

THE INSTITUTE  
OF  
MARINE ENGINEERS

FOUNDED 1889

INCORPORATED BY ROYAL CHARTER 1933

PATRON : HER MAJESTY THE QUEEN

TRANSACTIONS



Volume 74, 1962



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*Chairman:* T. W. LONGMUIR. *Committee:* E. BURNETT, M.B.E., E. R. CHAMBERLAIN, S. G. CHRISTENSEN, REAR-ADMIRAL F. E. CLEMITSON, C.B., F. J. COLVILL, C.B.E., B. C. CURLING, O.B.E., W. MCCLIMONT, B.Sc., D. M. REID, R. R. STRACHAN, C. O. TABBITT, C. H. TAYLOR-COOK, B.Sc.(Eng.), W. YOUNG.

### PAPERS AND TRANSACTIONS

*Chairman:* R. COOK, M.Sc. *Committee:* S. ARCHER, M.Sc., T. W. BUNYAN, B.Sc., J. CALDERWOOD, M.Sc., CDR. A. M. J. CUMMING, R.N., M. W. DUNHAM, E. G. HUTCHING, B.Sc., R. E. KNOWLES, M.B.E., J. B. MAIN, R. MUNTON, B.Sc., CDR. F. M. PASKINS, O.B.E. R.D., R.N.R., CDR. E. H. W. PLATT, M.B.E., R.N., J. H. REA, W. SAMPSON, G. M. SELLAR, B.Sc., S. A. SMITH, M.Sc.

### PUBLICITY AND ADVERTISING

*Chairman:* J. CALDERWOOD, M.Sc. *Committee:* F. D. CLARK, R. COOK, M.Sc., VICE-ADMIRAL SIR FRANK MASON, K.C.B., G. RIDLEY WATSON, B.Sc.

### SOCIAL EVENTS

*Chairman:* STEWART HOGG, O.B.E. *Committee:* E. R. CHAMBERLAIN, CDR. F. J. CORNEY, O.B.E., R.N., R. K. CRAIG, C.B.E., W. J. L. FOREMAN, ENG. CAPT. W. A. GRAHAM, O.B.E., R.N.R., CDR. H. T. MEADOWS, D.S.C., R.D., R.N.R., P. S. ROSSETER, CDR. J. WHITE, D.S.C., R.N., W. YOUNG.

## Joint Panel on Nuclear Marine Propulsion

*Institute of Marine Engineers:* VICE-ADMIRAL SIR FRANK MASON, K.C.B. (*Chairman of Panel*), R. COOK, M.Sc., H. N. PEMBERTON, H.N.E. WHITESIDE.

*Royal Institution of Naval Architects:* J. M. MURRAY, M.B.E., B.Sc., SIR VICTOR SHEPHEARD, K.C.B.

*Institution of Engineers and Shipbuilders in Scotland:* A. W. DAVIS, D.Sc., P. W. THOMAS, B.Sc.

*North East Coast Institution of Engineers and Shipbuilders:* PROFESSOR L. C. BURRILL, M.Sc., Ph.D., G. YELLOWLEY.

*Secretary to the Panel:* J. STUART ROBINSON, M.A.

*Representatives of the Joint Panel on the British Nuclear Energy Society*  
J. M. MURRAY, M.B.E., B.Sc., H. N. E. WHITESIDE, J. STUART ROBINSON, M.A.

# REPRESENTATIVES ON EXTERNAL ORGANIZATIONS

Association of Special Libraries and Information Bureaux	J. STUART ROBINSON, M.A.
British Conference on Automation and Computation: Engineering Applications Group	H. E. UPTON, O.B.E., and J. STUART ROBINSON, M.A.
British National Committee for Non-destructive Testing	R. H. PADDON ROW
City and Guilds of London Institute: Advisory Committee on Shipbuilding, Ship Joinery, Yacht and Boat Building	C. H. TAYLOR-COOK, B.Sc.(Eng.)
College of Technology, Portsmouth: Engineering Advisory Committee	G. M. KENNEDY
East Ham Technical College: Engineering Advisory Committee	R. S. BRETT
Engineering Institutions Examinations Standing Committee for Part I	C. H. TAYLOR-COOK, B.Sc.(Eng.)
Institution of Electrical Engineers: Ship Electrical Equipment Regulations Committee	A. N. SAVAGE
Institute of Welding	JAMES TURNBULL, O.B.E.
International Institute of Refrigeration: Standing Committee	K. C. HALES, B.A.
Joint British Committee for Stress Analysis	T. W. BUNYAN, B.Sc.
Joint Committee on Materials and Their Testing of Technical Institutions and Societies in Great Britain	R. COOK, M.Sc.
Lloyd's Register of Shipping: Technical Committee	A. LOGAN, O.B.E., and H. J. WHEADON
Northern Advisory Council for Further Education (Advisory Committee for Engineering)	A. W. JONES, B.Sc.
Poplar Technical College, Board of Governors	D. G. ALCOCK
Riversdale Technical College, Board of Governors	T. KAMEEN
Royal Naval Reserve (General Service) General Committee	F. D. CLARK
Southampton Technical College, Engineering and Science Advisory Committee	C. W. PAUL, M.B.E.
Southampton University: Advisory Committee, Department of Marine Engineering	ENG. CAPT. W. A. GRAHAM, O.B.E., R.N.R.
Sunderland Technical College: Advisory Committee for Electrical Engineering, Mechanical and Marine Engineering, and Naval Architectural Departments	W. R. JONE
Welsh College of Advanced Technology, Cardiff	D. SKAE

## BRITISH STANDARDS INSTITUTION

H. E. BEDFORD	CHE/18/2	Metallic Finishes (Quality)	C. WINYARD	MEE/29	Pump Tests
H. J. WHEADON	C/37	Boiler Water Tests	J. CALDERWOOD, M.Sc.	MEE/32	Engineering Symbols and Abbreviations
	C/37/2	Methods of Sampling Waters Used in Steam Generation	J. LIDDELL, B.Sc.	MEE/34	Land Boilers
W. McCLIMONT, B.Sc.	C/37/3	Methods of Boiler Water Treatment		MEE/34/1	Cylindrical Boilers
A. N. SAVAGE	C/37/2/2	Sampling of Steam		MEE/34/2	Water Tube Boilers
	ELE/1/10	Marine Motors and Generators		MEE/34/6	Boiler Mountings and Fittings
	ELE/3/2	Ships' Cables		MEE/34/8	Pipes and Piping
S. J. JONES, B.Sc.	ELE/3/21	Heat-resisting Cables		MEE/34/9	Boiler and Superheater Tubes
	ELE/28	Electrical Fans		MEE/34/15	Corrugated Furnaces for Cylindrical Boilers
	ELE/28/2	Methods of Measurement and Test of Fans	S. MATHEWS	MEE/36	Shaft Couplings
J. HASTIE	ELE/32/6	Radio Interference Suppression in Marine Installations	S. J. JONES, B.Sc.	MEE/39	Compressors, Exhausters and Fans
A. N. SAVAGE	ELE/51/5	Marine Transformers	E. F. J. BAUGH	MEE/39/4	Fans for General Purposes
E. F. BARTON	GLC/4	Observation and Gauge Glasses for Pressure Vessels	A. LOGAN, O.B.E.	MEE/63	Ships' Side Scuttles and Frames
E. F. J. BAUGH	GLC/5	Safety Glass for Marine Purposes		MEE/81/3	Valves for Gas, Water and Steam
R. W. CROMARTY	INE/4/5	Ships' Refrigeration Thermometers	W. O. HAMILTON	MEE/81/3/1	General Purpose Valves (Drafting)
R. A. COLLACOTT, B.Sc., Ph.D.	INE/6	Pressure Gauges	J. CALDERWOOD, M.Sc.	MEE/84	Ignition Equipment for Compression Ignition Engines
	INE/8	Revolution Indicators and Records	LIEUT. CDR. A. P. MONK, D.S.C., R.N.	MEE/91	Jointing Materials and Compounds
E. G. HUTCHINGS, B.Sc.	INE/6/2	Pressure Gauges (Drafting)	G. F. GATWARD	MEE/93	Lubricating Nipples Used for Grease Lubrication in Machinery and Vehicles
W. RENNIE	ISE/-	Iron and Steel Industry Standards		MEE/119	Plain Bearings
E. BURNETT, M.B.E.	ISE/6	Steel Castings	A. LOGAN, O.B.E.	MEE/123	Diesel and Gas Engines
JAMES TURNBULL, O.B.E.	ISE/15	Iron and Steel for Shipbuilding	T. D. SHILSTON	MEE/131	Dished Ends for Tanks and Pressure Vessels
W. RENNIE	ISE/31	Wrought Steels	S. ARCHER, M.Sc.	MEE/158	Mechanical Balancing of Rotating Machinery
	ISE/31/1	Carbon Steels		MEE/158/2	Mechanical Balancing of Rotating Machinery (Marine Applications)
T. A. RUSH	ISE/31/2	Alloy Steels	J. CALDERWOOD, M.Sc.	MEE/161	Engine Conventions and Definitions
W. R. HARVEY, O.B.E.	ISE/35/9	Austenitic Cast Irons	N. MACLEOD	NFE/27/3	White Metal Bearing Alloys and Tin Base Die Casting Alloys
S. ARCHER, M.Sc.	ISE/62	Steels for Pressure Vessels	CDR. F. M. PASKINS, O.B.E., R.D., R.N.R.	P/139	Prevention of Corrosion
	MEE/-	Mechanical Engineering Industry Standards	R. MUNTON, B.Sc.	PTC/2	Fuel Oils
J. ROGERSON	MEE/6/19	Gear Hobbing Machines	J. STUART ROBINSON, M.A.	UDC/269	Universal Decimal Classification Panel
J. LIDDELL, B.Sc.	MEE/11/4	Marine Flanges	C. H. TAYLOR-COOK, B.Sc.(Eng.)	USM/2/5	Thermodynamics
F. P. BELL	MEE/12	Chains and Fittings			
J. CALDERWOOD, M.Sc.	MEE/12/6	Anchor Cables			
J. ROGERSON	MEE/13	Engine Testing Fittings			
	MEE/17/7	Gears for Turbines and Similar Drives			
T. D. SHILSTON	MEE/21	Air Receivers			
	MEE/21/1	Solid Drawn Air Receivers			
	MEE/21/2	Riveted Air Receivers			
	MEE/21/3	Welded Steel Air Receivers			



# Annual Report of the Council for 1962

The Council would like to record how honoured the Institute has been to have had H.R.H. The Prince Philip, Duke of Edinburgh, as President for 1962. The culmination of this year was the delivery by His Royal Highness of his Presidential Address on 30th October, published in the December issue of the Transactions, Volume 74, No. 12, pages 539-540. All who heard the Address were most stimulated and it has provided the Council with much food for thought.

## CONFERENCES

Two Conferences have been organized by the Institute during the year, the first a one-day Conference for Headmasters and Careers Masters of schools in the London and Home Counties area to discuss the career of marine engineering. There were some eighty present to hear seven papers read and discussed. Copies of these papers are available at the Institute.

The second was the International Conference of Marine Engineers from 7th to 12th May, at which the Institute was host to fifty-four delegates and their ladies from Commonwealth and other overseas countries. Representatives of the following overseas societies attended :

- Australia — The Institution of Engineers, Australia
- Belgium — Union Belge des Ingenieurs Navals
- Canada — Engineering Institute of Canada
- Germany — Schiffbautechnische Gesellschaft e.V.
- Japan — The Society of Naval Architects of Japan
- Norway — Den Norske Ingeniørforening
- Portugal — Liga dos Engenheiros Maquinistas Portugueses
- Sweden — Svenska Teknologforeningen
- U.S.A. — Society of Naval Architects and Marine Engineers
- U.S.S.R. — State Committee for Shipbuilding Register (of Shipping) of the U.S.S.R.  
State Committee for Co-ordination of Scientific Research  
Ministry of Sea Transport  
Ukrainian Council of National Economy  
Economic Council, Leningrad

Over three hundred members and their ladies participated in the various Conference activities.

The official proceedings of the Conference were opened on Monday, 7th May, in The Memorial Building by The Right Honourable The Lord Mayor of London, Sir Frederick Hoare, after which the first technical paper—*Canberra* was read. The other papers read were "Marine Gas Turbines in the Royal Navy", "Post-war Developments and Future Trends of Steam Turbine Tanker Machinery" (two), "The Doxford Direct Drive Diesel Engine", "Direct Drive Diesel Machinery" and "Problems of Merchant Ship Nuclear Propulsion". In addition, visits to works and other establishments were organized together with a number of social events.

A full report of this Conference appeared in the July issue of the Transactions and the seven technical papers presented during the Conference appeared in their entirety in the October issue of the Transactions.

As a consequence of this event an invitation was extended by the Schiffbautechnische Gesellschaft e.V. to the Chairman of Council, Vice-Admiral Sir Frank Mason, K.C.B., and the Secretary and their wives to attend the Annual Meeting in Berlin of this Society, which took place from 21st to 24th

November. On their return the Chairman reported to the Council on the Conference, emphasizing the kindness and consideration which had been shown to the Institute's representatives, the value of meeting those attending the gathering and the interest which had been shown. He also reported that it had been suggested by the German Society that a joint meeting might be organized at some date in the future.

## ENGINEERING INSTITUTIONS JOINT COUNCIL

Discussions have taken place which have led to the formation of The Engineering Institutions Joint Council, of which the Institute is a constituent member. The other members are :

- The Royal Aeronautical Society
- The Institution of Chemical Engineers
- The Institution of Civil Engineers
- The Institution of Electrical Engineers
- The Institution of Gas Engineers
- The Institution of Mechanical Engineers
- The Institution of Mining Engineers
- The Institution of Mining and Metallurgy
- The Institution of Municipal Engineers
- The Institution of Production Engineers
- The British Institution of Radio Engineers
- The Institution of Structural Engineers

The purpose of this new body is to consider and take action upon matters of common interest in so far as they relate to the advancement of engineering and the dissemination of knowledge in that field and it aims to promote and foster relations with the Government, with national and international bodies and with the public. It will have no executive authority over its constituent institutions and its decisions will be taken by common consent.

The Institute's representatives on the Council are :

- Vice-Admiral Sir Frank Mason, K.C.B.
- Cdr. F. M. Paskins, O.B.E., R.D., R.N.R.
- The Secretary

At the inaugural meeting on 15th October 1962 two standing committees were set up—the Education and Training Committee and the General Purposes and Finance Committee. These two committees have already had their first meetings—the Education and Training Committee under the Chairmanship of Vice-Admiral Sir Frank Mason.

It is to be hoped that this new body will be able to speak with authority on behalf of Britain's engineers and that, as a result, the engineering profession will come to occupy that important place in the national life to which it is entitled by its contributions to the welfare of society.

## SECTIONS

Since the last Annual Report three new Sections have been formed :

- St. John's, Newfoundland



## Annual Report of the Council for 1962

Western Australia, based on Perth

South East England, based on Gravesend.

This brings the total number of Sections to twenty-seven, ten in the United Kingdom and seventeen overseas. In addition to these there are the Northern Ireland Panel and the Southern Joint Branch with the Royal Institution of Naval Architects.

The Committees of these new Sections appear later.

The Council is very pleased with this extension of Sections as it enables still more members to have meetings and some social occasions which otherwise would probably not be possible. The formation of the Section at St. John's now extends the Canadian Division over the full breadth of the country. All three of these Sections have made a good beginning and it is hoped that they will continue to flourish.

### DESIGNATORY LETTERS

The Institute, in common with other chartered organizations, has received a communication from the Privy Council expressing concern over the multiplicity of designatory letters which some professional Chartered Bodies permit their members to use after their names and especially when extended to partially qualified grades of members and even to students and other trainee grades. The Privy Council consider that a proliferation of designatory letters is unnecessary and contrary to their proper purpose which, in Their Lordships' view, should be that of denoting a full professional qualification. Use of designatory abbreviations by unqualified or partially qualified persons is likely to mislead the uninformed public into assuming a higher degree of competence than is in fact possessed and their indiscriminate use may also tend to detract from the value of their use by persons who are fully qualified in their professions. The general view is that the use of designatory letters should be restricted to corporate members of a professional institution who have attained that status either by passing the full examinations of that institution, or by virtue of long experience and practice.

The Council has considered this matter and while agreeing in principle, has made some suggestions to the Privy Council. It is probable that the subject will be one for discussion by the Engineering Institutions Joint Council.

### THE PARLIAMENTARY AND SCIENTIFIC COMMITTEE

The Institute has been elected to The Parliamentary and Scientific Committee. The Institute's representative is Mr. R. Cook, M.Sc. (Member of Council).

### NATIONAL PRODUCTIVITY YEAR

The Chairman of Council—Vice-Admiral Sir Frank Mason, K.C.B.—represents the Institute as a Vice-Patron of the National Productivity Year. Two papers have been organized as a contribution to the activities of the National Productivity Year, namely: "The Application of Planned Maintenance to Steam Turbine Tankers" by J. Scott, D.S.C. (Member) and H. Vickerstaff (Member) and "Progress in Automation" by R. Munton, B.Sc. (Member of Council), J. McNaught (Member) and J. N. Mackenzie (Member).

### THE LATE SIR WILLIAM CRAWFORD CURRIE, G.B.E.

During the year the Building Committee was wound up. This committee had had the responsibility of all the work leading to the successful culmination of The Memorial Building project. It remained in operation for some years after the completion of the building to deal with any problems which might arise during the first few years of its operation. The completion of this work provided an opportunity to commemorate the very great support and help which had always been forthcoming from Sir William Currie by the commissioning of a copy of the Halliday portrait of him. This now hangs in the Council Chamber.

### THE LATE B. P. INGAMELLS, C.B.E.

The Institute suffered a grievous loss in the sudden death of Mr. B. P. Ingamells, C.B.E., immediate Past Chairman of Council, at the conclusion of the International Conference. It was particularly regretted that he was unable to take part in

the proceedings after the first day although he had spent so much time in planning and organizing the events.

In memory of Mr. Ingamells his widow and daughters presented to the Council an inscribed ivory gavel on an ebony block for use at Council Meetings and Committee Meetings. The Council were very pleased to have this reminder of Mr. Ingamells' long service to the Institute.

### FINANCE

There is an excess of expenditure over income on the General Revenue Account of £6,275 compared with an excess of income over expenditure for last year of £2,470.

Membership expenditure has increased by £8,291. This is chiefly due to an increase of £6,850 in Transactions and £267 in the Journal of the Joint Panel on Nuclear Marine Propulsion. Included in Transactions is the extra cost, of approximately £3,000 after allowing for additional advertising revenue, for the October issue which included all papers read at the International Conference. Advertising revenue has continued to decline and there has been a further decrease of approximately £2,500 in the normal advertising revenue during the year. Steps have been taken to try to remedy this situation. The cost of library books and periodicals has increased by £781 due to arrears of binding all periodicals.

Establishment expenses show an increase of £236 due to an increase in housekeeping costs.

Administration expenses have increased by £2,880. Salaries and pensions charges are responsible for £2,181 of this, due in part to the staff being understrength in 1961. The remaining increase is due to general increases in postage charges and additional contributions to other organizations.

The Memorial Building Revenue Account shows a surplus of £30,145, a reduction of £65 over the surplus for last year. The increased cost in administering and servicing the building has been offset by the annual reduction in mortgage interest. From this surplus the annual appropriations of £15,000 to Capital Account and £1,000 to the War Memorial Building Redemption Fund have been made. Further appropriations of £2,000 to the Conference Expenses Reserve Fund and £4,000 to the Development Fund and £10,000 to the Education Fund have also been made. Details of these funds are shown in Note 3 in the accounts, and there is now a total of £23,648 being held in Revenue Reserve Accounts.

The general financial position of the Institute continues to be sound although the Council is concerned at the deficit on the General Revenue Account. It was apparent early in the year from the trend of advertising revenue and the estimated cost of the October issue of the Transactions that there would be a substantial deficit. The Council considered this and decided to allow another year to elapse before considering whether to recommend changes in subscription rates.

In view of the difficulties experienced by some members in remitting subscriptions to the United Kingdom arrangements have been made, in addition to the existing arrangements in India and Canada, for the collection of subscriptions through bank accounts in the following countries:

*Pakistan*: National and Grindlays Bank Ltd., P.O. Box 4662, McLeod Road, Karachi 2; *Australia*: Australia and New Zealand Bank Ltd., 394/396 Collins Street, Melbourne; *New Zealand*: Australia and New Zealand Bank Ltd., Lambton Quay and Featherston Street, Wellington; *U.S.A.*: Chase Manhattan Bank, 1 Chase Manhattan Plaza, New York 15.

