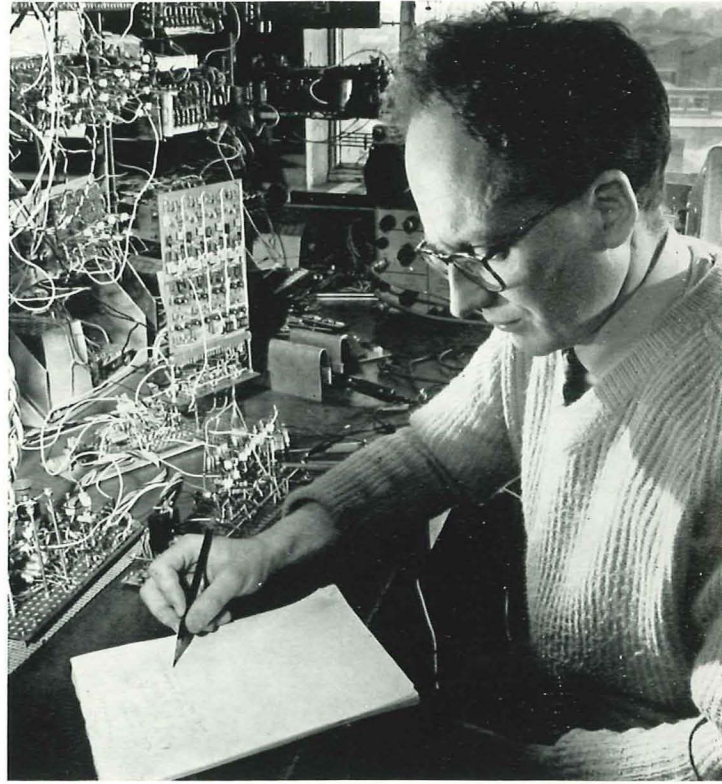
It is not only concerned with projects in the defence and aerospace fields. For example, EASAMS is applying its operational research and system design capabilities towards the planning and development of management information and control systems for the ports industry.



Computer Analysis: EASAMS is equipped with powerful computers which it uses in such projects as a study of dock and port operation upon which it is now engaged.