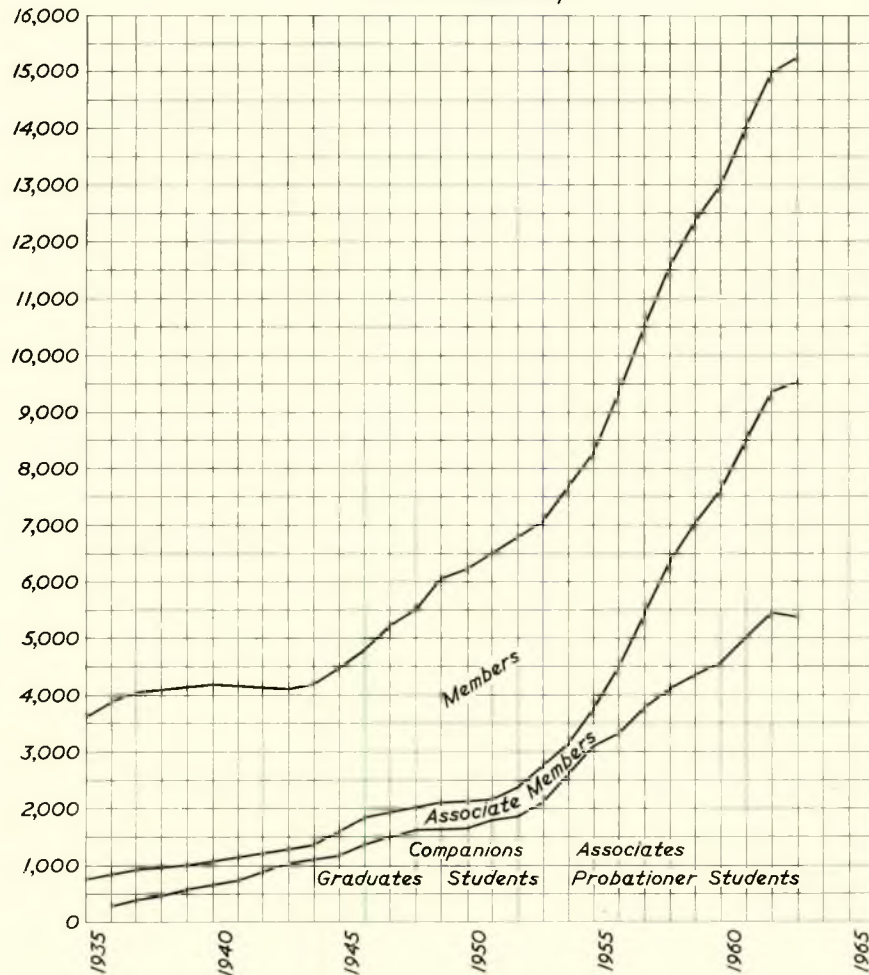
### MEMBERSHIP

The changes in the membership are shown in the following table and chart. Although the elections are of the same order as the previous year, the greatly increased number of lapsed memberships affects the net increase during the year considerably. The increase in this lapsed membership figure is due to the Council deciding to interpret less leniently than heretofore the requirements of By-Law 38 relating to unpaid subscriptions. This action has increased the number leaving the membership roll under this heading by some 500 but it is expected that in future years it will revert to the average annual figure of about 100.

## Annual Report of the Council for 1962

GRADE	Total 31st Dec. 1961	Transfer		Elected	Died	Resigned	Lapsed	Total 31st Dec. 1962	Increase or decrease during 1962	
		From	To							
Past Presidents	13			1				14	+	1
Honorary Members	6			1				7	+	1
Members	5,651		75	189	90	46	122	5,657	+	6
Associate Members	3,917	48	110	301	6	21	67	4,186	+	269
Companions	42			2		4		40	-	2
Associates	1,609	43	6	91	8	20	135	1,500	-	109
Graduates	998	73	44	144		16	34	1,063	+	65
Students	1,181	49	42	201		34	40	1,301	+	120
Probationer Students	1,573	64		196	1	23	224	1,457	-	116
<b>Totals</b>	<b>14,990</b>	<b>277</b>	<b>277</b>	<b>1,126</b>	<b>105</b>	<b>164</b>	<b>622</b>	<b>15,225</b>	<b>+</b>	<b>235</b>

Chart of Membership



### SUMMARY OF THE YEAR'S ACTIVITIES

#### COUNCIL

At their meeting on 30th April 1962 the Council elected Vice-Admiral Sir Frank Mason, K.C.B., as Chairman of Council and Cdr. F. M. Paskins, O.B.E., R.D., R.N.R., as Vice-Chairman for the 1962/63 session.

#### VICE-PRESIDENT

In January Mr. D. W. Low, O.B.E., was co-opted to serve as a Vice-President *vice* Mr. W. B. Johnstone, O.B.E. (deceased), and was subsequently elected a Vice-President in April.

#### LOCAL VICE-PRESIDENTS

The following new Local Vice-Presidencies have been created during the year:

*Plymouth:* Capt. J. G. Little, O.B.E., R.N.

*St. John's, Newfoundland:* H. S. Salt.

*Southampton:* G. M. Kennedy.

*Tees-side:* E. T. Middleditch.

The Council, having accepted the recommendation made by the Canadian Division that the retiring Chairmen of Sections should be appointed Local Vice-Presidents, approved the following appointments:



## Annual Report of the Council for 1962

*Halifax:* J. S. Porteous *vice* G. Curphey.  
*Montreal:* F. Minnikin *vice* Lt. Col. S. D. Clarke,  
 B.Sc., P.Eng.  
*Toronto:* L. D. MacBean *vice* A. Newland.  
*Vancouver:* R. Rennie, M.B.E., *vice* W. Dey.  
*Victoria:* N. Turner *vice* Capt. E. Revfem, C.D.,  
 R.C.N.

A. L. Brown was appointed Local Vice-President, Cape Town, *vice* I. W. Jones Evans (deceased).

### CORRESPONDING MEMBERS

The following have been appointed Corresponding Members:

*Falmouth:* N. W. Jephcott, M.A., *vice* C. Moffatt (resigned).  
*Greenock:* J. R. Duncan *vice* J. P. M. Ferrier (resigned).  
*Hong Kong:* J. A. Anderson *vice* R. Woodward (resigned).  
*Rotterdam:* Cdr. M. A. W. Bos, R.N.N., *vice* A. Knappe (deceased).  
*Swansea:* R. A. Simpson (new appointment).

### PAPERS READ

Date	Title	Author
9th January	"Residual Thermal Stresses in Compression Ignition Engines"	A. Dearden
23rd January	* "Initial Problems of the Submarine Pressurized Water Reactor Design and the Related Experimental Programme"	Prof. J. Edwards, B.Sc.(Eng.)
13th February	"Research in Mechanical Engineering at the National Engineering Laboratory"	F. D. Penny, B.Sc. (Eng.)
27th February	"Crankcase Explosions in Marine Oil Engines, the Efficacy of Gauze and Crimped Ribbon Flame Traps"	The late K. C. Brown, B.Sc., M.Sc. Tech., R. Cook, M.Sc. (Member), G. J. James, B.Sc., Ph.D., and K. N. Palmer, M.A.
12th March	* "The Dounreay Submarine Prototype"	Capt. W. T. C. Ridley, O.B.E., R.N. (Member), Cdr. H. T. Lewis, O.B.E., R.N., and Cdr. D. L. Alexander, R.N.
7th May	† "Canberra"	T. W. Bunyan, B.Sc. (Member), P. D. Morris and D. D. Stephen, B.Sc.
7th May	† Marine Gas Turbines in the Royal Navy	Capt. G. F. A. Trewby, R.N. (Member)
8th May	† "Post-war Developments and Future Trends of Steam Turbine Tanker Machinery"	Cdr. E. H. W. Platt, M.B.E., R.N. (Member) and G. Strachan, B.Sc. (Member)
8th May	† "Post-war Developments and Future Trends of Steam Turbine Tanker Machinery"	H. G. Bauer (Member)
8th May	† "The Doxford Direct Drive Diesel Engine"	P. Jackson, M.Sc. (Member of Council)

Date	Title	Author
8th May	† "Direct Drive Diesel Machinery"	H. Andresen
9th May	† "Problems of Merchant Ship Nuclear Propulsion"	B. Hildrew, M.Sc. (Member)
9th October	"Machinery Installations of Guided Missile Destroyers and General Purpose Frigates"	Cdr. J. M. C. Dunlop, R.N. (Associate Member) and Cdr. E. B. Good, R.N. (Member)
31st October	Presidential Address	His Royal Highness The Prince Philip, Duke of Edinburgh
13th November	"The Design and Development of Two-drum Marine Boilers"	E. G. Hutchings, B.Sc. (Member)
27th November	* "Operating Experience with Nuclear Propulsion"	J. W. Landis
11th December	"Progress and Development in Naval Propulsion Gears 1946-62"	Cdr. P. D. V. Weaving, R.N. (Member) and W. H. Sampson (Member)

### PAPERS PUBLISHED IN THE TRANSACTIONS

Month	Title	Author
January	"The Properties and Service Performance of Quarl-block Materials"	W. McClimont, B.Sc. (Member) and H. M. Richardson, B.Sc.
January	‡ "Fundamentals of Steam Turbine Thermodynamics"	W. L. Coventry, C.G.I.A. (Associate Member)
February	"Electrostatic Charging During the White Oil Loading of Tankers"	M. P. Holdsworth, M.Eng. (Member), Dr. J. L. van der Minne and Ir. S. J. Vellenga
March	"A Critical Survey of Marine Water Treatment Methods"	I. Raleigh
April	"The Trials and Operation of the Gas Turbine Ship <i>Auris</i> "	R. M. Duggan, M.A. (Associate Member) and A. T. O. Howell (Associate Member)
May	"Land Practice in Modern Steam Plant"	F. Dransfield, B.Sc. (Eng.) and J. L. Gray, B.Sc.
June	§ "Developments in Oily-water Separator Design"	E. Douglas, B.Sc., and I. G. Elliott
June	"Residual Thermal Stresses in Compression Ignition Engines"	A. Dearden
July	"Research in Mechanical Engineering at the National Engineering Laboratory"	F. D. Penny, B.Sc. (Eng.)
August	"Crankcase Explosions in Marine Oil Engines, the Efficacy of Gauze and Crimped-ribbon Flame Traps"	The late K. C. Brown, B.Sc., M.Sc. Tech., R. Cook, M.Sc. (Member), G. J. James, B.Sc., Ph.D., and K. N. Palmer, M.A.
September	"Boiler Cleaning"	Cdr. R. M. Inches, R.N. (Member)

\* Read before a meeting of the Joint Panel on Nuclear Marine Propulsion.

† Read at the International Conference of Marine Engineers.

‡ Read before a meeting of the Merseyside and North Western Section.

§ Read before a meeting of the North East Coast Section.

## Annual Report of the Council for 1962

Month	Title	Author
October	" <i>Canberra</i> "	T. W. Bunyan, B.Sc. (Member), P. D. Morris and D. D. Stephen, B.Sc.
	"Marine Gas Turbines in the Royal Navy"	Capt. G. F. A. Trewbly, R.N. (Member)
	"Post-war Developments and Future Trends of Steam Turbine Tanker Machinery"	Cdr. E. H. W. Platt, M.B.E., R.N. (Member) and G. Strachan, B.Sc. (Member)
	"Post-war Developments and Future Trends of Steam Turbine Tanker Machinery"	H. G. Bauer (Member)
	"The Doxford Direct Drive Diesel Engine"	P. Jackson, M.Sc. (Member of Council)
	"Direct Drive Diesel Machinery"	H. Andresen
	"Problems of Merchant Ship Nuclear Propulsion"	B. Hildrew, M.Sc. (Member)
November	‡ "The Treatment of Water for High Pressure Marine Boiler Feed"	T. V. Arden, D.Sc., Ph.D., and F. C. Blight
December	Presidential Address	His Royal Highness The Prince Philip, Duke of Edinburgh
	"Testing and Care of Marine Diesel Engine Crankcase Oils"	Lt. Cdr. E. V. Fewster, R.A.N.R. (Member)

PAPERS PUBLISHED IN THE SUPPLEMENT TO THE TRANSACTIONS		
February	¶ "Modern Oils in Marine Service"	D. Lyon (Member) and J. S. Nell (Member)
June	‡ "The Chemical Cleaning of Ships' Machinery"	P. F. Dilnot (Member) and H. R. Hamburg, Ph.D.
November	** "High Speed Planing Craft"	Cdr. P. du Cane, O.B.E., R.N. (Member)

PAPERS PUBLISHED IN THE CANADIAN DIVISION SUPPLEMENT		
March	†† "An Introduction to the Art of Forging"	D. Jamieson
June	‡‡ "Practical Welding Metallurgy"	H. Thomasson
	†† "Marine Lubrication"	R. M. Rice
September	§§ "Merchant Marine Steam Generators for Advanced Steam Conditions"	L. J. Culver, B.Sc. (Eng.) (Member)
December	‡‡ "Notes on Propeller Manufacture"	D. M. Harris

PAPERS PUBLISHED IN THE INDIAN DIVISION SUPPLEMENT  
 All the papers so far published in the Indian Division Supplement were read during the Shipping and Shipbuilding Conference held in Bombay in December 1961 which was

- ¶ Read before a meeting of the Western Australia Section.
- ¶ Read before a meeting of the Scottish Section.
- \*\* Read before a meeting of the Southern Joint Branch, R.I.N.A. and I.Mar.E.
- †† Read before a meeting of the Atlantic Section.
- ‡‡ Read before the Great Lakes Section.
- §§ Read before the Vancouver Section, the Great Lakes Section and the St. Lawrence/Ottawa Section.

organized by the Bombay Section of the Institute, the Institution of Marine Technologists and the Company of Master Mariners of India.

Month	Title	Author
May	"Construction of Marine Diesel Engines in India"	Rear-Admiral T. B. Bose, B.Sc., I.N. (Vice-President for India)
	"The Development of Large Marine Diesel Engines during the Past Ten Years"	K. Møller
August	"Some Remarks on Supercharging of Large Diesel Engines and Vibration Problems of Motor Ships"	Dr. F. Schmidt, Dipl. Ing.
	"Fires and Explosions in Engine Rooms"	Dr. Georg Vedeler
	"Rules for Electrical Equipment on Ships: Some Underlying Considerations"	D. Gray, B.Sc. (Eng.) (Member)
November	"The Design and Use of Controllable Pitch Propellers"	H. Klaassen and J. F. Stieltjes

JOURNAL OF THE JOINT PANEL ON NUCLEAR MARINE PROPULSION  
 Two issues of the Journal have been published and contained the following papers in addition to nuclear engineering abstracts from the technical press:

- "High Temperature Reactors for Marine Propulsion" by J. E. Richards, B.Sc., Ph.D.
- "The Atom in the Future" by W. R. Wootton.
- "A Preliminary Report of an Investigation of the Effects of Ship Motion on Boiling Water Reactors" by G. L. West, Jr., B.S.E., and H. Nishihara, M.S.E.

STUDENT ACTIVITIES	
15th January	Lecture on "Motorship Auxiliary Machinery" by H. Taylor (Member).
1st March	At Pametrada—Lloyd's Register Lecture for Students, "Engineering Research" by Dr. T. W. F. Brown, C.B.E., S.M. (Member), followed by a visit to Pametrada on the following day.
5th March	Panel Meeting—"Watchkeeping and Maintenance in a Motorship".
16th March	Social Evening—film programme.
2nd April	Lecture on "Modern Developments in Marine Engineering" by R. M. Duggan, M.A. (Associate Member).
2nd October	Technical film show and introductory talk by W. Girvan (Member).
13th October	Visit to R.M.S. <i>Amazon</i> .
27th October	Visit to m.v. <i>Suffolk</i> .
5th November	Lecture on "The Construction and Layout of Modern Ships" by R. S. Hogg (Member).
3rd December	Lecture on "Boiler Design and Construction" by J. Scott, D.S.C. (Member).

PAPERS AND ARTICLES PUBLISHED IN THE STUDENT TRANSACTIONS	
Issue	Title
January	"The <i>Great Eastern</i> " by R. G. Fuller, P.Eng.
February	"Marine Boiler Tube Failures—Three Case Histories" by R. D. Barer, B.A.Sc., S.M. (reprinted from the Journal of the Royal Navy Scientific Service).
March	Explosion from a Cast Iron Isolating Valve at the Howdon Gas Works: report of the Preliminary Inquiry by the Ministry of Transport.
	Explosion from a Water Tube Boiler at Woking and District Water Company: report of the Preliminary Inquiry by the Ministry of Transport.



## Annual Report of the Council for 1962

- April "Modern Oils in Marine Service" by D. Lyon (Member) and J. S. Nell (Member).
- May and June "The Trials and Operation of the Gas Turbine Ship *Auris*" by R. M. Duggan, M.A. (Associate Member) and A. T. O. Howell (Associate Member).
- July and August "Research in Marine Engineering" by Dr. T. W. F. Brown, C.B.E., S.M. (Member).
- August "The Chemical Cleaning of Ships' Machinery" by P. F. Dilnot (Member) and H. R. Hamburg, Ph.D.
- September Report of a Brains Trust held at the Welsh College of Advanced Technology, Cardiff.
- October "Research in Mechanical Engineering at the and National Engineering Laboratory" by F. D. Penny, B.Sc.(Eng.).
- November "Safety at Sea (1962)" by Stewart Hogg, O.B.E. (Vice-President).

### JUNIOR LECTURES

The following lectures were arranged in addition to those reported by the individual Sections of the Institute:

- 7th February at Kingston Technical College. "Metallurgy in Marine Engineering" by Dr. J. E. Garside, M.Sc.
- 13th February at South East London Technical College. "Lay-out and Operation of Marine Steam Turbine Machinery" by D. M. V. Parkinson, M.V.O. (Member).
- 4th April at West Ham College of Technology. "Automatic Boiler Control" by P. A. Gill.
- 4th October at Poplar Technical College. "Fire Fighting Equipment and Its Use in Ships" by G. Victory (Member).
- 7th November at Paddington Technical College. "Petroleum Refining" by E. H. Wild.

### EDUCATION GROUP

The Annual General Meeting of the Group was held on Tuesday, 20th March 1962. It was preceded by the Headmasters' Conference referred to earlier in this report.

### INSTITUTE AWARDS

*The Denny Gold Medal* for 1962 has been awarded to Cdr. E. H. W. Platt, M.B.E., R.N. (Member) and G. Strachan, B.Sc. (Member) for their paper entitled "Post-war Developments and Future Trends of Steam Turbine Tanker Machinery" read before the Institute on 8th May 1962, during the International Conference of Marine Engineers.

*The Institute Silver Medal* for 1962 has been awarded to A. Dearden for his paper entitled "Residual Thermal Stresses in Compression Ignition Engines" read before the Institute on 9th January 1962.

*The Yorkshire Award* 1961/62, value £40, has been awarded to J. B. Main (Member) for his paper entitled "The Design and Layout of a 22,000 s.h.p. Tanker Machinery Installation" read before the Institute on 14th February 1961.

*Extra First Class Engineer's Certificate Examination—Institute Award.* The Institute Silver Medal for the candidate obtaining the highest marks in the Ministry of Transport's examinations in 1962 has been awarded, on the recommendation of the Chief Examiner of Engineers, to R. L. Gray (Associate Member).

*The W. W. Marriner Memorial Prize*, value £5, for the best Engineering Knowledge script written by a candidate in the Ministry of Transport's examination for the Second Class Engineer's Certificate of Competency has been awarded, on the recommendation of the Chief Examiner of Engineers, to R. G. Rees.

*The Frank Roberts Award*, consisting of books or instruments to the value of £7 10s., awarded annually to the Student

or Probationer Student member of the Institute gaining the highest aggregate marks in the courses and examinations in Phase III of the alternative scheme for the training of seagoing engineers has been won by K. M. Howes (Student).

### *Institute Awards for the Ordinary National Diploma Course*

The Institute's awards, value two and three guineas each respectively, for the best first year and the best second year students taking the Ordinary National Diploma Course under the alternative scheme for the training of seagoing engineers were awarded as follows:

- R. Gilbert (first year) and D. Butterfield (second year), Bolton Technical College.
- B. A. Underwood (first year) and R. Choy (second year), Hendon Technical College.
- J. W. Stevens (first year) and S. B. Newcombe (second year), Kingston College of Further Education.
- R. England (first year) and A. Meese (second year), College of Technology, Kingston upon Hull.
- J. E. Moss (first year) and A. O. Odukwe (second year), Newport and Monmouthshire Technical College.
- P. G. Guppy (first year) and S. F. A. Coombes (second year), Plymouth College of Technology.
- R. J. Taylor (first year) and N. D. Land (second year), Poplar Technical College.
- A. G. MacDonald (first year) and D. S. Greenfield (second year), Riversdale Technical College, Liverpool.
- R. M. Beeson (first year) and G. N. Hukins (second year), South East London Technical College.
- M. T. Myint (first year) and P. A. Dootson (second year), Stow College of Engineering, Glasgow.
- J. A. Rooker (first year) and R. W. Jenkins (second year), Swansea Technical College.
- S. Davis (first year) and D. W. Manning (second year), Willesden Technical College.

### *Institute Prizes for the Study of Heat Engines*

The Institute's annual prizes, value two guineas each, for students at technical colleges and schools in marine centres who accomplish the best year's work in the subject of heat engines, were awarded as follows:

- K. Ralph, Barrow in Furness Central College of Further Education.
- J. McKeague, Belfast College of Technology.
- T. Ralston, Bootle Municipal Technical College.
- K. J. Dale, Constantine Technical College, Middlesbrough.
- I. C. Watson, Cornwall Technical College, Redruth.
- J. Imrie, Dundee Technical College.
- A. Green, Falmouth Technical College.
- M. E. Storey, College of Technology, Kingston upon Hull.
- D. John, Llandaff Technical College.
- J. A. Share, Plymouth College of Technology.
- M. J. Goff, The Polytechnic, Regent Street, London, W.1.
- F. C. Wilderspin, Poplar Technical College.
- M. Baron, Riversdale Technical College, Liverpool.
- I. Thomson, Robert Gordon's Technical College, Aberdeen.
- P. W. Neve, South East London Technical College.
- B. P. Bareham, South West Essex Technical College and School of Art.
- T. W. Smith, Stow College of Engineering, Glasgow.
- R. F. S. Browne, Swansea College of Technology.
- G. F. Taylor, Watt Memorial College, Greenock.
- E. Jackson, West Hartlepool Technical College.
- G. H. Raine, West Park College of Further Education Sunderland.

### *Thames Nautical Training College—H.M.S. Worcester*

The Institute's annual prize, value two guineas, for excellence in marine engineering, was awarded to Cadet D. G. Martin.

### INSTITUTE EXAMINATIONS

*Associate Membership Examinations.* Fourteen candidates entered for the Part I examination; one passed and three were



## Annual Report of the Council for 1962

referred in one subject. Two candidates entered for the Part II examination; one passed and one was referred in one subject. Three candidates entered for the Part III examination and one passed.

*National Certificates and Diplomas in Mechanical Engineering.* The following have been issued and signed on behalf of the President during 1962: Ordinary National Certificates, 748; Endorsements, 104; Higher National Certificates 200; Endorsements, 24; Ordinary National Diplomas, 158; Higher National Diplomas 36.

### INSTITUTE PUBLICATIONS

Two of the Institute's publications, namely, "The Running and Maintenance of Marine Machinery" and "Naval Architecture and Ship Construction" have been in continued demand. A completely revised edition of the third, "Electricity Applied to Marine Engineering", is now being prepared.

### INSTITUTE REPRESENTATION ON OUTSIDE ORGANIZATIONS

As mentioned earlier in the report the Institute is represented on the Engineering Institutions Joint Council by the Chairman of Council, the Vice-Chairman and the Secretary.

Upon invitation the Institute has nominated the following representatives to serve on the Committees shown:

*Southampton Technical College: Engineering and Science Advisory Committee*—C. W. Paul, M.B.E.

*British Standards Institution, Technical Committee MEE/91/6: Paper and Cork/Paper Jointing*—Lt. Cdr. A. P. Monk, D.S.C., R.N.

The Institute's representation on the following Committee has been altered as indicated:

*World Power Conference, British National Committee*—G. I. R. Watkins *vice* A. C. Hardy, B.Sc. (deceased).

### HONOURS AND AWARD

The Council congratulates the following members upon whom Her Majesty Queen Elizabeth II conferred honours

during the year:

Sir Leighton Seager, Bt., C.B.E. (Companion)—Baron.  
Lt. Col. T. Eustace Smith, C.B.E., T.D., D.L. (Companion)  
—Knight Bachelor.

Captain T. W. E. Dommett, R.N. (Member)—Commander of the Order of the British Empire.

A. G. Drury (Member)—Member of the Order of the British Empire.

The Council is gratified that the bravery of S. C. Logan (Member), Chief Engineer of the m.v. *Capetown Castle* has been recognized by the posthumous award of the Albert Medal for "Gallantry in Saving Life at Sea".

### DEATHS

In addition to Mr. B. P. Ingamells, C.B.E., whose death is mentioned in the introductory paragraphs of the report, the following who died during the year will be remembered particularly for their services to the Institute.

J. C. Lowrie (Honorary Vice-President).

D. H. Nicholson (former Local Vice-President, Buenos Aires).

### REMEMBRANCE DAY

The Chairman of Council, Vice-Admiral Sir Frank Mason, K.C.B., attended the Service in Westminster Abbey, and the Vice-Chairman of Council, Cdr. F. M. Paskins, O.B.E., R.D., R.N.R., laid a wreath on the Mercantile Marine War Memorial, Tower Hill, London, E.C.3, on Sunday, 11th November 1962.

### SOCIAL EVENTS

The following social functions have been held:

Annual Dinner, at Grosvenor House, London, W.1, on 9th March.

Annual Conversaciones, at Grosvenor House, London, W.1, on 7th and 21st December.

F. T. MASON (*Chairman of Council*)

J. STUART ROBINSON (*Secretary*)

# THE INSTITUTE OF MARINE ENGINEERS

## BALANCE SHEET

31st DECEMBER 1962

31.12.61	£	£	£	£
322,273				<b>337,942</b>
<b>Capital Account</b> (Note 1) ... ..				
375,000				<b>360,000</b>
<b>Loan Capital</b> (Note 2) ... ..				
<b>Capital Reserve</b>				
4,000				<b>5,000</b>
The Memorial Building Redemption Fund				
<b>Accumulated Funds</b>				
85,761			79,425	
General Revenue Account ... ..				
26,853			24,998	
The Memorial Building Revenue Account				
112,614			104,423	
<b>Revenue Reserves</b> (Note 3) ... ..				
16,663			<b>23,648</b>	
830,550			<b>831,013</b>	
<b>Social Events Account</b> (Note 4)				
4,138			<b>3,643</b>	
<b>Awards and Prize Funds</b> (Note 5)				
4,930			4,963	
Capital ... ..				
766			797	
Income ... ..				
5,696			<b>5,760</b>	
<b>Total</b>				
£840,384			£840,416	

31.12.61	£	£	£
		<i>Cost</i>	<i>Depre- ciation</i>
<b>Fixed Assets</b>			
686,283		691,084	—
The Memorial Building (Note 6)			
12,765		22,083	8,378
Furniture and Fittings ... ..			
699,048		713,167	8,378
			<b>704,789</b>
<b>Investments</b>			
93,244			93,667
Quoted Securities (Note 7) ... ..			
12,300			12,300
<i>Less: Reserve for Depreciation</i> ... ..			
80,944			81,367
<b>Sinking Fund Insurance Policies</b>			
(Note 8) ... ..			
80,944			<b>81,367</b>
<b>Social Events Account</b>			
4,138			<b>3,643</b>
Cash at Bank ... ..			
5,696			<b>5,760</b>
<b>Awards and Prize Funds</b> (Note 9)			
73,353			71,157
<b>Current Assets</b> (Note 10) ... ..			
22,795			26,300
<i>Less: Current Liabilities</i>			
(Note 11) ... ..			
50,558			<b>44,857</b>
£840,384			£840,416

Annual Report of the Council for 1962

### REPORT OF THE AUDITORS TO THE MEMBERS OF THE INSTITUTE OF MARINE ENGINEERS

We have audited the above Balance Sheet and annexed Accounts and have obtained all the information we have required. We have verified the Investments, Bank Balances, Insurance Policies and Title Deeds by means of certificates.

In our opinion the Balance Sheet and Accounts have been properly drawn up so as to exhibit respectively, together with the explanatory notes, a true and fair view of the state of the Institute's affairs as at 31st December, 1962 and of the income and expenditure for the year ended on that date.

SARDINIA HOUSE,  
52, LINCOLNS INN FIELDS,  
LONDON, W.C.2.

WEST AND DRAKE,  
*Chartered Accountants.*

28th February, 1963.

## GENERAL REVENUE ACCOUNT

31.12.61	£	£	£
<b>Membership Expenditure</b>			
12,502 Transactions (Note 13) ... ..		19,352	
800 Year Book (Note 3) ... ..		800	
Journal of the Joint Panel on Nuclear Marine Propulsion ... ..		752	
485 Overseas Sections Expenses ... ..	825		
742 Local Sections Expenses ... ..	1,481		
1,394 Travelling ... ..	278		
306			
532 Library Books and Periodicals ... ..		2,584	
56 Lecture Expenses ... ..	290		
59 Junior Lecture Expenses ... ..	50		
		340	
Associate Membership Examination Expenses ... ..		23	
44 Engrossing Certificates ... ..		61	
142 Prizes ... ..		144	
<u>17,078</u>		<u>25,369</u>	
<b>Establishment</b>			
4,017 Housekeeping and Cleaning ... ..		4,209	
1,494 Fuel and Lighting ... ..		1,470	
145 Insurance ... ..		180	
1,000 Repairs Appropriation (Note 3) ... ..		1,000	
Depreciation of Furniture and Fittings ... ..		1,451	
<u>1,418</u>		<u>8,310</u>	
8,074			
<b>Administration</b>			
18,201 Salaries and Pensions ... ..		20,382	
2,942 Stationery and General Printing ... ..		2,962	
1,562 Postage and Telephone ... ..		1,945	
240 Maintenance of Equipment ... ..		269	
500 Audit Fee ... ..		500	
76 Contributions to other Bodies ... ..		388	
467 Sundries ... ..		422	
<u>23,988</u>		<u>26,868</u>	
2,470 Surplus for the Year carried down ... ..			
<u>£51,610</u>		<u>£60,547</u>	
<b>Deficit for the Year brought down</b>		<b>6,275</b>	
Additional Appropriations			
800 Year Book Expenses Reserve ... ..			
Institute Premises Repairs Equalisation Account ... ..			
<u>1,000</u>			
1,800			
Loss on Sale of Investment ... ..		<b>169</b>	
<b>Balance at 31st December, 1962</b>			
85,761 carried forward ... ..		<b>79,425</b>	
<u>£87,561</u>		<u>£85,869</u>	

## YEAR ENDED 31st DECEMBER 1962

31.12.61	£	£
<b>Membership Income</b>		
1,544 Entrance Fees ... ..		1,361
44,577 Subscriptions (Note 12) ... ..		46,745
<u>46,121</u>		<u>48,106</u>
<b>Investment Income</b>		
4,526 ... ..		5,298
154 Less: Credited to Awards... ..		155
<u>4,372</u>		<u>5,143</u>
<b>Net Rent Receivable</b>		
156 Hire of Hall and Council Room ... ..		184
50 Freehold Property, Shenfield ... ..		—
<u>206</u>		<u>184</u>
155 <b>Insurance Commission</b> ... ..		<b>192</b>
<b>Profit on Sales of Publications</b>		
257 "Running and Maintenance of Marine Machinery" ... ..		288
167 "Electricity Applied to Marine Engineering" ... ..		—
252 "Naval Architecture and Ship Construction" ... ..		293
80 Reprints of Papers, etc. ... ..		66
<u>756</u>		<u>647</u>
<b>Deficit for the Year carried down</b>		<b>6,275</b>
<u>£51,610</u>		<u>£60,547</u>
<b>Balance at 31st December, 1961 brought forward</b>		<b>85,761</b>
83,921		
2,470 Surplus for the Year brought down ... ..		—
349 Life Subscriptions Received ... ..		<b>108</b>
189 Life Assurance premiums recoverable ... ..		—
9 Profit on Redemption of Investment ... ..		—
623 Profit on Sale of Freehold Property, Shenfield ... ..		—
<u>£87,561</u>		<u>£85,869</u>

# THE MEMORIAL BUILDING REVENUE ACCOUNT

YEAR ENDED 31st DECEMBER 1962

31.12.61	£	£	£	£	31.12.61	£	£	£	£
10,000			10,000		76,654			76,702	
7,119			7,748		9,328			9,328	
528			571		<u>85,982</u>			<u>86,030</u>	
1,611			1,673						
<u>19,258</u>			<u>19,992</u>		1,627			1,672	
5,934			6,747						
1,893			1,881					313	
1,932			1,656					92	
3,000			3,000					218	
2,863			2,872		633			26	
310			—		<u>994</u>			<u>649</u>	
539			560						1,023
<u>16,471</u>			<u>16,716</u>						
21,037			20,200						
30,210			30,145						
<u>£86,976</u>			<u>£87,053</u>		<u>£86,976</u>			<u>£87,053</u>	
15,000			15,000						
1,000			1,000						
4,000			2,000						
5,000			4,000						
<u>25,000</u>			<u>32,000</u>						
26,853			24,998						
<u>£51,853</u>			<u>£56,996</u>		<u>£51,853</u>			<u>£56,996</u>	

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## NOTES ON ACCOUNTS

	£	£
<b>1. Capital Account</b>		
Balance at 31st December, 1961 ... ..	322,273	
Donations received during 1962 ... ..	669	
Appropriation from Memorial Building Revenue Account ... ..	<u>15,000</u>	
		<u>£337,942</u>
<b>2. Loan Capital</b>		
The Church Commissioners		
Mortgage at 5½% per annum ... ..	300,000	
Mortgage at 6% per annum ... ..	<u>60,000</u>	
		<u>£360,000</u>

Secured on the Memorial Building and repayable by annual instalments of £15,000.



## 3. Revenue Reserves

	Balance 31.12.61	Appropriations Revenue Accounts		Expenditure during year	Balance 31.12.62
	£	General	Memorial Building	£	£
Staff Fund ... ..	3,366				3,366
Institute Premises Repairs Equalisation Account ... ..	1,734	1,000		2,236	498
Building Repairs Equalisation Account ...	3,378		3,000	2,626	3,752
Conference Expenses ... ..	7,303		2,000	(a) 6,823	2,480
Year Book Expenses ... ..	52	800			852
Development Fund ... ..	830		4,000	(b) 2,130	2,700
Education Fund ... ..			10,000		10,000
	<u>£16,663</u>	<u>£1,800</u>	<u>£19,000</u>	<u>£13,815</u>	<u>£23,648</u>

## Notes

(a) International Conference ... ..	6,373
Headmasters Conference ... ..	213
Chairman of Council and Secretary to Berlin Conference ...	237
	<u>£6,823</u>
(b) Canadian Division Expenses ... ..	1,613
Indian Division Expenses ... ..	445
Indian Division Furniture Depreciation ... ..	72
	<u>£2,130</u>

## 4. Social Events Account

Balance at 31st December, 1961 ... ..	£	£
Add: Profit on Dinner ... ..		110
		<u>4,248</u>
Less: Losses		
Conversaziones ... ..	260	
Summer Golf Meeting ... ..	15	
Autumn Golf Meeting ... ..	15	
	<u>290</u>	
Donation to Marine Engineers Guild of Benevolence in Memory of Mr. Ingamells ... ..	315	
		<u>605</u>
Balance at 31st December, 1962 ... ..		<u>£3,643</u>



## 5. Awards and Prize Funds

	Capital Account	Income Account for 1962			Balance 31.12.62
		Balance 31.12.61	Income	Awards	
<b>General</b>	£	£	£	£	£
Akroyd Stuart Award ... ..	700	294	32	50	276
W. W. Marriner Prize ... ..	230	15	8	5	18
Adam Girdwood Award ... ..	15	7	1	—	8
Denny Gold Medal ... ..	250	103	10	7	106
Denny Award... ..	100	68	11	—	79
Stephen Legacy ... ..	100				
Lord Inverforth Award ... ..	100				
John I. Jacobs Award ... ..	119				
W. Murdoch Legacy ... ..	62	121	11	—	132
D. F. Robertson Award ... ..	100	—	7	7	—
Frank Roberts Award ... ..	187				
<b>Administered as Trustees</b>					
William Theodore Barker Award ... ..	3,000	158	120	100	178
	<b>£4,963</b>	<b>£766</b>	<b>£200</b>	<b>£169</b>	<b>£797</b>

## 6. The Memorial Building

Cost to 31st December, 1961 ... ..	£	686,283
Additions during 1962		
Ladies Cloakroom ... ..	5,524	
Less: Expended in 1961 ... ..	3,500	
	2,024	
Rectification of Ventilating System ... ..	2,777	
		4,801
		<b>£691,084</b>

## 7. Investments

## Quoted Securities at Cost

## Government Securities

£9,000 3% Savings Bonds 1960/70 ... ..	£	9,000
£11,000 3% Savings Bonds 1965/75 ... ..		8,581
£12,500 3% British Transport Guaranteed Stock 1978/88 ... ..		9,826
£2,500 3½% Conversion Loan ... ..		2,668
£800 3% Treasury Stock ... ..		704
£3,250 5½% Treasury Stock 2008/12 ... ..		2,890
£13,200 3½% War Loan ... ..		12,636

46,305

## Banks

1,540 Lloyds Bank Ltd. £1 Ordinary Shares ... ..		3,765
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<b>Breweries</b>		
1,800 J. & R. Tennent Ltd. 5/- Ordinary Stock Units ... ..		3,350
<b>Commercial and Industrial</b>		
1,500 Beecham Group Ltd. 5/- Ordinary Shares ... ..	3,267	
£1,427 Bowater Paper Corporation Ltd. Ordinary Stock ... ..	3,910	
1,500 Gallaher Ltd. 10/- Ordinary Stock Units ... ..	2,766	
£700 Guest Keen & Nettlefolds Ltd. Ordinary Stock ... ..	3,267	
£1,050 Imperial Chemical Industries Ltd. Ordinary Stock ... ..	2,976	
4,000 News of the World Ltd. 5/- non-voting Ordinary Shares... ..	2,892	
750 Reckitt & Colman Holdings Ltd., £1 Ordinary Shares ... ..	3,210	
	<hr/>	22,288
<b>Insurance</b>		
700 Northern & Employers Insurance Co. Ltd. £1 Ordinary Shares ... ..	3,571	
1,500 Guardian Assurance Co. Ltd. 5/- Ordinary Shares ... ..	3,305	
	<hr/>	6,876
<b>Iron, Coal and Steel</b>		
750 Colvilles Ltd. £1 Ordinary Shares ... ..		3,040
<b>Dollar Securities</b>		
125 Johns Manville Corporation \$5 Common Shares ... ..	2,664	
100 F. W. Woolworth Co. \$10 Common Shares ... ..	2,477	
100 U.S. Steel Corporation \$16 2/3 Common Shares ... ..	2,902	
	<hr/>	8,043
		<hr/> <b>£93,667</b> <hr/>

(Market Value at 31st December, 1962 £82,953)

**8. Sinking Fund Insurance Policies**

Single Premiums to <i>Assurance Company</i>	<i>Date of Maturity</i>	<i>Payment Secured</i>
Royal Exchange Assurance Company	1st November 2011 ... ..	10,000
Royal Exchange Assurance Company	10th June 2012 ... ..	10,000
Canada Life Assurance Company	10th June 2012 ... ..	1,000
Atlas Assurance Company	10th June 2012 ... ..	1,000
Sun Life Assurance Society	10th June 2012 ... ..	1,000
		<hr/>
		<b>£23,000</b>

(The present surrender value of the above policies is £4,525)

**9. Awards and Prize Funds**

<b>Investments</b>	£	£
Akroyd Stuart Award		
£915 3½% Conversion Loan at Cost ... ..	698	
John I. Jacobs Award		
£200 2½% Consolidated Stock as valued at 31st January, 1919 ... ..	119	
Lord Inverforth Award		
£100 3½% War Loan at par ... ..	100	
W. W. Marriner Prize		
£166 3% Savings Bonds 1955/65 at cost ... ..	166	
	<hr/>	1,083
<b>Cash on Deposit with Bank</b> ... ..		4,677
		<hr/> <b>£5,760</b> <hr/>

10. <b>Current Assets</b>									£	£	
Stocks on hand	...	...	...	...	...	...	...	...		9,257	
Sundry Debtors and Prepayments less provision for Doubtful Debts	...	...	...	...	...	...	...	...		11,254	
Amounts due from Tenants											
Rents and Service Charges	...	...	...	...	...	...	...	...		17,605	
Loan to Local Authority	...	...	...	...	...	...	...	...		20,000	
Cash and Bank Balances	...	...	...	...	...	...	...	...		13,041	
										<u>£71,157</u>	
11. <b>Current Liabilities</b>											
Sundry Creditors	...	...	...	...	...	...	...	...		13,058	
Mortgage Interest	...	...	...	...	...	...	...	...		7,654	
Income Tax Payable	...	...	...	...	...	...	...	...	5,820		
Less: Income Tax Recoverable	...	...	...	...	...	...	...	...	2,045		
										3,775	
Unexpired Subscriptions (Note 12)	...	...	...	...	...	...	...	...		1,813	
										<u>£26,300</u>	
12. <b>Subscriptions</b>											
31.12.61									Received	Unexpired	Net
£									£	£	£
21,399	Members	...	...	...	...	...	...	...	22,736	698	22,038
13,048	Associate Members	...	...	...	...	...	...	...	14,629	637	13,992
5,642	Associates	...	...	...	...	...	...	...	5,793	136	5,657
2,760	Graduates	...	...	...	...	...	...	...	3,163	192	2,971
1,186	Students	...	...	...	...	...	...	...	1,422	77	1,345
436	Probationer Students	...	...	...	...	...	...	...	671	67	604
106	Companions	...	...	...	...	...	...	...	144	6	138
<u>£44,577</u>									<u>£48,558</u>	<u>£1,813</u>	<u>£46,745</u>
13. <b>Transactions</b>											
31.12.61									£	£	£
£											
22,356	Composition, Printing, Paper, etc.	...	...	...	...	...	...	...		26,613	
4,685	Reporting, Abstracting and Salaries	...	...	...	...	...	...	...		5,799	
7,247	Wrapping and Postage	...	...	...	...	...	...	...		8,093	
											40,505
22,136	Less: Advertising Revenue	...	...	...	...	...	...	...		22,464	
2,918	Sales	...	...	...	...	...	...	...		2,249	
52	Profit on Bound Volumes	...	...	...	...	...	...	...		28	
<u>25,106</u>											24,741
											<u>15,764</u>
2,418	Canadian Supplement	...	...	...	...	...	...	...		2,133	
	Less: Advertising Revenue	...	...	...	...	...	...	...	630		
	Sales	...	...	...	...	...	...	...	19		
565										649	
<u>1,853</u>											1,484
	Indian Supplement	...	...	...	...	...	...	...		2,150	
	Less: Advertising Revenue	...	...	...	...	...	...	...		1,617	
											533
1,594	Student Transactions	...	...	...	...	...	...	...		1,674	
127	Less: Sales	...	...	...	...	...	...	...		103	
<u>1,467</u>											1,571
<u>£12,502</u>											<u>£19,352</u>



## Annual Reports of the Sections

### HOME

#### DEVON AND CORNWALL

The number of registered and non-registered members as at the end of 1962 was as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	64	39
Associate Members ...	34	31
Companions ... ..	—	1
Associates ... ..	10	16
Graduates ... ..	5	21
Students ... ..	24	17
Probationer Students	8	18
	145	143

This shows a small increase upon last year's total which was 136 registered members and 139 non-registered.

The general tendency is fluid. Over a period of twelve months it seems that about two or three dozen members leave the area and roughly the same number enter, the number entering being slightly greater than the number leaving.

The continual interchange is due mainly to the movements of R.N. personnel and, to a slightly lesser extent, the movements of Merchant Navy engineer students who are attending the Plymouth or Cornwall colleges.

During 1962 the following meetings were held:

- 16th January (Plymouth) "Safety Aspects of Nuclear Propulsion of Merchant Ships" by D. R. Murray-Smith, B.Sc., H. N. E. Whiteside (Member) and Capt. A. C. Manson.
- \* 20th February (Plymouth) "Marine Lubrication" by G. H. Clark (Member).
- † 27th March (Plymouth) "Trials and Operation of the Gas Turbine Ship *Auris*" by R. M. Duggan, M.A. (Associate Member) and A. T. O. Howell (Associate Member).
- 10th October (Plymouth) "Heat Exchangers—Design Aspects to Avoid Corrosion" by C. H. Pattman.
- \* 6th November (Falmouth) "Watchkeeping in Motorships" by S. Speed (Member).
- ‡ 21st November (Plymouth) "Machinery Installations of Guided Missile Destroyers and General Purpose Frigates" by Cdr. J. M. C. Dunlop, R.N. (Associate Member) and Cdr. E. B. Good, R.N. (Member).

The attendance at this last meeting was excellent, being in excess of seventy-five and gave good indication of the potential of the Section. The subject was, of course, most topical.

Attendance at lecture meetings has been satisfactory on the whole. Nevertheless, it is highly to be desired that those members residing in, or near, Plymouth should support the meetings. It cannot reasonably be expected that more distantly located members should travel to Plymouth. Plymouth is the base and that is where the meetings must be held. No requests have so far been received for meetings to be held at centres other than Plymouth, excepting of course, for the already established annual junior meeting in Falmouth.