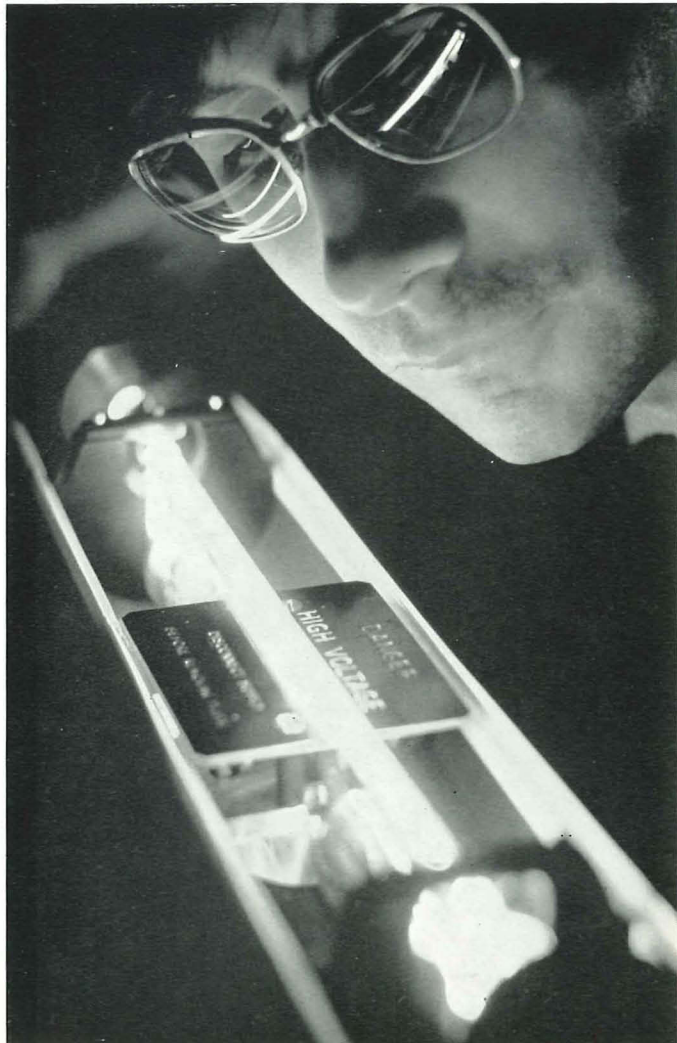
Research

Automation involves many different techniques—electrical, electronic, pneumatic, hydraulic and mechanical—and is constantly pushing at the frontiers of knowledge. Much of Elliott-Automation's total effort in development and applied research is conducted by the manufacturing companies and divisions themselves. This effort is backed-up by seven specialist research laboratories, each engaged in a particular field—computing, radar, microelectronics, flight automation, space research, fluid dynamics and metallurgy—ensuring that the Group has experience of the latest techniques relevant to its work in these fields. Several of the laboratories also undertake work from commercial organisations outside Elliott-Automation.



Computing: the Computing Research Laboratory develops new techniques and ensures that the Company is fully up to date with world-wide developments in computing technology.

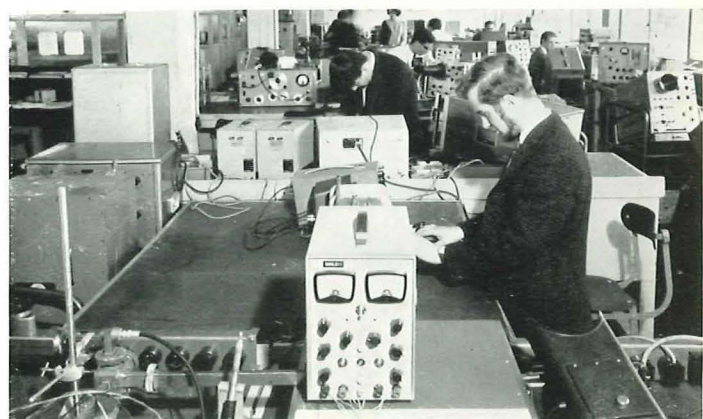
Lasers: new laser techniques and applications are being developed by the Company which supplies 70% of the British market for gas lasers.



Microelectronics Research: the Elliott microelectronics laboratory at Glenrothes, in Scotland, is the most advanced in Europe.



Radar Research: the Radar Research Laboratory has pioneered many developments in aerial design and short-wavelength radar systems.



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TRAINING SCHEMES.

STUDENT APPRENTICESHIP.

The Company offers a limited number of Student Apprenticeships. Successful candidates would read for a Bachelor of Science Honours Degree and entry qualifications are at least two good passes at Advanced Level (Maths and Physics) with a wide range of passes at Ordinary Level, including English Language. The length of Course would vary with University but is usually 4 years and is organised on a thin sandwich basis i.e. six monthly periods of alternate industrial experience and academic study. The majority of successful applicants will read Electrical Engineering, but vacancies also exist for those who wish to read Production Engineering, Instrument and Control Engineering and occasionally Mathematics.

In some cases those who do not have entry qualifications for the Bachelor of Science Degree, but who otherwise show evidence of potential success in an engineering career may be considered for the Higher National Diploma Course.

ENGINEERING TECHNICIAN APPRENTICESHIP.

Engineering Technicians are intended eventually to fill vacancies in the wide variety of work between the professional Engineer and the skilled Craftsman. It is difficult to forecast the career of any individual, but it would cover draughtsmen, technical assistants, laboratory assistants, estimators and people who work in production control, planning, work study, methods, prototype model shops and in many other fields. Many people who progress well in this Course will develop into engineers.