The First Annual Dinner of the Section took place on Friday, 7th December 1962, at the Duke of Cornwall Hotel, Plymouth. About forty-three people were present and though this number was less than had been hoped for, the personal and friendly contact among members and guests and the excellence of the speakers more than compensated for the modest attendance.

It was thought that the programme arranged for 1962 was quite adequate and suitable for local conditions. Subject to the approval of the new Committee, it is probable that the programme for the next season will follow a similar course excepting that a rather more favourable date must be decided upon for the Annual Dinner.

W. E. B. Dainton (*Chairman*)

A. H. Morton (*Honorary Secretary*)

#### *Annual General Meeting*

The Annual General Meeting of the Section was held on Wednesday, 9th January 1963, at the Duke of Cornwall Hotel, at 7.0 p.m.

Among those present was the new Local Vice-President, Captain J. G. Little, O.B.E., R.N. During the Spring of 1962, the Offices of Local Vice-President, Plymouth and Corresponding Member, Falmouth, became vacant and it fell to the Committee to nominate members for these vacancies. The Section was fortunate in obtaining the consent of Captain Little, Engineer Manager of H.M. Dockyard, to be Local Vice-President and of Mr. N. W. Jephcott, M.A., Engineering Manager of Silley Cox and Co. Ltd., Falmouth, as Corresponding Member.

Only three nominations were received for the three vacancies on the Committee, therefore no voting was required. The Honorary Secretary and Honorary Treasurer were confirmed in office for a further year.

The newly constituted Committee is as follows:

Local Vice-President: Captain J. G. Little, O.B.E.,  
R.N.

Chairman: W. E. B. Dainton

Vice-Chairman: *To be appointed*

Committee: J. A. P. Collings

Cdr. W. Farrell, M.B.E., R.N.

Cdr. J. Frederick, R.N.

M. J. Gilbert

Cdr. B. P. McConnell, O.B.E., R.N.

Inst. Cdr. H. E. Morgan, B.Sc.(Eng.)

R.N.

R. E. Pritchard

S. Walker

Honorary Secretary: A. H. Morton

Honorary Treasurer: Commander R. T. Jones, O.B.E.,  
D.S.C., R.N.

The informal discussion arranged to take place after the Annual General Meeting was postponed as a number of those present living in outlying districts wished to leave early on account of the worsening weather conditions.

\* Junior Lecture.

† Published in the April 1962 issue of TRANSACTIONS.

‡ Published in the January 1963 issue of TRANSACTIONS.

## Annual Report of the Council for 1962

### KINGSTON UPON HULL

The year 1962 has again shown continued interest and progress in all the various activities of the Section. Membership has increased by 20 to a total of 363 and although there was a slight drop in the number of registered members this was confined to the Student grades which are the most mobile. This is due to the fact that the majority of the student intake comes from the Hull College of Technology and, in the main, comprises those who are studying under the Alternative Apprenticeship Scheme.

The membership is as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	79	30
Associate Members ... ..	78	37
Associates ... ..	24	7
Graduates ... ..	20	13
Students ... ..	11	22
Probationer Students	16	26
	228	135

During the year seven lectures were held as follows:

- \* 11th January "Medium Speed Diesel Engines for Marine Auxiliary Purposes" by C. J. Hind (Member).
- † 8th February "The Steam Reciprocating Engine" by G. Yellowley (Member).
- 22nd February "Marine Refrigeration" by Lt. Cdr. M. B. F. Ranken, R.N. (Member).
- 22nd March "Construction of a Modern Trawler" by A. C. Kelly (Member).
- 11th October "Gearing for Marine Geared Diesel Installations" by I. Wans (Member).
- 22nd November "The Refrigeration Equipment Designed for the m.t. *Junella*" by Dr. S. Forbes Pearson.
- 6th December "The Denny Sidewall Hovercraft" by C. F. Morris.

The standard of all lectures was high and this was reflected in the average attendance of 73 at the senior lectures, a considerable increase on last year. This was made up of an average of 41 members and 32 non-members, whilst the attendance at the junior lecture increased to 53. A notable feature of the programme was the first lecture to be held in Grimsby on 11th January 1962, which took the form of a joint meeting with the Grimsby Institution of Engineers and Shipbuilders. This was particularly successful both from the educational and social aspect and it is hoped will become an annual feature.

The Twelfth Annual Dinner of the Section was held on Friday, 2nd November 1962, at the Guildhall, Kingston upon Hull and reached new heights of success. The record number of 222 members and guests enjoyed an excellent dinner, together with speeches by Mr. J. Calderwood, M.Sc. (Senior Vice-President) and the Deputy Lord Mayor of Kingston upon Hull, Alderman K. Turner, J.P. The Lord Mayor, Alderman G. Frear, J.P., who was to have attended, was unfortunately taken ill on the day of the Dinner.

During the year two students, Mr. R. England and Mr. G. L. Nunn, were selected for the Lloyd's Register of Shipping Award and made an interesting visit to Pametrada Research Station.

Institute Awards for the Ordinary National Diploma Course were received by C. J. Belton and N. R. Dalton, and the Heat Engines Prize was awarded to E. R. Penge.

Nomination forms for the election of the Committee were issued early in December and by the closing date of 31st December the following had been nominated: Messrs. J. Jackson, F. N. Sutcliffe, G. W. Hill, M.B.E., F. C. Inskip, R. Rawlings, J. E. Bayram and J. Campbell.

B. Taylor (*Chairman*)  
D. A. Taylor (*Honorary Secretary*)

Thursday, 31st January 1963, at 7.30 p.m. when the Chairman was Mr. F. C. M. Heath (Local Vice-President).

Apologies for absence were first received from Messrs R. Rawlings, A. E. Walker, A. J. White and G. H. M. Hutchinson. The minutes of the Eleventh Annual General Meeting were read and adopted and under the heading "Matters arising from the Minutes" considerable discussion took place regarding the Vice-Presidency recently lost to the Section. The Honorary Secretary read out the various correspondence to date on this matter, including the recent decision taken by the Council. Although members appreciated many points made by the Council, they felt that the situation was still far from satisfactory and instructed the Honorary Secretary to write to the Council further on this matter. Members also raised the question of the distribution of voting papers for the election of the Committee and felt that on this point the Rules should be strictly adhered to. The Honorary Secretary was also asked to forward these comments in due course. The Chairman then signed the minutes.

The Honorary Treasurer presented his report which showed that all the accounts indicated a favourable balance and after clarification of a few minor points the report was adopted unanimously.

The Honorary Secretary then presented his report and reported progress in all fields, the Annual Dinner being particularly successful. Attendance at lectures had improved considerably but it was imperative that the high standard of lectures should be maintained.

In the Chairman's remarks which followed, Mr. Heath welcomed the members present and asked them to join with him in congratulating both the Honorary Treasurer and Honorary Secretary on their reports and to thank them for their loyal service during the past year. The increase in membership was again pleasing to see but registration with the Section by all existing and new members was urged. With regard to the latter and despite trends to the contrary, it was quality not quantity which would ensure the future of the Institute. The Chairman also remarked that although there had been an increase in attendance at the lectures there were signs that it might fall again due to members only attending when the paper directly concerned them. Something more than lukewarm loyalty was required. Finally Mr. Heath paid tribute to the Vice-Chairman, Mr. G. A. Skelton, M.B.E., for so readily taking over during the year when Mr. Bryan Taylor retired and for guiding the meetings with interest and good humour.

The election of the Committee then followed with Messrs. A. W. Kemp and T. Watkins appointed as scrutineers. A total of 47 voting papers had been received out of the 155 sent out and the scrutineers reported that Messrs. F. N. Sutcliffe, G. W. Hill, M.B.E., R. Rawlings and J. Campbell had been duly elected.

Messrs. C. J. Potter and D. A. Taylor were then appointed to the offices of Honorary Treasurer and Honorary Secretary respectively and Messrs. P. H. V. Evers and W. Holcroft appointed as Honorary Auditors.

The question of works visits by the Section was raised and the Committee agreed to look into the matter.

A short Committee meeting followed in which Mr. G. W. Hill, M.B.E., was elected Chairman and Mr. G. A. Skelton, M.B.E., Vice-Chairman, for the forthcoming year. It was also decided to co-opt Mr. J. E. Bayram to the Committee for the service he renders the Institute in the Grimsby area.

The newly constituted Committee is as follows:

Local Vice-President: F. C. M. Heath  
Chairman: G. W. Hill, M.B.E.  
Vice-Chairman: G. A. Skelton, M.B.E.  
Committee: J. E. Bayram (co-opted)  
J. Campbell  
A. C. Coward, M.B.E.  
P. F. Dilnot  
H. F. Hesketh  
W. Holcroft  
R. Rawlings

### Annual General Meeting

The Twelfth Annual General Meeting of the Section was held at the Royal Station Hotel, Kingston upon Hull, on



## Annual Report of the Council for 1962

J. R. Rea  
F. N. Sutcliffe  
A. E. Walker  
D. Vincent

Honorary Secretary: D. A. Taylor  
Honorary Treasurer: C. J. Potter

\* Joint meeting with the Grimsby Institution of Engineers and Shipbuilders.

† Junior Lecture.

### MERSEYSIDE AND NORTH WESTERN

Interest in the Section is being maintained and total membership figures show a slight increase over last year and, due to a recent circular, there has been an increase of some 200 in the number of registered members; the respective numbers are as follows:

	Registered	Non-registered
Members ... ..	364	125
Associate Members ...	259	140
Companions ... ..	1	—
Associates ... ..	82	36
Graduates ... ..	53	54
Students ... ..	102	125
Probationer Students	135	217
	996	697

Senior meetings held in the rooms of The Liverpool Engineering Society, The Temple, Dale Street, Liverpool, 2, were:

5th February Annual General Meeting followed by "Some Features of the Sulzer R.D. Engine" by E. T. Kennaugh (Member).

5th March "Oil Burning with Particular Reference to Marine Application" by G. R. Gray.

\* 2nd April "Boiler Cleaning" by Cdr. R. M. Inches, R.N. (Member).

Autumn senior lectures, given in the Theatre of The Merseyside Film Institute Society, 45 Bluecoat Chambers, Liverpool, 1, were as follows:

3rd October "Thin Wall Bearings for Marine Diesels and Turbines" by J. Campbell, B.Sc. (Associate Member).

† 7th November "The Design and Development of Two-drum Marine Boilers" by E. G. Hutchings, B.Sc. (Member).

‡ 5th December "Machinery Installations of Guided Missile Destroyers and General Purpose Frigates" by Cdr. J. M. C. Dunlop, R.N. (Associate Member) and Cdr. E. B. Good, R.N. (Member).

In addition to the above and in conjunction with the Barrow Engineering Society, the following paper was presented at the Alfred Barrow Secondary Modern School, Duke Street, Barrow-in-Furness:

30th November "Marine Electrical Engineering" by D. Gray, B.Sc. (Member).

On Thursday, 10th October 1962, by kind invitation of the Royal Institution of Naval Architects, members were invited to take part in a one-day meeting in Bluecoat Chambers, when the following papers were presented:

"Some Aspects of Passenger Liner Design" by R. V. Turner, B.Sc., M.R.I.N.A., M. Harper and D. I. Moor, B.Sc. (Member).

"Glenlyon Class of Ship—Machinery Installation" by W. H. Falconer (Member) B. Todd and R. Steven.

The number of members attending was most encouraging and was favourably commented upon by the Chairman of the Royal Institution of Naval Architects.

In co-operation with and by kind invitation of The Liverpool Engineering Society, members also attended the following lectures:

10th January "Epicyclic Gearing for Industrial and Marine Use" by P. M. Woodbridge.

14th February Thomas Lowe Gray Lecture: "The Resistance of Ships with Special Reference to Skin Friction and Hull Surface Conditions" by H. Lackenby, M.Sc.

In conjunction with "Ladsirlac" the Section organized and supported the following lecture in the "Brown Library", William Brown Street, Liverpool.

28th March "Marine Engineering and the Shipowner" by Sir Stewart MacTier, C.B.E. (Companion).

The undernoted meetings were held in Manchester:

§ 15th January "Trials and Operation of the Gas Turbine Ship *Auris*" by R. M. Duggan, M.A. (Associate Member) and A. T. O. Howell (Associate Member).

|| 12th February "Land Practice in Modern Steam Plant" by F. Dransfield, B.Sc.(Eng.) and J. L. Gray, B.Sc.

8th October "Thin Wall Bearings for Marine Diesels and Turbines" by J. Campbell, B.Sc. (Associate Member).

Junior lectures were held as under:

31st January (Riversdale) "Marine Electrical Engineering" D. Gray, B.Sc. (Member).

14th February (Birkenhead) "Modern Marine Water Tube Boilers" by Lt. Cdr. A. P. Monk, D.S.C., R.N. (Member).

1st March (Bolton) "Modern Marine Applications of Refrigeration" by Lt. Cdr. M. B. F. Ranken, R.N. (Member).

27th March (Birkenhead) "Gas Turbines" by a representative of Power Jets Ltd.

4th April (Riversdale) "The Engineer Officer" by Capt. W. S. C. Jenks, O.B.E., R.N. (Member).

11th April (Birkenhead) "The Engineer Officer" by Capt. W. S. C. Jenks, O.B.E., R.N. (Member).

30th October (Bolton) "Automatic Boiler Control" by P. A. Gill (Associate).

21st November (Birkenhead) "Modern Marine Water Tube Boilers" by J. H. Milton (Member of Council).

Attendances at senior lectures have been quite encouraging and it is obvious that if a good subject and author were provided, full support is forthcoming.

Junior lectures are well attended by Students, but it would be more encouraging for authors and college staff if senior members would try to attend.

Following advice from The Liverpool Engineering Society that their accommodation would not be available for the 1962/63 Session, it was necessary to make extensive enquiries regarding other accommodation and after some difficulty the Committee was fortunate in being able to hire the theatre of The Merseyside Film Institute Society, 45 Bluecoat Chambers, Liverpool, 1: to do this involved changing the day of the meetings from the first Monday to the first Wednesday in the month, but this was unavoidable.

Mr. Stanley Hitchings of Riversdale Technical College, Mr. Geoffrey M. Watson of Birkenhead Technical College and Mr. G. Warburton of Bolton Technical College were nominated for the Lloyd's Register of Shipping Award. All three were accepted for the Award, which took the form of a visit to the Pametrada Research Station, Wallsend-on-Tyne, followed by a lecture on Engineering Research by Dr. T. W. F. Brown, C.B.E., S.M. (Member).

After representations by the Committee, Headquarters advised that in future six places would be made available to Students in this area; this will make the task of the Selection Committee much easier in the future.

The Dinner Dance was again held in the Banqueting Suite

## Annual Report of the Council for 1962

of the Adelphi Hotel, Liverpool, on Friday, 2nd November 1962, when the Section was honoured by the presence of the Chairman of Council, Vice-Admiral Sir Frank Mason, K.C.B., and Lady Mason, together with the Principals of Riversdale and Birkenhead Technical Colleges, with their ladies. This happy occasion was again well supported by members and their friends, some 340 being present.

On Wednesday, 6th June 1962, a party of 37 members visited the works of Rolls-Royce Ltd., Shrewsbury; this proved to be both instructive and enjoyable. The Rolls-Royce personnel went to a great deal of trouble on behalf of the members and were kind enough to entertain the party to a most enjoyable lunch.

W. S. C. Jenks (*Chairman*)  
T. Kameen (*Honorary Secretary*)

### Annual General Meeting

The Tenth Annual General Meeting of the Section was held on Wednesday, 6th February 1963, in The Theatre of the Merseyside Film Institute Society, 45 Bluecoat Chambers, Liverpool, 1, at 6.0 p.m.

Approximately 40 members attended which, in view of the severity of weather conditions throughout the whole country, was considered to be a very good representation.

Copies of the annual report and the financial statement were available. The Honorary Secretary, Mr. T. Kameen, gave a résumé of his report and, there being no matters arising therefrom, it was proposed by Mr. L. Deakin, seconded by Mr. F. Lewin and carried unanimously, that they be adopted.

Four nominations were received for the four vacancies on the Committee; no ballot was therefore necessary and the four nominees, Messrs. L. Deakin, T. Kameen, D. McGrouther and B. Mead, were elected to the Committee.

As no nominations were received for the office of Honorary Secretary, Mr. Kameen agreed to continue in this capacity until a successor could be found.

Mr. J. E. Shields, being the only nominee for the office of Honorary Treasurer, will continue to fill this position.

The Chairman, Captain W. S. C. Jenks, O.B.E., R.N., in his survey of the year's activities, stressed the importance of one major event in the activities of the Institute over the past year, namely the Presidential Address of His Royal Highness The Prince Philip, Duke of Edinburgh, who honoured the Institute by being its President this year. The Chairman particularly drew attention of members present to the way in which His Royal Highness had stressed the importance of those engaged in the marine engineering profession, to regard technical progress as normal and necessary for survival, a burning ambition being essential within the profession to ensure that this country of ours should be in the forefront of development and thus, the envy of the world.

The Chairman thanked the Committee for their loyal support during his term of office and advised the meeting that the Committee had unanimously agreed to elect Mr. J. A. Smith, D.S.C., V.R.D., B.Sc. as Chairman for 1963/64. Mr. Smith then took the Chair and thanked the members for entrusting him with this very important office. In paying tribute to the manner in which Captain Jenks had conducted the affairs of the Section, Mr. Smith expressed the hope that he would be able to maintain the high standard set by his predecessors and that he would be able to fulfil his duties to the satisfaction of all concerned.

The constitution of the Committee for 1963 is as follows:  
Vice-President, Liverpool: T. McLaren, B.Sc.  
Chairman: J. A. Smith, D.S.C., V.R.D., B.Sc.

Committee: J. Bowman  
R. F. Capey (Member of Council)  
G. Clark  
J. A. Clay (Corresponding Member, Manchester)  
L. Deakin  
Capt. W. S. C. Jenks, O.B.E., R.N.  
(co-opted 1963/64)

T. E. Jones (Member of Council)  
G. Keenan (Associate Member of Council)  
Lt. Cdr. G. Kenworthy-Neale, R.N.R.  
(co-opted 1963/64)  
D. McGrouther  
R. McVie, B.Sc. (Corresponding Member, Barrow)  
B. Mead  
T. C. Shaw (co-opted 1963/64)  
J. L. Snowdon

Honorary Secretary and Vice-Chairman: T. Kameen  
Honorary Treasurer: J. E. Shields

\* Published in the September 1962 issue of TRANSACTIONS.  
† Published in the February 1963 issue of TRANSACTIONS.  
‡ Published in the January 1963 issue of TRANSACTIONS.  
§ Published in the April 1962 issue of TRANSACTIONS.  
|| Published in the May 1962 issue of TRANSACTIONS.

### NORTH EAST COAST

The North East Coast Section register is as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	301	81
Associate Members ...	279	77
Companions ... ..	1	2
Associates ... ..	51	16
Graduates ... ..	62	27
Students ... ..	73	27
Probationer Students	49	32
	816	262

The following meetings were held during 1962:

- 18th January (Newcastle) Annual General Meeting followed by "Residual Thermal Stresses in Compression Ignition Engines" \* by A. Dearden.
- † 8th February (Newcastle) "Marine Lubrication" by G. H. Clark (Member).
- † 5th March (South Shields) "The Steam Reciprocating Engine" by G. Yellowley (Member).
- 15th March (South Shields) Centenary Lecture in honour of the Centenary of the Marine and Technical College, South Shields. "Problems Arising in Design" by C. C. Pounder (President).
- ‡ 18th October (Newcastle) "The Doxford Direct Drive Diesel Engine" by P. Jackson, M.Sc. (Member of Council).
- † 22nd October (South Shields) "Marine Electrical Engineering" by D. Gray, B.Sc. (Member).
- § 8th November (Newcastle) "Machinery Installations of Guided Missile Destroyers and General Purpose Frigates" by Cdr. J. M. C. Dunlop, R.N. (Associate Member) and Cdr. E. B. Good, R.N. (Member).
- † 22nd November (Sunderland) "Safety at Sea" by Stewart Hogg, O.B.E. (Vice-President). Junior lecture for Sunderland Technical College Engineering Society.
- † 26th November (South Shields) "Fire Fighting Equipment and its Use in Ships" by G. Victory (Member).
- ‡ 13th December (Newcastle) "Problems of Merchant Ship Nuclear Propulsion" by B. Hildrew, M.Sc. (Member).

The increase in average attendance which has been reported in previous years has risen sharply in 1962. This is partly due to holding several meetings in the new large theatre at South Shields. The Centenary Lecture drew an audience of 458 which included senior representatives of the Institute, education and industry, together with the staff and students of the South Shields Marine and Technical College most of whom are members of the Institute.



## Annual Report of the Council for 1962

The Annual Dinner and Dance was held on Friday, 2nd February 1962, at the Royal Station Hotel, Newcastle upon Tyne and was a great success. This function appears to increase in popularity as there is a demand for tickets exceeding the supply.

During 1962 the North East Coast Section Golfing Society has been successfully launched under the direction of the Social Committee with Mr. C. J. Probett co-opted to act for golf meetings. The inaugural meeting was held at Brancepeth Castle Golf Club, Co. Durham, on Wednesday, 16th May. The Autumn Meeting was held on Wednesday, 5th September 1962, at Arcot Hall Golf Club, Northumberland. Further meetings are planned for 1963.

The Section is co-operating with the National Productivity Council by offering an invitation to one meeting and by inviting a lecturer from the British Lighting Council to deliver a junior lecture at South Shields.

The Committee have recorded a sincere vote of thanks and appreciation to the retiring Chairman, Mr. S. H. Dunlop.

As the North East Coast Section covers many marine centres, local members who wish to be advised of all activities in the area at no extra charge, are requested to register with the local section.

G. Yellowley (*Chairman*)

A. J. S. Bennett (*Honorary Secretary*)

### *Annual General Meeting*

The Eleventh Annual General Meeting of the Section was held on Thursday, 17th January 1963 at the Marine and Technical College, South Shields, at 6.15 p.m. with Mr. G. Yellowley in the Chair.

Two scrutineers were nominated and were approved by the meeting. The scrutineers elected were Messrs. W. Francis and T. D. Morton who then left the meeting to count the votes for the election of the new Committee members.

The annual report, available at the meeting and previously approved by the Committee, was also accepted by the meeting.

Mr. R. McDonald, B.Sc. (Honorary Treasurer), was then called upon to report on the annual accounts. The proposal by Professor G. H. Chambers, D.S.C., that the accounts be accepted, was seconded by Mr. Kling and carried by the meeting.

The following were elected to serve on the Committee: Messrs. M. Adams, P. H. Arthur, W. C. Grant, P. Henry and A. B. Ives.

The Chairman cordially welcomed the new members and expressed his appreciation of the work done by the retiring members of the Committee. He also expressed appreciation of the individual help from the two university members Professor Chambers and Mr. Jones.

The new Committee is as follows:

Local Vice-President, Newcastle upon Tyne: E. C. Cowper

Local Vice-President, Tees-side: E. T. Middleditch

Chairman: G. Yellowley

Committee: M. Adams

P. H. Arthur

Prof. G. H. Chambers, D.S.C.

J. E. Church (Member of Council)

W. Embleton

W. Francis

W. C. Grant

J. G. Gunn, B.Sc. (Corresponding Member, Sunderland)

P. Henry

A. B. Ives

P. Jackson, M.Sc. (Member of Council)

A. W. Jones, B.Sc.

W. R. Jones

E. Lea

C. J. Probett (co-opted)

C. R. Rowcliffe

R. Walker

C. Wappett

Honorary Secretary: A. J. S. Bennett, M.B.E.

Honorary Treasurer: R. McDonald, B.Sc.

The Annual General Meeting was followed by a paper entitled "Recent Developments in the Götaverken Oil Engine" by G. Yellowley (Member) and Lars Th. Collin.

Mr. E. C. Cowper (Local Vice-President) took the Chair at 6.40 p.m. and introduced the speakers. Mr. Yellowley then read his part of the paper which dealt with the Götaverken engine and was followed by Mr. Collin who covered the super-charging aspects and the more recent developments in the engine. A most interesting discussion followed which included amongst others, a characteristic contribution from Mr. P. Jackson, M.Sc. (Member of Council), and Mr. J. F. Butler, M.A. (Member) and some first hand information of seagoing experience.

An appropriate vote of thanks to the lecturers for their excellent paper was proposed by Mr. P. Henry who thanked Mr. Collin for travelling from Sweden, also all members present for their attendance in the face of inclement weather.

\* Published in the June 1962 issue of TRANSACTIONS.

† Junior Lecture.

‡ Published in the October 1962 issue of TRANSACTIONS.

§ Published in the January 1963 issue of TRANSACTIONS.

### NORTH MIDLANDS

Membership of the Section has increased slightly during the current year and it is pleasing to report that interest in the activities of the Section continues to increase.

Membership figures are as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	76	32
Associate Members ... ..	53	38
Companions ... ..	1	—
Associates ... ..	18	13
Graduates ... ..	15	9
Students ... ..	11	13
Probationer Students	10	28
	184	133

The programme for the year was varied and interesting and included the following activities:

- 31st January (Sheffield) "Marine Lubrication" by G. H. Clark (Member).
- 4th April (Derby) "Advanced Nuclear Marine Propulsion Plant, based on n.v. *Savannah*" by W. R. Wootton and A. J. Taylor.
- \* 9th May (Sheffield) "Land Practice in Modern Steam Plant" by F. Dransfield, B.Sc.(Eng.) and J. L. Gray, B.Sc.
- 10th September (Sheffield) Visit to Sheffield Corporation Waterworks.
- 21st November (Derby) Visit to Rolls-Royce Ltd., Derby, to see "Altitude Test Plant".

The largest attendance at any meeting during the 1962 Session was at Derby, when 184 members and friends attended the lecture on the "Nuclear Marine Propulsion Plant", thus indicating the intense interest that this subject has in the area. Mr. Wootton, who presented the paper, was extremely lucid in his remarks and in a way that even laymen could understand. The paper, together with a film showing various stages in the building of the hull and reactor for the n.v. *Savannah*, made the meeting an outstanding occasion.

Another outstanding event was a visit, by the members and their wives, to the Sheffield Corporation Waterworks and the Derwent Valley Waterboard System. To choose a day (in a summer notable for its rain) that was gloriously fine, was indeed an achievement and contributed immensely to the tour which was by coach, through some of the best scenery in Derbyshire.

The Section was indebted to Mr. A. B. Baldwin, M.Eng., M.I.C.E., M.I.W.E., of the Sheffield Corporation Waterworks and Mr. K. J. Saxton, M.A.(Cantab.), A.M.I.C.E., M.I.W.E.,



## Annual Report of the Council for 1962

for the itinerary, which showed the care taken in the collection, filtration and supply of our most valuable commodity.

The day ended with high tea at the Rising Sun Hotel, Bamford.

In concluding the annual report of the Section, the Honorary Secretary paid tribute to the sterling work of the retiring members of Committee, Mr. J. C. Proudfoot (Chairman), Mr. H. V. Campbell (Vice-Chairman), Messrs. C. W. Parris, F. P. Jewitt, H. C. Rivers and W. S. Taylor who have served in that capacity since the inauguration of the Section and said that they could still be counted upon if their assistance was required in the future.

F. H. Soppitt (*Honorary Secretary*)

### Annual General Meeting

The Third Annual General Meeting of the Section was held on Wednesday, 16th January 1963, in Sheffield. Mr. J. C. Proudfoot (Chairman of the Section) was in the Chair and despite inclement weather twenty-six members attended.

The annual report and financial statements were presented and approved.

The Chairman thanked the Committee for the help given to him during the past year and referred to the high standard of the meetings and the increasing interest of members in the activities of the Section.

The following three members were elected to the Committee, Messrs. G. Prentice, E. C. Hayes and L. R. G. Sayer.

The Committee is now constituted as follows:

Chairman: J. W. Batey

Vice-Chairman: *To be appointed*

Committee: E. C. Hayes

A. M. Jarvis, B.Sc.

A. S. Lawrie

G. Prentice

L. R. G. Sayer

V. Wales

Honorary Secretary: F. H. Soppitt

Honorary Treasurer: Y. Arakie

Following the meeting the members were entertained by the Directors of the English Steel Corporation Limited. After a film showing the manufacture of a Doxford engine crankshaft, the members were conducted in parties round the melting shop where castings up to 185 tons individual weight can be produced, the heavy forge, where currently, hollow forged steel boiler drums are being manufactured for one of the latest power stations and then into the heavy machine shop where members witnessed, amongst a large variety of products, boiler drums and turbine rotor shafts in various stages of machining to the completed article.

After the tour members were entertained socially and a vote of thanks for an exceptionally interesting evening, was proposed by Mr. J. C. Proudfoot and heartily endorsed by all present.

\* Published in the May 1962 issue of TRANSACTIONS.

### SCOTTISH

The total membership of this Section continues to increase and now stands at 1,291, consisting of 921 registered and 370 non-registered members.

It was with great regret that the Section had to record the death on 6th November 1962, of Mr. N. M. Kissell, a member of Committee.

Joint meetings were held with the Institution of Engineers and Shipbuilders in Scotland and with the Graduates' Section of the Scottish Branch of the Institution of Mechanical Engineers.

The Eighth Annual Dinner was held on Friday, 16th February 1962, at the Central Hotel, Glasgow, and the Sixth Dinner and Dance on Saturday, 8th December 1962, at the Grosvenor Restaurant, Glasgow and both these functions were very successful.

The following papers were presented during 1962:

- 10th January (Glasgow) "Latest Trends in Automatic Boiler Control for the Merchant Fleet" by P. A. Gill.
- 7th February (Glasgow) "Propellers and their Performance" by J. B. McNee, O.B.E.
- 10th October (Glasgow) "Operational Problems of Small Diesel Ships" by R. Beattie (Member).
- \* 31st October (Glasgow) "Automation in Ships" by J. Lenaghan, C.B.E.
- † 14th November (Glasgow) "Ship Repair Practice" by L. M. Scaife (Member).
- ‡ 5th December (Glasgow) "The Doxford Direct Drive Diesel Engine" by P. Jackson, M.Sc. (Member of Council).

The average attendance at the Glasgow senior meetings was 109: the attendance at the Junior meeting on 31st October was 150.

R. Beattie (*Chairman*)

A. W. Clark (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting of the Section was held at the Institution of Engineers and Shipbuilders in Scotland, 39 Elmbank Crescent, Glasgow, on Wednesday, 6th February 1963, at 7.30 p.m. with an attendance of 140, despite very wintry conditions.

Mr. R. Beattie (Chairman of the Section) presided and formally obtained approval of the 1962 reports of the Honorary Secretary and the Honorary Treasurer, both these documents having been distributed to members.

The auditors, Mr. H. C. Kemp and Mr. T. Smeaton, agreed to accept office for a further year, as did the scrutineers, Mr. J. B. Stewart and Mr. W. Paterson.

The Chairman announced that no nominations had, so far, been received for the office of Honorary Secretary and in view of this, Mr. A. W. Clark agreed to serve for another month or so, pending the appointment of his successor.

Mr. J. D. B. Mundie and Mr. R. Marshall agreed to continue for another year as Honorary Assistant Secretary and Honorary Treasurer respectively.

Mr. C. A. Creber and Mr. W. Lochridge were formally nominated to serve on the Committee on the retirement, after three years' service, of Mr. R. Beattie and Mr. R. Yates.

A formal vote of thanks to the Committee for their past year's service was eloquently proposed by Mr. Douglas Macfarlane.

The meeting was then declared open for any member to raise any question about the Section's activities, etc., but none was raised.

On conclusion of the Section's business, the Chairman welcomed the President and Secretary of the Institution of Engineers and Shipbuilders in Scotland, Mr. I. M. Stewart and Mr. P. W. Thomas respectively, to this joint meeting with them and emphasized the value of such meetings.

Mr. Beattie then introduced Mr. J. W. Dagleish and asked him to present his paper "The Clyde Dry-Dock Project", copies of which were distributed at the meeting. The author put over his paper in an exceptionally able manner and mentioned in detail many of the interesting problems associated with the new Clyde Dry-Dock.

A lengthy and varied discussion followed, with which Mr. Dagleish dealt in a pleasing and interesting manner.

A vote of thanks to the author was aptly proposed by Mr. I. M. Stewart, President of the I.E.S. and was carried with great enthusiasm.

\* Junior Lecture. Joint meeting with the Institution of Engineers and Shipbuilders in Scotland and the Scottish Branch of the Institution of Mechanical Engineers.

† Joint meeting with the Institution of Engineers and Shipbuilders in Scotland.

‡ Published in the October 1962 issue of TRANSACTIONS.



## Annual Report of the Council for 1962

### SOUTH EAST ENGLAND Annual General Meeting

The First Annual General Meeting of the Section was held on Tuesday, 15th January 1963, at the Clarendon Royal Hotel, Gravesend. The only item on the agenda was the confirmation in office of the Provisional Committee, nominated by the inaugural meeting held on 23rd October 1962.

It was proposed by Mr. Baldwin and seconded by Mr. Thornton, that the Provisional Committee, including the Honorary Secretary and Honorary Treasurer, be elected as the Section Committee for the current year. This received unanimous approval from the members present.

The Committee therefore, is as follows:

Chairman: G. F. Forsdike  
 Vice-Chairman: R. Woodward  
 Committee: J. S. Allan  
               J. A. Andrew  
               R. H. Cadle  
               Lieut. N. H. Card, R.N.  
               S. G. Cracknell  
               A. E. Franklin  
               J. Heighway  
               A. R. Stamp

Honorary Secretary: J. Haddock  
 Honorary Treasurer: A. H. Stobbs

The Chairman asked for any further nominations for membership to the Committee, but no proposals were made. He delivered a brief address to the meeting, welcoming the eighty members and guests present and outlining the aims of the Section.

The Chairman then introduced Mr. W. R. Harvey, O.B.E. (Member of Council) who expressed his pleasure at being invited to give the first paper to the Section. Mr. Harvey presented his paper on "The Care and Maintenance of Water-tube Boilers" which received great attention. A number of questions put to Mr. Harvey were answered in his customary erudite manner. He subsequently received the congratulations of the Chairman and the members present.

### SOUTH WALES

The membership of the Section shows a slight decrease in the total number of members resident in the area. There are now 248 registered members and 126 non-registered members, compared with 237 registered and 153 non-registered members last year. Despite the drop, it is very encouraging to note that the number of members registered with the South Wales Section shows an increase and it would appear that the campaign to encourage interest has borne results.

The membership figures are as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	106	22
Associate Members ...	66	36
Companions ... ..	1	—
Associates ... ..	14	5
Graduates ... ..	15	6
Students ... ..	23	35
Probationer Students	23	22
	248	126

The following programme was arranged for 1962:

- \* 22nd January (Cardiff) † "Brains Trust" at the Welsh College of Advanced Technology.
- 5th February (Cardiff) "Welding in Small Ship Construction" by R. Du Cane. Joint Meeting with the Institute of Welding.
- 6th February (Swansea) "Welding in Small Ship Construction" by R. Du Cane. Joint Meeting with the Institute of Welding.
- 12th March (Cardiff) "Spheroidal Graphite (Nodular) Cast Iron in Marine Engineering" given by J. C. Robinson.
- 15th October (Cardiff) "Recent and Notable Ship Fires and Explosions" by A. S. Minton (Associate).

- \* 26th October (Swansea) "Watchkeeping in Motorships" by S. Speed (Member) read by W. S. Holness (Member).
- 19th November (Cardiff) "A Brief Study of Alternating Electric Current for Marine Application" by G. Hair (Member).

The Annual Golf Meeting was held on Friday, 15th June 1962, at the Glamorganshire Golf Club at Penarth, when 33 members participated. The David Skae Cup was won by Mr. D. R. M. Barwell who had travelled from Pembroke for the occasion.

The Annual Dinner was held on Friday, 9th November 1962, at the Royal Hotel, Cardiff, and was attended by 143 members and guests. Vice-Admiral Sir Frank Mason, K.C.B. (Chairman of Council), Mr. J. Calderwood, M.Sc. (Senior Vice-President) and Mr. J. Stuart Robinson, M.A. (Secretary of the Institute) represented the Council at this very successful function.

D. Skae (*Chairman*)  
 T. C. Bishop (*Honorary Secretary*)

### Annual General Meeting

The Eleventh Annual General Meeting of the Section was held on Monday, 7th January 1963, at the South Wales Institute of Engineers, Park Place, Cardiff, at 6.0 p.m.

The Chairman of the Section, Mr. David Skae (Vice-President) presided at the meeting which was attended by 19 members.

In his report the Chairman said that probably the most noteworthy feature of the past year was the increasing interest and support shown by Swansea members and for this gratifying development thanks were due to the enthusiasm and good example of the Vice-Chairman, Mr. R. A. Simpson (Corresponding Member, Swansea), whose untiring efforts would be recognized by his election to the office of Chairman of the Committee for the ensuing year.

Attendance at lectures is still not as good as could be wished, but he was pleased to record that the measures inaugurated last year—the advancement of the hour to 6.0 p.m. and the provision of light refreshments—had achieved some success which he hoped would be maintained and improved upon this year.

The financial report was read by the Honorary Treasurer, Mr. G. K. Beard, and approved by the meeting.

Mr. P. A. Ridyard and Mr. O. T. Griffiths were appointed as scrutineers for the ballot for the seven vacancies on the Committee. Messrs. W. E. Brennan, T. G. Bullen, S. J. French, W. S. Holness, J. E. Morgan, H. G. Wickett, M.B.E. and J. Wormald, B.Sc., were elected to serve on the Committee in place of Messrs. R. F. J. Black, A. J. Cant, F. R. Hartley, J. L. Hindmarsh, R. H. Rees, O.B.E. and T. G. Whitelaw, B.Sc. who retire after serving three years and Mr. R. F. Munro (Honorary Assistant Secretary) who is now resident in Switzerland.

The newly constituted Committee is as follows:

Vice-President: D. Skae  
 Chairman: R. A. Simpson  
 Committee: W. E. Brennan  
               T. G. Bullen  
               S. J. French  
               W. S. Holness  
               H. S. W. Jones  
               J. McE. Kay  
               J. E. Morgan  
               D. Ormiston  
               P. A. Ridyard  
               H. G. Wickett, M.B.E.  
               H. F. Widdas  
               J. Wormald, B.Sc.

Honorary Secretary and Vice-Chairman: T. C. Bishop  
 Honorary Treasurer: G. K. Beard

\* Junior Lecture.

† Published in the September 1962 issue of Student TRANSACTIONS.



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### SOUTHERN JOINT BRANCH R.I.N.A. AND I.M.A.R.E.

The Branch is very fortunate in having the continued interest of Mr. R. N. Newton, R.C.N.C., who, despite his promotion to Deputy Director of Naval Construction and consequent move to Bath, has accepted office as President for another year.

The two new members of Council are Mr. D. G. Low, R.C.N.C. and Mr. C. Golesworthy.

Owing to difficulties that have arisen making it very inconvenient to hold meetings in the Portsmouth and Southampton Technical Colleges, the Council were obliged to hold the meetings at local hotels this session; as this arrangement has proved to be successful from every point of view, meetings will continue to be held there.

The papers read were:

18th January	(Southampton) "Modern Methods in Marine Main Propulsion Machinery" by E. Norton, C.B.E., B.E.M.
15th February	(Southsea) "Superstructure and Funnel Design Relative to the Smoke Plume" by A. D. Third, B.Sc., Ph.D., and E. Ower, B.Sc.
19th March	(Southampton) "The Prediction of Yacht Performance" by W. A. Crago, B.Sc.
27th September	(Southsea) "Modern Management Methods in Shipbuilding" by G. Y. Elliott.
16th October	(Southampton) "Canberra's Machinery" by T. W. Bunyan, B.Sc.
22nd November	(Southsea) "Oceanography" by Dr. G. E. R. Deacon, C.B.E., F.R.S.

A visit to the Admiralty Experimental Works at Haslar, took place in April.

The Annual Dinner and Dance was held on 2nd March 1962 and the Annual Dinner on 26th October 1962, at the Royal Beach Hotel, Southsea. The guest of honour at the Annual Dinner was Mr. J. W. Thornycroft, C.B.E., and guests included representatives from the parent societies and local technical colleges.

### WEST MIDLANDS

The Section is again able to report an increase in the membership, the total having been increased from 343 to 353 during the year.

Whilst this report is encouraging, it is disappointing to record that the number of registered members has decreased and a concerted effort will, therefore, need to be made during the next few months in an attempt to increase the number of registered members. It is hoped that members of the West Midlands Section who read this item will register with the Honorary Secretary, J. H. Gilbertson, c/o Serck Radiators Ltd., Warwick Road, Birmingham 11.

The analysis of the present membership is as follows:

	Registered	Non-registered
Members ... ..	72	42
Associate Members ...	59	56
Associates ... ..	23	14
Graduates ... ..	17	10
Students ... ..	15	22
Probationers ... ..	9	14
	195	158

Five meetings were held during the year for the presentation of the following papers:

* 18th January	"The Future Doxford Marine Oil Engine" by P. Jackson, M.Sc. (Member of Council).
† 15th February	"The Automatic Control of Naval Boilers" by Cdr. J. P. H. Brown, R.N. (Member) and Lt. Cdr. W. J. R. Thomas, R.N.
22nd March	"The Second Generation of Hydrostatic Power Transmission" by D. Firth.
12th April	"The Training of Engineers for the Industrial Era Ahead" by J. Wilson, J.P., B.Sc., B. Com.

‡ 18th October "Machinery Installations of Guided Missile Destroyers and General Purpose Frigates" by Cdr. J. M. C. Dunlop, R.N. (Associate Member) and Cdr. E. B. Good, R.N. (Member).

The average attendance at each meeting was 39 which shows an increase over the previous year of ten per cent.

In addition to the above lectures a works visit was arranged to Bristol Siddeley Engines Ltd., Ansty, Coventry, on Thursday, 20th September 1962. The visit was well attended and included a tour of the Maybach Diesel and gas turbine shops which was supported by a talk about engines, aided by a colour film.

Gas turbine units, to be used for peak load operation in power stations, which were pioneered by the company, aroused great interest. Lunch and tea were provided and all members present had a most enjoyable and interesting visit.

During the year the Section has moved to the Engineering and Building Centre, Broad Street, Birmingham. This is an unique building; not only does it provide lecture rooms, reference libraries, etc., but it is also a permanent exhibition of Midland industry and over 200 firms have stands showing their products.

The Tenth Annual Dinner was held at the Queen's Hotel on Thursday, 15th November 1962. The Chairman of the Section, Mr. H. E. Upton, O.B.E. (Local Vice-President, Birmingham), presided and 125 members and guests were present.

The Section was honoured by the attendance of the Senior Vice-President of the Institute, Mr. J. Calderwood, M.Sc., Vice-Admiral Sir Frank Mason, K.C.B. (Chairman of Council) and Mr. J. Stuart Robinson, M.A. (Secretary).

Amongst the guests were Mr. J. Wilson, J.P., B.Sc., B.Com., Director of Education and Training, B.M.C. Staff College, Mr. W. H. Lindsey, M.A., Technical Director of Bristol Siddeley Engines Ltd. and Mr. J. W. Laing, Chief Engineer, G.E.C., Witton.

It was again confirmed by many of those present that the informality of the function makes it such a success.

H. E. Upton (*Chairman*)

J. H. Gilbertson (*Honorary Secretary*)

### Annual General Meeting

The Tenth Annual General Meeting of the Section was held at the Engineering and Building Centre, Broad Street, Birmingham, on Thursday, 24th January 1963 at 6.0 p.m. The Chairman of the Section, Mr. H. E. Upton, O.B.E. (Local Vice-President) was in the Chair and the meeting was attended by fourteen members.

Apologies for absence were received from Messrs. G. G. Connor, A. L. Cramb and K. H. Harrison.