Entry qualifications are less stringent than for Student Apprenticeships, but broadly fall into two groups. These with four 'O' levels, including Maths, Physics, English and one other would be entered directly to the National Certificate Course on day release. Those with fewer 'O' levels or not having the specified subjects would enter the new General Course and depending on the level of pass on this Course, then proceed to the National Certificate Course or the special Technicians Courses in either Electrical or Mechanical Engineering. Age on entry is about 16½ to 17½ and the Course lasts five years.

CRAFT APPRENTICESHIP.

This Course is intended for those who wish to work in the traditional skilled trades. There is a wide range available, but three main groups are Electronic Instrument Maker, Fitter Turner and Sheet Metal Worker. No formal entry qualifications are requested, although it is preferred that applicants should have spent a fifth year at secondary school. Successful applicants will be given day release to attend the City and Guilds Course appropriate to their trades. Age on entry is 15½ to 16½ years and the Course normally lasts five years.

JUNIOR CAREERS TRAINEE SCHEME.

It is realised that many school leavers will find it difficult to obtain an apprenticeship and will not have a proper opportunity to train for skilled work. The Junior Careers Scheme is designed to train people for some types of skilled work not covered by traditional apprenticeship, such as Machine Setter/Operators, Wiremen and some branches of inspection. Although not formally indentured their conditions of service are the same as those of an Apprentice, including day release to attend the Technical College, and at 21, if they have followed the Course successfully, they will receive the skilled rate.

GRADUATE OPPORTUNITIES IN ELLIOTT-AUTOMATION

SCIENTISTS AND TECHNOLOGISTS

A great deal of Elliott-Automation's work is done at advanced scientific and technological levels and the Company has a continuing requirement for mathematicians, physicists and engineers. It has vacancies every year for men and women scientists and technologists.

There is plenty of scope for those who wish to devote themselves largely to scientific and engineering development. Although the Company's laboratories do not undertake any large volume of fundamental research in the normally understood sense, many of the scientific fields in which new applications are being sought and developed are close to the frontiers of scientific knowledge. It is also the case that many automation systems, both in the industrial and military fields, involve extremely advanced mathematical thinking.

The Company also needs graduate engineers in the production field to apply modern concepts to problems associated with the manufacture of advanced instrumentation and systems.

ARTS GRADUATES AND ECONOMISTS

Efficient financial control and administration is of crucial importance and provides excellent opportunities for graduates in arts and economics, not only in the Company's central administration but also in operating divisions and management companies. The important position of Divisional Budget and Cost Officer provides a useful first opportunity for the non-technical graduate to exercise real responsibility following the end of his training. More senior positions subsequently available include appointments as controllers, contracts managers and similar key jobs which can open the way to the top levels of management. Organisation and Methods is another activity which offers careers to arts graduates.

DIRECT ENTRY

It is frequently found to be to the advantage both of the Company and of graduate entrants that the latter should come directly into laboratories or into development or engineering departments. There they are able to make immediate use of their scientific or technological qualifications while simultaneously receiving specific training in the work of the department. This also applies, for example, to the systems analyst where a mathematics or scientific degree is particularly suitable.

But great care is taken that particular abilities and aptitudes are recognised so that direct entry of this sort does not lead to graduates becoming tied down in work which they discover is not in fact their real *métier*. An attempt is also made to enable young scientists and technologists to gain a constructive insight into the wider issues of managerial and Company effectiveness, so that they can, by their own observation, criticism and thought, prepare themselves against the time when they may have to broaden the scope of their activities.

Direct entry is also eminently suitable for scientists and technologists who have obtained second and advanced degrees. Their additional academic experience is, of course, taken into account in the work which they undertake immediately upon joining the Company.

GRADUATE TECHNICAL TRAINING SCHEME

Engineering graduates who wish to supplement their academic studies by a course of practical training in accordance with the recommendations of the Engineering Institutions can do so by joining the Company's Graduate Technical Training Scheme. This provides for appropriate periods in production shops, planning, progress, development and design departments and also includes both budgetary control and sales experience. The course lasts two years and initial appointments in production design and development engineering or in sales application engineering are made in order to combine opportunities for the exercise of responsibility with the continuation of training.