In presenting his report the Chairman was pleased to record a slight increase in membership within the Section, although comment was made upon the large proportion of members who remained unregistered. The Chairman suggested that Head Office should be asked to circulate all members, or to put a suitable letter in *TRANSACTIONS*, on the advantages and benefits in registering with the local sections.

During the year the Section had moved to new premises and it was felt that although attendance at lectures held during the year had shown an increase, with the new amenities further increases should be obtained in the future.

The statement of accounts was then submitted. A motion that these accounts be accepted, which was proposed by Mr. R. R. Gilchrist, M.A. and seconded by Mr. G. H. Cornish, was approved by the meeting.

The Chairman thanked the Committee for the help and support given to him during the year and made particular reference to the retiring members, Messrs. R. R. Gilchrist, M.A., J. R. Cotterill, H. E. Muckley and G. G. Connor.

In the absence of further nominations Mr. J. H. Gilbertson was returned as Honorary Secretary, being proposed by Lt. Cdr. G. C. Holland, D.S.M., R.N. and seconded by Mr. G. H. Cornish.



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Mr. K. H. Harrison was returned as Honorary Treasurer being proposed by Mr. J. W. Bell and seconded by Mr. J. R. Cotterill.

No new nominations for the vacancies on the Committee had been received other than those of the four members who had retired. Mr. Connor has been elected to the Committee being eligible due to the fact that he was co-opted to the Committee during the year.

It was suggested by the Chairman that in view of the fact that no further nominations for the vacancies on the Committee had been received, consideration should be given to re-electing the retiring members. This motion was carried unanimously.

The Committee for the ensuing year is as follows:

Local Vice-President, Birmingham: H. E. Upton,  
O.B.E.

Chairman: R. R. Gilchrist, M.A.

Vice-Chairman: *To be appointed*

Committee: J. W. Bell

G. G. Connor

G. H. Cornish

J. R. Cotterill, J.P.

A. L. Cramb

H. E. Muckley

R. S. Robinson, B.Sc.

Honorary Secretary: J. H. Gilbertson

Honorary Treasurer: K. H. Harrison

It was suggested by Lt. Cdr. Holland that consideration should be given in future to commencing the Annual General Meeting later in the evening. It was felt that 6.0 p.m. was a little early and perhaps prevented members from attending.

Mr. J. R. Cotterill proposed a vote of thanks to the Chairman, Mr. H. E. Upton, complimenting him on his efforts and enthusiasm during his term of office.

\* Published in the July 1961 issue of TRANSACTIONS.

† Published in the April 1961 issue of TRANSACTIONS.

‡ Published in the January 1963 issue of TRANSACTIONS.

### WEST OF ENGLAND

Membership of the West of England Section at 31st December was as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	115	17
Associate Members ...	67	17
Associates ... ..	23	4
Graduates ... ..	17	4
Students ... ..	16	8
Probationer Students	19	6
	257	56

Once again there has been a substantial increase in both registered and non-registered members. The total membership of 313 is greater than last year's figure by 19.

During the year the Section suffered the loss by death of two of its members, Mr. A. E. C. Glass and Mr. V. R. Newlands.

The full list of papers or lectures presented during 1962 is as follows:

- \* 12th February (Bristol) "Funnel Design and the Smoke Plume" by A. D. Third, B.Sc., Ph.D., and E. Ower, B.Sc.
- † 19th February (Bath) "Land Practice in Modern Steam Plant" by F. Dransfield, B.Sc.(Eng.) and J. L. Gray, B.Sc.
- ‡ 12th March (Bristol) "A Critical Survey of Marine Water Treatment Methods" by I. Raleigh.
- 11th April (Bath) "Gas Turbines" by N. M. Clark.
- § 8th October (Bath) "Boiler Cleaning" by Cdr. R. M. Inches, R.N. (Member).
- 12th November (Bristol) "Oil Fuel Burning" by Cdr. R. B. Cooper, M.B.E., R.N.

10th December (Bath) "Ship Steering Gears" by W. Spencer Paulin.

The average attendance at these meetings was 32.7. Compared with last year, this is an increase of 10.8 per cent and it is hoped that this improvement will continue.

Mr. J. E. Riley, who fulfilled the requirements for the Lloyd's Register of Shipping Award for 1963, was nominated to represent the West of England.

On Thursday, 17th May 1962, a party of members, together with their ladies and guests, made a visit to the Queens Engineering Works, Bedford, by courtesy of the directors of W. H. Allen Sons and Company Ltd. The members had a most interesting tour of the Works, while the ladies thoroughly enjoyed a visit to the local confectionery factory of Meltis Ltd.

A visit to the City of Bath Technical College on Thursday, 1st November 1962 was arranged by courtesy of the Principal and Staff and members spent a very enjoyable and interesting evening in the Engineering Laboratories and workshops, where they had a good insight into the activities of the various departments.

The third Annual Dinner and Dance was held at the Royal Hotel, Bristol, on Saturday, 27th October 1962.

The principal guests were the Chairman of Council, Vice-Admiral Sir Frank Mason, K.C.B., and Lady Mason, the Chairman of the Institution of Mechanical Engineers (Western Branch) Mr. J. M. Knowlson, and Mrs. Knowlson, also the Chairman of the Devon and Cornwall Section, Mr. W. E. B. Dainton, and Mrs. Dainton. The function was again an outstanding success and thoroughly enjoyed by members, their ladies and guests, numbering 155 in all.

R. G. Raper (*Chairman*)

J. E. Gander (*Honorary Secretary*)

### Annual General Meeting

The Eighth Annual General Meeting of the Section was held at Queen's Building, University of Bristol, on Monday, 14th January 1963, at 7.30 p.m. Captain R. G. Raper, R.N. (Chairman of the Section) presided and twenty members were present, including Mr. D. W. Gelling (Local Vice-President).

The Chairman said that as an account of the activities of the Section would be given in the annual report, to be read by the Honorary Secretary, he would not anticipate it except to remark upon the success of the Dinner and Dance. He had received very complimentary letters of thanks from the official guests and the thanks of all the members of the Section who attended. In anticipation of the continued popularity of the Dinner and Dance the Committee had approved the action of the Social Committee in booking a larger room for the next function. The social funds had to stand a small but calculated loss on the last occasion and it would be necessary to raise the prices slightly owing to the recent increase in catering charges. On behalf of the meeting, the Chairman paid tribute to Mr. Rees, Chairman of the Social Committee, to its Secretary, Mr. Hyde, also to Mr. Atkinson, Mr. Brown, Commander Inches and Mr. Vickery for devoting a great deal of time and thought to the arrangements. Members would be extremely sorry to learn that having reached the age of four score years, Mr. Rees felt he should now retire from the Committee to make way for someone else.

The papers presented during the year had been both interesting and instructive, distinguished among them was one by Commander Inches, a member of the Section Committee, who read his paper on "Boiler Cleaning".

The Chairman said that the Annual General Meeting was a necessary function of the Section and thanked members for attending despite the unpleasant weather. The Committee spent a fair amount of time dealing with Section affairs and required the general backing of the Annual General Meeting. He was pleased to report regular attendance at Committee Meetings and was grateful to the members of Committee for their co-operation and particularly thanked the retiring members. The Chairman said that he thought the success of the Section's activities centred on the Honorary Secretary and



## Annual Report of the Council for 1962

could not adequately express the thanks due to him for his unflinching industry and enthusiasm in dealing with the affairs of the Section. He was completely without the support of any sort of office staff, yet, for the past three years he had contrived not only to compete with the Section's business, but to compete with it efficiently and entirely reliably. This was not just flattery on his part the Chairman said, as the staff of the Institute had also remarked upon the efficiency with which the Honorary Secretary carried out his duties. It was with great regret that he had to report that, understandably, Mr. Gander felt that he had to resign from this office in view of a widening of his business responsibilities. The Chairman said that from his point of view, Mr. Gander had acted as every sort of guide and mentor and that he was extremely grateful to him, as well as to the Local Vice-President, Mr. Gelling, and the Vice-Chairman, Mr. Vickery, for making his job as Chairman a pleasure. He also very much regretted having to report that Mr. Davies, Honorary Treasurer, would also be retiring because of domestic difficulties which would make it impossible for him to attend meetings. Mr. Davies has been Honorary Treasurer of the Section since its inauguration in 1954, he had seen it through its early financial troubles by issuing warnings and encouragement at the right time. Although Mr. Davies had much to contend with he was never without a cheery word and he felt sure that members would remember his service to the Section with gratitude.

The Chairman then outlined the necessary procedure for the reconstitution of the Section's Committee.

Messrs. R. S. Brown, W. Brunton, G. S. Selman and J. P. Vickery, having served for three years on the Committee would retire at the end of the meeting and were not eligible for re-election. Messrs. D. V. Hyde and A. G. A. Muirhead who were co-opted in 1962 would also retire but were eligible for re-election.

Five nominations had been received for the seven vacancies on the Committee and the following members were elected: Messrs. J. E. Gander, D. V. Hyde, T. A. Mogg, A. G. A. Muirhead and C. W. J. Stow. In the absence of any further nominations Mr. M. R. Goodacre and Mr. W. C. Atkinson were elected to replace Mr. J. E. Gander and Mr. A. J. A. Davies the retiring Honorary Secretary and Honorary Treasurer respectively.

The annual report was then read by the Honorary Secretary who also presented the financial statement in the unavoidable

absence of the Honorary Treasurer, Mr. Davies. It was noted that once again there was an excess of income over expenditure in the main account and that although expenditure had slightly exceeded income for the Dinner and Dance, the social funds still had a credit balance. Mr. W. C. Atkinson thanked the Honorary Secretary and Honorary Treasurer for their work during the year and proposed the adoption of the annual report and financial statement. The proposal was seconded by Mr. G. B. Dawson.

Commander R. M. Inches proposed a vote of thanks to Captain Raper, the retiring Chairman and paid tribute to the contribution he had made in giving a good deal of his time, effort and enthusiasm which was largely responsible for the continued progress of the Section. Mr. A. G. A. Muirhead expressed his pleasure at seconding the proposal.

Mr. J. P. Vickery (retiring Vice-Chairman) proposed a vote of thanks to Mr. D. W. Gelling (Local Vice-President) for his invaluable work in all matters concerned with the Section. This was seconded by Mr. M. R. Goodacre.

At a meeting of the Committee held after the Annual General Meeting, Captain R. G. Raper, R.N., was re-elected Chairman of the Section and Captain A. C. W. Wilson, R.N., Vice-Chairman. Mr. J. P. Vickery was co-opted to serve for one year.

The Committee for 1963 is therefore constituted as follows:

Local Vice-President, Bristol: D. W. Gelling  
 Chairman: Capt. R. G. Raper, R.N.  
 Vice-Chairman: Capt. A. C. W. Wilson, R.N.  
 Committee: Lt. Cdr. A. N. S. Burnett, R.N.  
               G. B. Dawson  
               J. E. Gander  
               D. V. Hyde  
               Cdr. R. M. Inches, R.N.  
               T. A. Mogg  
               A. G. A. Muirhead  
               Cdr. C. W. T. Saunders, D.S.C., R.N.  
               C. W. J. Stow  
               J. P. Vickery (co-opted 1963)  
 Honorary Secretary: M. R. Goodacre  
 Honorary Treasurer: W. C. Atkinson

\* Published in the August 1961 issue of TRANSACTIONS.

† Published in the May 1962 issue of TRANSACTIONS.

‡ Published in the March 1962 issue of TRANSACTIONS.

§ Published in the September 1962 issue of TRANSACTIONS.

### OVERSEAS

#### CANADIAN DIVISION

##### ATLANTIC

Since its inception in June 1960, the Section has grown considerably and the rate of growth has been kept at a very satisfactory level.

From 65 members of all grades at the beginning of 1961 and 85 members at the beginning of 1962, the membership now stands as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	38	10
Associate Members ...	19	14
Associates ... ..	8	—
Graduates ... ..	2	4
Students ... ..	2	1
	—	—
	69	29
	—	—

Meetings were held in the R.C.N. Dockyard Management Association Building, Halifax, N.S., as follows:

16th February A paper entitled "Stern Gear for High Powered Single Screw Tankers and Bulk Carriers" by G. T. R. Campbell, P.Eng. (Member) and N. V. Laskey, B.Sc. This

paper has been approved by the London Papers and Transactions Committee for publication in the Canadian Supplement.

\* 23rd March

A paper on "Marine Lubrication" was read by R. M. Rice.

25th April

A Technical Forum was held. The panel consisted of Mr. R. Guthrie, Electrical Superintendent of Halifax Shipyards, Mr. L. M. Mathers (Member), Lloyd's Register of Shipping, Lt. Cdr. R. Tizzard, R.C.N. and Mr. V. F. Phillips (Member).

19th October

Mr. V. F. Phillips presented his paper entitled "From Three to Two Thousand Fathoms", an account of the grounding, refloating and subsequent scuttling of the Liberty Ship *Suerte* off the coast of Nova Scotia, which was illustrated by films.

16th November

A paper on "Ships Versus the Law" was read by Mr. Donald Kerr of Messrs. Stewart, Smith and McKean. The paper described some of the legal perils encountered by ship-owners and ship's officers.

Attendances remained at a consistently high level, which

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is, in good part, due to the excellent facilities offered by the Royal Canadian Navy.

The lectures all proved to be of interest to members and it is hoped that this standard will be maintained.

The First Annual Golf Tournament of the Section was held at Brightwood Golf and Country Club, on the 22nd June 1962 and the winner's trophy, the "Howard Rogers Cup" was won by Mr. G. Lawson (Member) with a low gross of 83. It is hoped to hold the Second Annual Golf Tournament in June.

During the past year the Committee has been sadly depleted. Early in the year Mr. J. S. Porteous (Local Vice-President, Halifax) moved to Montreal, Mr. T. Howard Rogers (Chairman of the Section) returned to the United Kingdom and Mr. K. Nicol (Honorary Secretary) was transferred to Quebec City in December.

L. M. Mathers (*Chairman*)

G. C. Johnson (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting of the Atlantic Section was held on Friday, 18th January 1963, at the Dockyard Management Association Building, Halifax, at 8.0 p.m.

Mr. L. M. Mathers (Vice-Chairman of the Section) was in the Chair and welcomed the 25 members present.

The Chairman explained that due to transfers and retirements a large proportion of the Committee would have to be replaced. He then called for two scrutineers to count the votes.

The minutes of the meeting held on 16th November 1962, were read by Mr. Mathers, who also gave details of correspondence with Mr. T. M. Pallas, Secretary for Canadian Affairs.

A résumé of the Section's financial position was then outlined.

Mr. V. F. Phillips proposed a vote of thanks to the remaining Committee members, Lt. Cdr. J. D. Clarke, R.C.N.R. and Messrs. L. M. Mathers, J. Mitton and G. S. Ronald. This received appreciative applause.

The new Committee is as follows:

Local Vice-President, Halifax: Capt. F. Harley, R.C.N.

Chairman: L. M. Mathers

Vice-Chairman: E. C. Smith

Committee: Lt. Cdr. M. R. Kent, C.D., R.C.N.

B. D. Lawson

J. Mitton

Cdr. V. F. O'Connor, C.D., B.Sc.,

R.C.N.

Honorary Secretary: G. C. Johnson

Honorary Treasurer: H. R. MacPherson

\* Published in the June 1962 issue of the Canadian Supplement.

### GREAT LAKES

As in other years the membership of the Section has increased. At present, there are 91 members residing in the area, 77 of whom are registered and actively participating in the Section's functions. The Chairman urged that all members residing in the area who are registered elsewhere, should contact the Honorary Secretary and obtain the necessary form to change their registration to that of the Great Lakes Section.

The following meetings were held in 1962:

- \* 29th March "Merchant Marine Steam Generators for Advanced Steam Conditions" by L. J. Culver, B.Sc.(Eng.) (Member). After the paper an informal question-and-answer period followed, in which many interesting questions were asked and answered.
- 17th May A plant tour was arranged in which members were privileged to visit Molson's Brewery. After a complete and interesting tour of the brewing and processing operation, an enjoyable social hour was spent in the well-appointed recreation room.
- 18th October Mr. H. J. Crawford of Canadian Westing-

house, presented a paper entitled "Electrical Ship Propulsion, Past, Present and Future". This paper proved to be very interesting, as did the informal question-and-answer period which followed.

29th November

A meeting was held at which Mr. A. Newland, Past Local Vice-President, gave a report on the International Conference in London. This was followed by an educational film, by courtesy of Commander G. P. Fowlie, R.C.N.R. (Member of Committee), showing the latest technique in lengthening and deepening a modern tanker. This operation was carried out in one of the leading shipyards of Japan and proves that shipyards of the Far East are not behind in modern shipbuilding methods.

All the aforementioned meetings were held at the Engineers' Club, Victoria Street, Toronto, and the Section owed a great debt of gratitude to Mr. Newland, a member of the Club, for his interest in having its facilities extended to the Section.

The membership may be aware of the International Conference of Commonwealth Engineering Institutes, held during the 1962 season and, for the first time, in Canada. The Section was not present at this Conference and members are assured that this matter has been taken up with our London Headquarters. More will be heard of this at a later date.

Arrangements are now in hand for a Divisional Meeting. The views of the Section have been expressed on this matter and developments are awaited.

E. L. James (*Chairman*)

D. G. Champion (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting of the Section was held at the Engineers' Club, 105 Victoria Street, Toronto, on Thursday, 17th January 1963. Thirty members gathered at the Club for dinner before the meeting was officially opened.

Due to the unfortunate absence of the Chairman of the Section, Mr. E. L. James, Cdr. G. P. Fowlie, R.C.N.R., was in the Chair. He welcomed those present, apologizing for Mr. James's absence and conveyed to the meeting his regrets.

Mr. T. M. Pallas, P.Eng. (Secretary, Canadian Division) addressed the meeting on matters concerning finances, the proposed Divisional Meeting, applications for membership and subscriptions.

Mr. J. H. Edlund (Honorary Treasurer) presented his annual financial statement which was adopted on a motion proposed by Mr. West and seconded by Mr. Bonnell.

The Chairman then announced that Mr. F. D. MacInnis and Mr. G. W. R. Corbin had been elected to serve on the Section Committee for three years. The meeting unanimously approved the re-election of Mr. D. G. Champion and Mr. J. H. Edlund as Honorary Secretary and Honorary Treasurer respectively.

In the absence of Mr. James, Mr. L. D. MacBean (Local Vice-President) read the Chairman's report, in which he commented on the excellent co-operation he had received during his term of office. It had been his privilege to receive an invitation from Headquarters to attend the International Conference of Marine Engineers, held in London early in May. Due to pressure of business he was unable to do so, but Mr. A. Newland (Past Local Vice-President) happened to be in London at that time and he attended on behalf of the Section.

In conclusion, Mr. James wished to thank the membership for the privilege of serving as their Chairman. Particular thanks were due to Mr. L. D. MacBean (Local Vice-President), for his assistance to Mr. A. Newland (Past Local Vice-President), Mr. D. G. Champion (Honorary Secretary) and Mr. J. H. Edlund (Honorary Treasurer). Also to the Members of Committee and the membership at large, for their co-operation and help.



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Mr. MacBean paid high tribute to the retiring Chairman and the meeting responded with a show of appreciation which Mr. James indeed deserves.

The Committee for 1963 is as follows:

Local Vice-President, Toronto: L. D. MacBean  
Chairman: Cdr. G. P. Fowlie, R.C.N.R.  
Vice-Chairman: A. C. Waldie  
Committee: G. W. R. Corbin  
F. D. MacInnis  
Cdr. R. C. H. Reed, D.S.C., R.D.,  
R.C.N.R.

Honorary Secretary: D. G. Champion  
Honorary Assistant Secretary: D. R. Weaver  
Honorary Treasurer: J. H. Edlund

\* Published in the September 1962 issue of the Canadian Supplement.

### NEWFOUNDLAND

The inaugural meeting of the Newfoundland Section was held on Friday, 8th December 1961. Formal acceptance as a Section was received on 29th January 1962.

The strength of the Section now stands at 32 accredited members with four applications now in hand at Headquarters in London and two other prospects.

During 1962 the following technical meetings were held:

25th January "The Harbour Development of St. John's, Newfoundland" by D. A. Low, P.Eng.  
9th March "The Building of the Icebreaker C.G.S. *D'Iberville*" by H. S. Salt (Local Vice-President).  
6th April "Slipways and Marine Haulouts" by R. Noah, P.Eng.  
28th September "The Chemistry of Fire" by J. Cardoulis, United States Fire Marshal.  
27th October "The Passing of the Steam Engine" by Lt. Cdr. R. C. Hawksford, R.C.N.(R.).  
30th November "Lubrication" by J. L. McLaughlin (Associate Member), Technical Representative, Imperial Oil Co. Ltd.

Excellent attendance was in evidence throughout the year with an average of 25 to 30 members and guests at each meeting. The Section was most fortunate in the arrangement with the R.C.N.R. Division in St. John's, in putting the wardrobe at its disposal on meeting nights, and was most grateful to the Commanding Officer and the Officers for this privilege.

In April word was received of the appointment of Mr. H. S. Salt as Local Vice-President.

The Social and Emergency Fund of the Section which has been contributed to by the members on a voluntary basis now stands at \$83.50.

H. Stuart Salt (*Corresponding Secretary*)

### Annual General Meeting

The Annual General Meeting of the Section was held on Tuesday, 18th December 1962, at the Canadian National Railways Dockyard, St. John's at 8.0 p.m.

Mr. R. A. Harvey (Chairman of the Section) was in the Chair and 24 members attended.

In the election of officers for 1963 it was unanimously decided that the previous Committee be called upon to carry on for the ensuing year with the following changes and additions.

Mr. M. K. O'Grady was elected Honorary Secretary in place of Mr. H. S. Salt, now being transferred to Halifax, N.S. and Mr. L. D. MacArthur to serve on the Committee.

The Committee now is as follows:

Chairman: R. A. Harvey  
Vice-Chairman: T. A. Stewart  
Committee: M. N. Butt  
E. S. Hoskins  
G. P. McCarthy  
L. D. MacArthur  
B. M. Strang

Honorary Secretary and Honorary Treasurer:

M. K. O'Grady

Recording Secretary: M. Green

The financial statement and annual report were read and approved.

A discussion was held on the questions in the letter from Mr. T. M. Pallas (Secretary, Canadian Division) concerning a Divisional Meeting for Canada. The answers to the queries were:

- a) The first such meeting should be held in Montreal.
- b) Probably some time in February.
- c) The meeting should be of at least two, and preferably, three days duration.
- d) The question of expenses could not be decided—it was agreed that the Newfoundland Section could levy for a contribution but could not stand the full expense of a delegation.
- e) If possible at least two delegates from each Section—to be decided upon by the members of that Section.
- f) Agenda

General business.

Organizing of sections.

Amount of authority to be delegated to Canadian Division.

Future financing for further meetings.

Locale of following meetings.

- g) Comments

It was agreed that the idea of a Canadian Division meeting was excellent, but difficulties could be foreseen due to the tremendous distances.

A vote of thanks was given to Mr. H. S. Salt (Local Vice-President and Corresponding Secretary) for his work in organizing the activities of the Section and for his secretarial work during the past year.

Owing to uncertainty for the next few months as to a meeting place, due to the transfer of the R.C.N. Base to Fort Pepperell, no definite arrangements could be made at this time for further meetings.

The meeting welcomed a newly elected Member, Mr. J. McGettigan, and Mr. R. S. Salt, reported as having been accepted as a Graduate.

### ST. LAWRENCE—OTTAWA

#### Annual General Meeting

The Annual General Meeting of the Section was held on Friday, 18th January 1963, in the Montreal Seaman's Institute.

Approximately thirty members attended and it was noted with satisfaction that a small number of members from Ottawa were present.

A most welcome guest, Mr. T. M. Pallas, P.Eng. (Secretary, Canadian Division) was present and despite the rather small attendance, there was a feeling of enthusiasm and interest throughout the entire meeting and it was felt generally that it was an excellent meeting.

As required by the By-Laws, Mr. Walter P. Graham (Honorary Secretary) and Mr. D. R. Stonely (Honorary Treasurer) were retired, but in accordance with their expressed desire, both offered to continue in office for the year 1963 and both were immediately re-elected with acclamation.

Lt. G. T. Gosling, R.C.N. and Mr. T. Bradley were elected to serve on the Committee for a three-year term in place of Cdr. M. W. Anketell-Jones, R.C.N., and Mr. D. Halkett who retired by rotation. Mr. J. P. Heslop, who also retired was re-elected. Only one nomination was received from Ottawa, namely, Cdr. R. W. Edwards, R.C.N., who was duly elected.

A vote of thanks to the retiring members was carried unanimously.

In the absence of Mr. D. Halkett (Chairman of the Membership Committee) his report was read.

Mr. D. R. Stonely (Honorary Treasurer) read his financial report and it will be noted that the year 1962 closed with a small credit balance.

In reviewing the year, it is felt that the Section has now



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consolidated its position and made steady progress. However, continued progress depends entirely upon the enthusiasm displayed by the members in general and, what is more important, a steady supply of good technical papers.

Appreciation of the work done by Mr. F. Minnikin (Local Vice-President) in the formation of the Section and of his excellent work whilst in the office of Chairman, was publicly expressed and tangible recognition of the members' appreciation and thanks was manifested in the presentation to Mr. Minnikin of a suitably engraved cocktail shaker.

Mr. A. Riddell (Honorary Vice-President) also expressed the gratitude of the members for the services rendered by Mr. Minnikin who suitably replied.

Mr. Pallas spoke on the current position of the other Sections in Canada and his advice and remarks were received with appreciation.

The meeting concluded with the exhibition of a film on the Allen Stoeckicht Epicyclic Reduction Gear which was kindly furnished by Lt. Cdr. W. G. Attwell, R.C.N. (Chairman of the Papers Committee).

T. N. Ross (*Chairman*)

### VANCOUVER ISLAND

The first year of the Vancouver Island Section has proved successful and interesting, not only to members but also to visitors.

Six meetings were held during the year as follows:

- 25th January Annual General Meeting followed by special films taken by Mr. H. B. Brett (Member of Committee) during the *Camsell* cruise.
- 22nd February Mr. I. J. M. Davidson, Pacific Coast Branch manager, Babcock and Wilcox Ltd., presented a further instalment of his paper on the nuclear ship *Savannah*.
- \* 27th March A paper entitled "Merchant Marine Steam Generators for Advanced Steam Conditions" by L. J. Culver, B.Sc.(Eng.) (Member), was presented.
- 6th April Annual Dinner held in H.M.C.S. *Naden* wardroom. The principal guest was His Honour Major General G. R. Pearkes, V.C., P.C., C.B., D.S.O., M.C., Lieutenant Governor of British Columbia. Guest speaker was Captain G. S. Veres, B.Sc., managing director, McKay Cormack Ltd., Victoria, who presented a paper on "Future Pattern of Merchant Ships".
- 25th October Mr. P. V. Meulengracht, P.Eng. (Member), manager of Burmeister and Wain of British Columbia, presented a paper, illustrated by films, on "Half a Century of Diesel Engineering".
- 22nd November Lt. Cdr. B. F. Ackerman, R.C.N., of the R.C.N. Diving School, showed a most interesting film on the Salvaging of the U.S. liner *Lafayette*, using divers to prepare the ship for raising—he also discussed "Diving in the Space Age".

During the year agendas, minutes, etc. were prepared for each meeting. Eight Committee Meetings were attended by the Honorary Secretary, including a special meeting with Mr. T. M. Pallas during his visit to Victoria on 12th October and other special meetings.

Annual reports of the Section were submitted to Ottawa and to London.

In his report the Honorary Secretary said it had been a pleasure to serve in that capacity for another year. He wished to thank Mr. N. Turner (Local Vice-President), Mr. H. L. Elliott (Chairman of the Section Committee), Cdr. J. S. Osborn, C.D., R.C.N., Mr. H. B. Brett and the remainder of the Committee for their help and support during the year.

He expressed his thanks for the confidence shown in him

over the years and intimated his willingness to serve again as Honorary Secretary if so desired.

J. McPherson (*Honorary Secretary*)

The Committee for 1963 is as follows:

Local Vice-President, Vancouver Island: N. Turner  
Chairman: H. L. Elliott, O.B.E.

Vice-Chairman: Cdr. J. S. Osborn, C.D., R.C.N.

Recording Secretary: C. T. Brinkman

Committee: H. B. Brett

J. E. Cunningham

Cdr. H. G. Gillis, C.D., R.C.N.

R. Main

F. W. Skinner

Honorary Secretary: J. McPherson

Honorary Treasurer: W. Hichens-Smith

\* Published in the Canadian Supplement, No. 9, September 1962.

### DURBAN

During the past year the Committee has been very active on behalf of the Section and the following meetings were held at the Merchant Navy Officer's Memorial Club:

- 25th January Annual General Meeting which was very well attended. This was followed by a most interesting and informative paper on the developments of the Hovercraft in Great Britain read by Mr. T. Ratcliffe (Local Vice-President). The paper was illustrated by slides and was well received.
- 3rd May Three papers—"Marine Engineering as a Career", "The Evolution of a Marine Engineer" and "Status of a Marine Engineer" were presented by Mr. R. F. Dillon (Member), Engineer Surveyor of the Ministry of Transport. This meeting was exceptionally well attended, 84 members and visitors being present. Many students from the Technical College and ship repairing industries also attended.
- 9th August Mr. R. W. A. Bann presented a topical paper entitled "Electrical Repairs to Marine Machinery". The paper was followed by a film "Milestones in Atomic Energy" by courtesy of the English Electric Company and Shell Oil Company.
- 22nd November A paper entitled "Instrumentation With Relation to Marine Engineering" was presented by Mr. R. Scrimshaw. Illustrated with the use of an epidiascope, the paper proved of interest to all members. It was followed by three films shown by courtesy of the Shell Oil Company.

During the year three luncheon parties were arranged at the Merchant Navy Officer's Memorial Club. These luncheons were very well attended and have now become a permanent feature in the activities of the Section.

The Durban Section of the Institute is a member society of the Natal Association of Scientific and Technical Societies. During the year this Association held two functions to which all members were invited. The first meeting was a talk by Sir John F. Baker, O.B.E., Professor of Mechanical Sciences, Cambridge University. Unfortunately the Honorary Secretary was only advised of the meeting at short notice and was unable to circularize all members. A social occasion in the form of a cocktail party was also held and supported by a number of members.

A prize to the value of R10-00 for the purchase of books and instruments was again awarded to the most promising marine engineering student at the Natal Technical College.

Membership of the Section continues to grow and the total membership now numbers 46.

The Committee for 1963 is constituted as follows:

Local Vice-President, Durban: T. Ratcliffe

## Annual Report of the Council for 1962

Chairman: C. T. Glover  
 Committee: R. C. Baker  
             R. F. Dillon  
             H. T. V. Horner  
             W. W. Hutchinson  
             T. H. Noel  
             D. G. Strickland  
 Honorary Secretary: J. F. Smith  
 Honorary Treasurer: J. R. Holdsworth

### EASTERN U.S.A.

While a thirty per cent increase in registered members signifies the growth of the Eastern U.S.A. Section, the result of efforts to interest Student Members from the U.S. Merchant Marine Academy and the New York State Maritime College has been particularly gratifying. Many members who had not taken an active part since the formation of the Section in 1960, did so this year.

The year 1962 has been one of progress for the Section. However, unlike the two prior years when it was possible to arrange lectures by two outstanding European engineers, both of the projected meetings for 1962 ran into insurmountable difficulties as far as the speakers were concerned with the result that no full membership technical meetings of the Section were conducted.

Several meetings of the Executive Committee were held during the year at one of which it was decided, in order to bolster the finances of the Section, to attempt to obtain advertising for the issue of the TRANSACTIONS which would contain the papers presented during the International Conference. It is pleasing to report that thirty-five and one half pages of advertising were obtained so that the Section is now operating in the black for the first time. The credit for this result is due to the energetic handling of this project by many members.

Mr. H. G. Bauer, a member of the Section Committee, presented one of the outstanding papers read at the International Conference of Marine Engineers. The paper was entitled\* "Post-war Developments and Future Trends of Steam Tanker Machinery" and it was very well received. Three other members of the Section also attended the Conference and were most impressed by the delightful programme which had been arranged, the smooth and efficient manner in which all the activities were carried out and particularly by the thoughtful and generous consideration extended to the visiting delegates.

As the Section is now established on a sound basis, both through the interest of members and financially, confidence is felt of progress in the future.

I. H. Thomas (*Chairman*)  
 P. C. Speer (*Honorary Secretary*)

The following members were elected to serve on the Committee for 1963:

Vice-President for the U.S.A.: A. R. Gatewood  
 Chairman: P. C. Speer  
 Committee: F. Andres  
             H. H. G. Bauer  
             P. A. Birkeland  
             W. G. Blanding  
             V. S. Dingle  
             G. H. Hodges  
             J. R. Lindgren  
             W. H. Low  
             J. E. McCoy  
             B. A. McLean  
             F. C. I. Owen  
             H. G. Webber

Honorary Secretary: E. D. Story  
 Honorary Treasurer: P. F. Gresser

\* Published in the October 1962 issue of TRANSACTIONS.

### PAKISTAN GROUP

During 1962 the Karachi Section together with the East Pakistan Section, have been re-formed as the Pakistan Group.

The activities of the Karachi Section are as follows:  
 14th May Annual Dinner held at Beach Luxury Hotel. Captain S. Z. Hasnain, P.N. (Local Vice-President) was in the Chair and forty members and guests attended. Vice-Admiral A. R. Khan, Commander in Chief, Pakistan Navy, was the principal guest. A floor show followed the dinner and lasted until midnight.

18th August A meeting of the Section was held to consider the resignation of Commander M. A. Ansari, P.N., from the office of Honorary Secretary, owing to his transfer to East Pakistan. The meeting also passed a resolution of condolence on the sad death of Mr. B. P. Ingamells, C.B.E., former Chairman of Council.

14th November A technical film, mainly for the benefit of engineering students and apprentices, was attended by 140 students.

27th November "Oil and Mineral Resources of Pakistan" by Maj. Gen. M. Hayauddin at the Merchant Navy Club. Captain S. Z. Hasnain, P.N. (Local Vice-President) presided at the meeting which was well attended. A lively discussion followed in which nine members and guests took part, and the speaker made suitable replies to the points raised.

8th December A technical film was shown, attended by 63 students.

J. Ahmad (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting was held on Tuesday, 11th December 1962, in the Services Club at 5.30 p.m. Captain S. Z. Hasnain, P.N. (Local Vice-President) was in the Chair and twelve members attended.

It was proposed and unanimously accepted, that Commander J. Ahmad, P.N., should be elected to the office of Honorary Secretary, the term of office to be three years.

The following were elected to serve on the Committee:

Local Vice-President, Karachi: Capt. S. Z. Hasnain,  
 P.N.

Chairman: A. S. Benjamin

Committee: H. Abbas

J. G. D'Sylva

Capt. M. A. Toosy, P.N.

Honorary Secretary and

Honorary Treasurer: Cdr. J. Ahmad, P.N.

In the absence of the Local Vice-President, Capt. S. Z. Hasnain, P.N., who is residing in the United Kingdom for a year, his duties will be taken over by Mr. A. S. Benjamin.

The Honorary Secretary informed members that subscriptions can now be paid into the account of the Institute at the National and Grindlays Bank Ltd., McLeod Road (Near City Station), Karachi.

### SINGAPORE

Active corporate membership (i.e. Members and Associate Members) at the end of 1962 totalled 68, an increase of eight over last year, while Graduates, Students and Probationer Students accounted for 13 making a grand total of 81.

Twenty-three members of the Marine Engineering Society of the Singapore Polytechnic have also applied for Student membership and it is hoped that members will have the opportunity of welcoming these Students during the coming year.

During the earlier part of the year, various invitations were received from the Joint Group to participate in the visits arranged by the Group. Unfortunately during the latter part of the year a number of invitations were received too late to circulate to the members.

It is hoped that in the coming year it will be possible to



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arrange visits of interest to our members and also show films of technical interest.

All members will be pleased to learn that the Pre-Sea Marine Courses being held at the Singapore Polytechnic have received the approval of the Ministry of Transport in London.

Discussions are still in progress with the Parent Council in London regarding affiliation with the Joint Group of Institutes at Singapore.

No decision has yet been received from the Council regarding the proposal to provide a prize of books, tools or instruments for students at the Marine Engineering Course at the Polytechnic and to students training in Marine Engineering under the auspices of the Royal Malayan Navy.

J. McA. Brown (*Chairman*)

L. D. Phillip (*Acting Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting of the Section was held on Wednesday, 23rd January 1963, in the Shell Theatre, Shell House, Collyer Quay, Singapore, at 5.30 p.m.

Mr. J. McA. Brown was in the Chair and 18 members were present.

The Chairman proposed that the annual report and financial statement which had been circulated to members should be taken as read. This proposal was unanimously approved by all members present.

Under the heading "Other Business", the Chairman stated that he had attended a meeting of the Singapore/Malayan Joint Group of the Institutions of Civil, Mechanical and of Electrical Engineers at which time the affiliation of the Singapore Section of the Institute of Marine Engineers to this Joint Group was discussed.

The Chairman then proposed that the Singapore Section affiliate with the Singapore/Malayan Joint Group and this was unanimously approved by the members present.

At a Committee Meeting held prior to the Annual General Meeting Mr. J. O'B. Canavan was elected Chairman. The proposal made by the retiring Chairman, Mr. J. McA. Brown and seconded by Mr. S. A. Anderson, was carried unanimously.

The Committee for 1963 is as follows:

Local Vice-President, Singapore: S. A. Anderson

Chairman: J. O'B. Canavan

Vice-Chairman: J. Snadden

Committee: J. A. Boater

J. McA. Brown (co-opted)

N. Gartland

B. B. Girling

A. F. Whiteley

L. K. Wong

Honorary Secretary: L. D. Phillip

Honorary Treasurer: J. Mair

### SYDNEY

The Committee has pleasure in presenting the Fourteenth Annual Report of the proceedings of the Sydney Section during 1962.

The Section has gained three members during the year and now has a total of 177. In addition, enquiries regarding membership have been received from ten prospective members.

Four general meetings were held during the year, also the fourteenth Annual Meeting for students and apprentices, as follows:

28th March	Annual General Meeting: "Some Problems Associated with the Snowy Mountains Scheme" by I. L. Pinkerton.
23rd May	"The Aerodynamics of Ground Effect Machines" by Professor P. T. Fink.
15th June	"A Day in the Life of a Lloyd's Surveyor" by T. McGinnis (Member).
25th July	"The Tube Failure and Circulation Trials of a Marine Water Tube Boiler" by R. F. Alder (Member).
6th November	"The Doxford Engine—Recent and Future Developments" by T. W. D. Abell (Member).

The Annual Dinner was held at the Wentworth Hotel on Thursday, 8th November 1962. This was a most successful function and was attended by fifty members and fifty-five guests. It continues to be one of the most important annual gatherings of those associated with shipping in Sydney.

The Council continues to take a very keen interest in the activities of the Section and has always given it encouragement. The Section is most grateful for this interest and for the invitation to the Vice-President for Australia to attend the International Conference of Marine Engineers in London.

The Committee is also grateful to all local members for their continued support, as it is only through this that the Section can continue to function successfully.

G. I. D. Hutcheson (*Chairman*)

N. A. Grieves (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting of the Sydney Section was held on Wednesday, 27th February 1963, at Science House, Gloucester Street, Sydney.

Captain G. I. D. Hutcheson, C.B.E., B.E., R.A.N. (Vice-President for Australia) was in the Chair and sixty-five members and guests were present.

The Chairman moved the adoption of the annual report and the financial statement, this was seconded by Mr. N. A. Grieves (Honorary Secretary) and carried unanimously.

The Committee for 1963 is as follows:

Vice-President, Australia: Capt. G. I. D. Hutcheson, C.B.E., B.E., R.A.N.

Chairman: W. G. C. Butcher

Committee: C. Bie

E. S. Clark, B.Mech.E.

W. Fyffe

W. T. Mathieson

K. M. Murray

Capt. R. G. Parker, O.B.E., R.A.N.

Honorary Secretary: N. A. Grieves

Honorary Treasurer: Lt. Cdr. J. W. Lamb, R.N.

Following the meeting a paper entitled "Some Unusual Repairs to Large Marine Diesel Engines" was presented by Lt. Cdr. J. W. Lamb, R.N. The paper was illustrated by slides.

A discussion followed in which fourteen speakers took part.

A vote of thanks to Lt. Cdr. Lamb was proposed by Captain F. W. Purves and carried with acclamation.

### VICTORIA

The activities of the Victoria Section held during 1962 were as follows:

9th February	Annual General Meeting at the Royal Society Building, Melbourne.
11th May	A lecture entitled "Production Jig Boring" was presented by Mr. R. Davies of Newall Engineering at Royal Society Building, Melbourne.
10th August	A lecture entitled "Modern British Naval Boiler Development and Maintenance Methods" was delivered by Lt. Cdr. C. H. Humby, R.N., at Royal Society Building.
23rd August	The Apprentices' Awards Night was held at the Radio Theatre of the Royal Melbourne Institute of Technology. Mr. L. B. Hansen (Member) was in the Chair and Mr. J. Dixon (Member) was the guest speaker. Three films were shown, the subjects being a trip round the world on the s.s. <i>Southern Cross</i> , the building of a B.P. tanker, from the Board Room to the maiden voyage and the <i>Princess Tasmania</i> , the latest passenger and vehicle ferry between Tasmania and Melbourne.
1st November	The Sixth Annual Dinner was held at the University Union Private Dining Room; the guest speaker was Rear-Admiral K. McK. Urquhart, C.B.E.



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2nd November A lecture on "The Doxford Engine—Recent and Future Developments" was delivered by Mr. T. W. D. Abell (Member), Managing Director of William Doxford and Sons (Engineers) Ltd., Sunderland.

There has been no change in the Committee which is as follows:

Local Vice-President, Melbourne: A. J. Edwards  
Committee: P. Bossen  
V. F. Harris  
J. E. North  
G. Seales  
J. B. Thomson  
Lt. Cdr. D. W. K. Vagg, R.A.N.  
Honorary Secretary: K. Paxton  
Honorary Treasurer: Lt. Cdr. J. H. Coles, R.A.N.V.R.

WESTERN AUSTRALIA

1962 has seen the first year of the Section's activities during which four papers were presented.

The listed membership for the metropolitan area and environs has increased twelve per cent since the formation of the Section on 8th December 1961.

The following meetings were held during 1962:

31st January A general meeting was held to discuss the proposed activities for the year and to enable members to get to know one another and the members of Committee.

\* 6th April A paper entitled "Testing and Care of Marine Diesel Engine Crankcase Oils" was presented by the author Lt. Cdr. E. V. Fewster, R.A.N.R. (Member).

13th June Mr. A. G. L. Perman (Member) presented a paper entitled "Cargo Handling and Port Facilities". This was supported by some excellent films on "Container Cargo Ships and Shore Handling Facilities".

8th August Mr. J. G. Bancroft (Member), presented a paper entitled "Boiler Water Treatment and its Results".

10th October A Student Meeting was held and presented as a Symposium, there being three papers read: "Pre-sea Training of Marine Engineers" by A. G. L. Perman (Member), "The Sea Training of Marine Engineers" by D. Taylor and "Opportunities for Employment Ashore" by C. Jagger. Each paper provoked lively discussion. The papers were supplemented by the film "They Chose the Sea" which dealt with the training and life of engineer apprentices in the British Tanker Co. The film was presented by courtesy of B.P. Australia. For this meeting an open invitation was extended to all Apprentice Trade Schools in the metropolitan area and a total of fifty apprentices and instructors were present.

The Committee is grateful for the support given by local members during the year's activities and earnestly requests that members continue to show their support by attending the meetings arranged.

An interesting programme has been arranged for 1963 with guests speakers coming from Melbourne and Sydney.