GRADUATE COMMERCIAL TRAINING SCHEME

The aim of the Graduate Commercial Training Scheme is to produce administrative and commercial people of post-graduate level who, by virtue of a broad education and experience in various aspects of the Company's activities, will be potential management material.

This course of training is basically for ten months and has three phases.

Phase 1. The Information Period: this is an intensive period of learning about the various activities of the organisation and includes a computer appreciation course. Its main purpose, however, is to give all course members concentrated theory and practice in the problems of commercial business management including the application of financial control procedures. It comprises a combination of lectures, visits, case studies and projects covered by some of the Group's senior managers.

Phase 2. The Experience Period: this involves working in actual departments (usually four of them) to acquire job experience.

Phase 3. Directed Objective Training: this involves training in the job to which the trainee will eventually be appointed.

Although other opportunities do occur, the first job of the majority of trainees is either as a Budget and Cost Officer or a member of the O & M team.

SALARIES AND CONDITIONS OF EMPLOYMENT

Starting Salary Scales

Degree	Pass	Lower 2nd	First or Upper 2nd	2nd Degrees & Doctorates
1. Direct Entry				
(a) Conventional (3 year) degree course	£950	£1,000	£1,100	1 year extra for M.Sc. £1,200
(b) Sandwich Course including relevant industrial experience	£1,000	£1,100	£1,200	} By negotiation taking into account relevant post-graduate work
(c) Conventional (3 year) degree course with 1 year's relevant pre-college industrial experience	£1,000	£1,100	£1,200	
2. Graduate, Commercial and Technical Trainees	£1,000	£1,000	£1,000	

Appointments will be offered on the basis of a normal five-day week, with three weeks' holiday a year (which can be taken at any time, subject to management agreement) in addition to statutory holidays. Four weeks' notice will be given by either side to terminate appointment. A contributory pension scheme is available, membership of which automatically provides non-contributory life assurance. Very reasonable provision exists for payment in the event of sickness.

Direct entrants can normally expect to remain for some years at the location to which they are appointed, but it is in the nature of a rapidly expanding organisation that this cannot be guaranteed. Trainees will be given as much of their training as possible at one location, but some movement between locations is sometimes necessary.

It is the Company's policy to build up its overseas subsidiaries as a part of the national economy of the country in which each is based. Permanent overseas appointments are therefore unlikely to play a significant part in the general pattern of graduate career development.

APPLICATIONS

Representatives of Elliott-Automation visit all the Universities and a large number of Colleges early each year. Information about these visits can be obtained through Appointments Boards or their equivalent.

Direct applications are also welcomed. When interviews cannot be arranged at a University, applicants will be invited to visit one of the Company's Establishments whenever appropriate vacancies are likely to be available. Direct applications should be made as follows:—

Automatic Control Valves Flight Automation Personnel Manager, Elliott Brothers (London) Limited, Airport Works, Rochester, Kent. Medway 44400

Digital Computers Radar Systems Personnel Manager, Elliott Brothers (London) Limited, Elstree Way, Borehamwood, Herts. 01-953 2030

Mechanical Engineering Nuclear Instrumentation Process Instrumentation Industrial Automation Personnel Manager, Elliott Brothers (London) Limited, Century Works, Lewisham, London, S.E.13. 01-692 1271

Space Systems Defence Electronics Personnel Manager, Elliott Brothers (London) Limited, Chobham Road, Frimley, Camberley, Surrey. Camberley 3311

Relays Post Office Equipment Metallurgy Personnel Manager, Associated Automation Limited, 70, Dudden Hill Lane, Willesden, London, N.W.10. 01-459 8070

Heating and Ventilating Control Equipment Personnel Manager, Satchwell Controls Limited, Farnham Road, Slough, Bucks. Slough 23961

Applications for the Company's Graduate Technical Training Scheme, Graduate Commercial Training Scheme, or enquiries about any other field of activity or for further information, should be addressed to:—

Group Education Executive, Elliott-Automation Limited, Elstree Way, Borehamwood, Herts. 01-953 2030