The Committee for 1963 is as follows:

Chairman: *To be appointed*  
Committee: Lt. Cdr. E. V. Fewster, R.A.N.R.  
E. E. Freeth, B.Eng.  
W. E. Hoes  
D. McRoberts  
E. Morris  
A. G. L. Perman  
Honorary Secretary: Lieut. L. F. Coy, R.A.N.  
Honorary Treasurer: A. F. McKimmie

\* Published in the December 1962 issue of TRANSACTIONS.

## Representatives' Reports

*British Conference on Automation and Computation: Engineering Applications Group.* Representatives: H. E. Upton, O.B.E. and J. Stuart Robinson, M.A.

The Annual General Meeting of the Council was held in October 1962 and in introducing the report, the Chairman said that the British Conference on Automation and Computation was recognized by the Government and by overseas bodies and individuals who were concerned with its subject as being the British forum for matters connected with automation and computation.

a) *Education and Training*

Good progress has been made in the main activity. Several conferences have been organized and further series will be held during 1963.

b) *Public Relations*

During the year a new 64 page booklet has been published which will be known as the B.C.A.C. Record. It is the first of a new line of such publications and deals with the activities over the period 1961-62 and includes details of several conferences which have been held during the year.

c) *Research and Development*

The Panel has met fourteen times during the year and has visited a number of research associations and manufacturers. In their general report a number of conclusions and recommendations have been made and there is undoubtedly considerable scope for the development of new methods of handling light materials.

Greater use can be made of data processing systems for production planning particularly where batches of identical products are small because of the large number of styles, colours and sizes which have to be produced, particularly in the commodity industries.

It is recommended that trade and research associations should organize conferences of senior executives within their industries to discuss the use of data processing equipment. B.C.A.C. could help by suggesting suitable speakers with experience of its use for similar problems in other industries. The Panel believed that research and development programmes on a national scale should be established for basic problems which occur with only minor variations in several different industries. A few such problems could include the control of composition of raw materials; moisture content; atmosphere control; rapid and economic heating in continuous layers; automatic inspection and automatic assembly.

It has also been suggested that some means should be sought for stimulating backward industries to re-equip with the best foreign material available to bridge the gap until better British material has been developed.

d) *Foreign Relations Panel*

During the year a number of British papers has been offered for submission at various congresses and conferences and during 1963 there will be an important conference held in Basel, Switzerland.

*British National Committee for Non-destructive Testing*  
Representative: R. H. Paddon Row.

The membership of the National Committee remained unchanged and it met five times during 1962.

*Fourth International Conference on Non-destructive Testing*

The National Committee has collaborated actively with the Conference organizers, the Institution of Mechanical Engineers and has been responsible for the preparation of the technical and social programmes. Some 130 papers have been submitted and about 60 selected as potentially acceptable.

Plans for social activities and visits have been made which include a Conference Banquet at London Guildhall and a supplementary tour of technical and general interest during the week following the Conference.

Calculations and arrangements have been based on an attendance of 450 but it will be possible to accept 700. Preliminary registration forms and further publicity are being given widespread circulation early in 1963.

*The Needs of Industry*

An investigation was carried out by a Working Party into items of research and development considered valuable to industry and a report prepared. This presents the results of discussions with three industries viz.: power generation, iron and steel and aircraft (manufacture and operation). The report is not intended to be conclusive and it is acknowledged that it deals largely with current problems; nevertheless, it contains interesting information which the National Committee feels should be published at the present stage.

The Working Party will continue its investigations and hopes to deal in future with the long-term requirements of industry.

*Standardization*

A Symposium was organized by the Institution of Production Engineers under the aegis of the National Committee and took place in Harrogate from 20th to 22nd September. The Conference was successful and led to some positive proposals for new standardization relating to acceptance, calibration of equipment and methods. These proposals are being communicated to the British Standards Institution and are being supported by the National Committee.

*Co-operation*

The National Committee has set up an Advisory Panel on Co-operation with the object of increasing the co-ordination of activities of four of its member societies which are directly concerned with non-destructive testing. They are:

The Institution of Engineering Inspection  
The Institute of Physics and the Physical Society  
(The Materials and Testing Group)

The Society of Non-destructive Examination  
The Non-destructive Testing Society of Great Britain

A joint meeting was planned by the four societies to take place on 20th February 1963 and plans have also been laid for similar meetings in subsequent years.



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The National Committee has asked that the Fourth International Conference be associated with the National Productivity Year and this has been readily adopted by the N.P.Y. organizers.

*City and Guilds of London Institute: Advisory Committee on Shipbuilding, Ship Joinery, Yacht and Boat Building.*  
Representative: C. H. Taylor-Cook, B.Sc.(Eng.).

A new scheme has been adopted for subject No. 182—Shipbuilding, Shipwrights Work and General Shipbuilding. The new syllabus is related more clearly to the work of shipwrights and platers, while other craftsmen in the industry will benefit from a study of the items of general shipbuilding which are included. Considerable stress is placed on safety in shipyards and a new feature is the introduction of General Studies.

In the examination results in Shipbuilding, the average standard is improving slowly but calculations still cause trouble for candidates.

The standard of candidates in Ship Joinery has not made any significant change.

In Yacht and Boat Building, the standard was good.

*College of Technology, Portsmouth: Engineering Advisory Committee.* Representative: G. M. Kennedy.

The year 1962 has been one of continued expansion both in the academic and practical fields. New equipment for the Mechanical and Civil Engineering Department helped considerably to increase opportunities for experimental and practical experience.

The problem of lack of facilities for practical experience is a national one and is particularly acute for foreign students, there being a certain reluctance on the part of many employers to train boys who will not normally remain in this country.

The number of students on full time courses in Mechanical and Civil Engineering and Naval Architecture has increased. Record of passes in Higher National Diploma, Higher National Certificate and College Diploma has been high.

The National Council for Technical Awards inspected the College in connexion with giving approval for Diploma Technical courses in Mechanical and Civil Engineering and continuation of courses in Electrical Engineering. A number of post-graduate courses have been introduced including the second award of the Hives Council—Member of the College of Technologists, which is regarded as equivalent to a Ph.D.

Proposals for College development during the next few years have been outlined and included the building of a completely new Electrical Engineering Department, provision for a hostel to house 250 students and erection of a Mathematics and Physics Block. Add to this plans for the erection of a nine storey block to house the Arts, Commerce and Management Departments and Administration Offices and it will be seen that the City of Portsmouth College of Technology is alive to national and international problems and can justifiably be proud of its efforts to meet and solve them.

*East Ham Technical College: Engineering Advisory Committee.*  
Representative: R. S. Brett.

Three meetings of the Committee were held during 1962, on 22nd March, 19th June and 15th November.

### *Enrolments*

Enrolments at June 1962, compared with the last year, showed a substantial increase in Part-time Day and Evening students and Evening students.

	1961/62	1960/61
Block release ... ..	36	105
Part-time Day and Evening ...	874	736
Part-time Day ... ..	240	214
Evening ... ..	798	631

### *Changes in National Certificate Courses*

The general changes now being introduced into technical education principally concerned National Certificate courses and their relation to exemptions from the membership examina-

tions of the various Institutions. The purpose of the changes was to improve the status of National Certificates by substituting longer courses of instruction for the shorter courses previously considered satisfactory.

For the 1962/63 session the National Certificate courses would be operating under the new regulations in which the Ordinary National Certificate was taken after two years' study. The two years were to be designated as O1 and O2 and corresponded to the S2 and S3 years of the existing courses.

The qualifications for entry into the O1 year were rather difficult and to meet them a two year General course (designated G1 and G2) of five subjects was being run in place of the old course, which comprised one year of Preliminary work and one year of study in three subjects (the former S1 course). As five subjects were now required instead of three, more time was necessary and to facilitate this a second half day and evening, from 3.0 p.m. to 7.0 p.m., had been provided.

For students who could attend only in the evening, it was proposed to provide a three year course of three evenings a week, provided that the numbers justified the formation of the classes.

The General Certificate of Education in four subjects, including Mathematics and a Science subject, was accepted as a qualification for entry into the O1 year and this was another possible mode of entry for evening students.

Entry to the O1 year also would be allowed to students who had passed a Technician's Certificate at Intermediate level, or its equivalent and this method would probably have a greater appeal to students. A greater expansion in Technicians' courses was anticipated.

Entry into Technicians' courses was made at 16 years of age, and 15 year-old school leavers would have to take a suitable preliminary course before entering. Consequently they would not be able to enter the O1 year until they were 18 years old. On the other hand, students who had remained at school and obtained the necessary four passes in the General Certificate of Education could enter the O1 course at 16 or 17 years of age.

*Engineering Institutions Examinations Standing Committee for Part I.* Representative: C. H. Taylor-Cook, B.Sc.(Eng.).

There is very little to report from this Committee beyond the regular control examinations. Examination fees have been increased in consequence of an increase in the rate of payment to examiners.

The British Institution of Radio Engineers has been admitted to membership.

*Institution of Electrical Engineers: Ship Electrical Equipment Regulations Committee.* Representative: A. N. Savage.

Two meetings have been held during the year and three Working Groups were formed to examine the following matters:

- a) High-voltage systems.
- b) Problems arising from the adoption of higher conductor temperatures for cables.
- c) Problems associated with miniature and "mould-case" circuit breakers.

*International Institute of Refrigeration: Standing Committee.*  
Representative: K. C. Hales, M.A.

The Department of Scientific Research Standing Committee met twice in 1962. Apart from routine matters the Committee has discussed the Congress of Refrigeration to be held in Munich in 1963 and a meeting to be held in East Pakistan. The latter meeting was intended to counteract, in part, the inevitable tendency for most of the International Institute meetings to be held in Europe or North America.

*Joint British Committee for Stress Analysis.* Representative: T. W. Bunyan, B.Sc.

The Committee met four times during 1962, on 8th February, 3rd May, 2nd October and 11th December.



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A meeting of the Permanent Committee for Stress Analysis was held in Paris on 14th April and was reported in the minutes of the Joint British Committee on 3rd May. At the meeting it was agreed that the third International Conference should be held in Germany in 1966; the venue is not yet known.

The Committee pressed Dr. Emschermann, who will be supervising the administrative arrangements, to arrange an early meeting of the Permanent Committee to consider, not only the future Conference arrangements, but also terms of reference of the Permanent Committee and discussion of other matters vital to the development of proper relations between national committees.

Dr. Emschermann promised to consult the other national committees on their views before convening a further meeting of the Permanent Committee.

### *Second International Conference on Stress Analysis*

A post-meeting discussion was held on 3rd May relating to the 2nd International Conference. There was some criticism of the administrative arrangements, but it was felt that the technical content of the Conference had been worth while.

No attempt has been made by the organizers to publish the Proceedings of the Conference, authors being left to find their own avenues of publication.

The following papers offered for the Conference were subsequently offered to the Institution of Mechanical Engineers and accepted for publication.

"Photoelastic Study of Stresses near Cracks in Thick Plates" by H. Fessler and D. O. Mansell.

"The Rigidity of Rib-reinforced Cover Plates" by J. P. Duncan and J. Harvey.

"A New Method for the Measurement of Local Residual Stresses in Tubes" by A. A. Denton and J. M. Alexander.

"Discontinuity Stresses in Spherical Pressure Vessels with Cylindrical Supports" by H. Fessler, R. K. Penny and D. A. Wright.

It was agreed that all authors of British sponsored papers should be approached to ascertain whether publication of their papers had been effected.

### *Proposed National Conferences*

Proposals for two national conferences were examined during the year as follows:

*Stress Analysis Problems Associated with Pre-stressed Concrete Pressure Vessels.* It was agreed to adopt this proposal and seek the view of the Institution of Civil Engineers as to sponsorship. That Institution accepted the responsibility for arranging the Conference in principle but deferred making a definite decision for twelve months. It was pointed out that the success of such a conference would depend primarily on contributions from consortia and conditions in industry were at present in a state of uncertainty which might react unfavourably on the arrangements if a start were made immediately.

*Conference on Thermal Loading and Creep in Structures and Components.* Following discussion with representatives of the Institution of Mechanical Engineers, that Institution agreed to sponsor a conference lasting two to three days. An Organizing Committee has been convened under the Chairmanship of Professor D. C. Johnson and had its first meeting on 11th December. A preliminary release was issued to the Press before the end of December.

The Conference will be held in London in May 1964.

### *Seventeenth Annual Conference*

The Institute of Physics and the Physical Society Stress Analysis Group will hold the 17th Annual Conference on 3rd-5th April 1963 at the University of Nottingham. The subject of the Conference will be "Optical Methods of Stress Analysis".

*Joint Committee on Materials and Their Testing of Technical Institutions and Societies in Great Britain.* Representative: R. Cook, M.Sc.

Following a proposal of the Joint Committee, an Informal Discussion on the Design of Testing Machines was held at the Institution of Mechanical Engineers on the 8th October 1962.

Early negotiations have begun for a conference on the Acoustic Properties of Materials, dealing particularly with the passage of noise through solids, the fundamental physical principles which can be exploited in testing methods and the basic information which is required when dealing with noise damping problems.

*Lloyd's Register of Shipping: Technical Committee.* Representatives: A. Logan, O.B.E. and H. J. Wheadon.

During the year two important alterations to the Rules for oil tankers have been adopted. Provision has been made for a reduction in scantlings of the internal structure when an approved system of corrosion control is installed and the Rules have been amended to permit cargo tanks of greater length than previously contemplated.

Revised Rules have been approved for Fire Protection, Detection and Extinction, which have been extended to apply to all types of ships and to cover the relevant requirements of the International Convention.

Provision has been made for safety devices in starting air systems of heavy oil engines.

As a result of investigations of the strength of pressure vessels and the Society's survey experience of these in service, the Rules for welded boiler drums, air receivers, etc. have been revised to permit the use of higher working stresses and the production of more efficient designs and lighter constructions. Requirements have also been introduced for containers intended for the carriage of liquefied propane, butane and similar cargoes under pressure.

Requirements have been introduced for main steam pipe systems with all-welded joints suitable for the high temperature steam conditions of turbine installations of advanced design.

Other minor amendments to the Rules were dealt with.

*Northern Advisory Council for Further Education (Advisory Committee for Engineering).* Representative: A. W. Jones, B.Sc.

### *Block Release Courses*

It has been agreed to urge the introduction of Block Release Courses of about twelve weeks duration in any one year. Where numbers justify it, there could be three intakes a year corresponding to the normal college terms.

It was stressed that examinations should be held at the end of the period of full-time college attendance.

### *Ordinary National Certificate*

The new regulations for Ordinary National Certificate have been discussed and agreed.

### *Constitution of the Committee*

The Committee as at present constituted was considered to be rather unwieldy and it was decided to reconstitute it, providing for eight co-opted members. This permits interested people to be co-opted when subjects in which they are experts are being discussed.

*Poplar Technical College, Board of Governors.* Representative: D. G. Alcock.

The representative of the Institute has continued to serve upon the Board of Governors and additionally, on the Staff Sub-Committee. Every opportunity has been taken to stimulate interest in the Institute's activities amongst the various students attending at this College and it is recommended that the Institute's representation continues.



## Annual Report of the Council for 1962

*North East Technical College, Old Swan, Riversdale and Walton Technical Colleges, Board of Governors.* Representative: T. Kameen.

Eight meetings of the Board of Governors for the above Colleges have been attended by the Institute's representative, the main item of interest having been the opening of the North East Technical College and further developments at Riversdale, where it is hoped that Phase 3 workshop training for apprentices participating in the Alternative Training Scheme for marine engineers will be started very shortly.

Representation on this body is well worthwhile and is indeed an essential part of the work of the Institute in the area.

*Southampton Technical College, Engineering and Science Advisory Committee.* Representative: C. W. Paul, M.B.E.

The Committee met twice during the year and all departments reported satisfactory progress, a total of 294 students enrolled for the Ministry of Transport courses which was a record for the Department.

The results of the examinations were as follows:

Part A Second Class ... ..	43
Part A First Class ... ..	15
Part B Second Class (Steam, Motor and Combined)	75
Part B First Class (Steam, Motor and Combined)	45

The total of 120 Ministry of Transport Certificates awarded was an increase of 18 per cent on the previous session and a record for the Department.

The Assistant Education Officer explained the alternative entry schemes for marine engineering as set out in a communication from the Ministry of Education.

*Sunderland Technical College: Advisory Committee for Electrical Engineering, Mechanical and Marine Engineering and Naval Architectural Departments.* Representative: W. R. Jones.

Four meetings of the Advisory Committee were held during the year, at which various aspects of the Advanced Courses were discussed.

There was great disappointment that the proposed course for the Diploma of Technology in Mechanical Engineering, approved by the Northern Regional Advisory Council for Further Education, had to be deferred for a further year. The course will now commence in October 1963.

The course for the Diploma of Technology in Naval Architecture did not recruit sufficient students during the year to run a first-year course. The reason for this was attributed possibly to the recession in shipbuilding and the near proximity of an excellent degree course at King's College. A meeting of the shipbuilding employers in the area was held during the year to discuss this problem.

The new College building is proceeding to programme and certain sections were occupied in October.

It is anticipated that the building and students' hostel accommodation will be completed towards the end of 1963.

An Elliott 803 digital computer was installed during the year and courses both for industrialists and College Staff were held. It is hoped that industry in the area will make full use of these facilities.

A tutorial system of instruction was introduced at the College in October and this has proved to be highly successful. Both students and lecturers welcomed this new innovation.

*Welsh College of Advanced Technology, Cardiff.* Representative: D. Skae.

Due to the changes which have taken place in the Governance of the Welsh College of Advanced Technology the "old" Governing Body ceased to exist on the 31st March 1962. The Advisory Committee, on which the Institute was represented, was a Sub-Committee of that Governing Body and therefore automatically ceased to exist on the same date.

A new Governing Body has been set up and as one of its first tasks nominated an *ad hoc* Sub-Committee to consider the position of Advisory Sub-Committees and to make recommendations to the new Governing Body.

### BRITISH STANDARDS INSTITUTION COMMITTEES

*CHE/18/2 Metallic Finishes (Quality).* Representative: H. E. Bedford.

No notifications of any meeting of this Committee have been received.

*C/37 Boiler Water Tests.*

*C/37/2 Methods of Sampling of Waters.*

*C/37/3 Methods of Boiler Water Treatment.* Representative: H. J. Wheadon.

No meetings of the above Committees were held during 1962. However, it is of interest to record that Committee C/37 completed and published British Standard 1427:1962, "Routine Control Methods of Testing Water used in Industry During the Latter Part of the Year".

*C/37/2/2 Sampling of Steam.* Representative: W. McClimont, B.Sc.

The Committee has held one meeting during 1962, to consider a document setting out recommendations for estimating the dryness of saturated steam. It was agreed that arrangements should be made for tests to be carried out on suitable boilers to evaluate the various sampling methods which have been suggested.

*ELE/1/10 Marine Motors and Generators.* Representative: A. N. Savage.

British Standards 2949:1960. The question of standard terminal markings has been under consideration, but has not yet been finalized.

*ELE/3/2 Ships' Cables.* Representative: A. N. Savage.

Amendment No. 2 to British Standards 883:1958 was published on 9th November. This amendment deletes items covered by British Standard 3360—"Copper Conductors in Insulated Cables and Cords".

*ELE/3/21 Heat-resisting Cables.* Representative: A. N. Savage.

No meetings of this Committee have been held during the year.

*ELE/28 Electrical Fans.*

*ELE/28/2 Methods of Measurement and Test of Fans.* Representative: S. J. Jones, B.Sc.

A number of meetings has been held to finalize British Drafts for table fans, ceiling fans, pedestal fans and regulators and general agreement has been reached on British points of view. Other countries' comments have been reviewed and compromises satisfactory to British ideas have on occasions been agreed.

The final Drafts are:

IEC/62/1255

IEC/62/1256

IEC/62/1257

These Drafts are Pedestal Fans, Ceiling Fans and Table Fans in that order and are now submitted to National Committees through Central office for approval under the six months rule. Consideration is now being given to propeller fans for ship use under Draft D62/10144.

*ELE/32/6 Radio Interference Suppression in Marine Installations.* Representative: J. Hastie.

There is nothing to report on the work of this Committee.

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*ELE/51/5 Marine Transformers.* Representative: A. N. Savage.

No meetings of this Committee have been held during the year. A recently published British Standard for isolating transformers—B.S. 3535 will be examined with a view to its citation in Institution of Electrical Engineers regulations.

*GLC/4 Observations and Gauge Glasses for Pressure Vessels.* Representative: E. F. Barton.

There have been no meetings of this Committee during the past year.

*GLC/5 Safety Glass for Marine Purposes.* Representative: E. F. J. Baugh.

Final Draft Specifications have now been completed and will be submitted to the Committee for their approval, this year.

*INE/4/5 Ships' Refrigeration Thermometers.* Representative: R. W. Cromarty.

No meetings of this Committee were held during the year.

*INE/6 Pressure Gauges.*

*INE/8 Revolution Indicators and Records.* Representative: R. A. Collacott, B.Sc., Ph.D.

No meetings of the above Committees were held during 1962.

*INE/6/2 Pressure Gauges (Drafting).* Representative: E. G. Hutchings, B.Sc.

No meetings of this Committee have been held during the year.

*ISE/- Iron and Steel Industry Standards.* Representative: W. Rennie.

During 1962 one meeting of the above Committee was held on 15th March.

*ISE/6 Steel Castings.* Representative: E. Burnett, M.B.E.

No meetings were held during the past year and there is nothing of interest to report.

*ISE/15 Iron and Steel for Shipbuilding.* Representative: J. Turnbull, O.B.E.

A Draft revision of British Standard 29 "Carbon Steel Forgings for Shipbuilding and General Engineering Purposes" has been circulated to industry for comment. The Committee met on 11th September 1962, to consider these comments and it was agreed, that subject to a few amendments, the revision of this Standard should be submitted to the Iron and Steel Industry Standard for approval prior to publication.

*ISE/31 Wrought Steels.*

*ISE/31/1 Carbon Steels.*

*ISE/31/2 Alloy Steels.* Representative: W. Rennie.

A joint meeting of the Iron and Steel Industry Standards Committee, the Non-Ferrous Metals Industry Standards Committee and the Welding Industry Standards Committee was held on 19th July. The work of the Technical Committees of ISE/- during the year has resulted in the following publications.

*New Standards published:*

B.S. 4—Structural steel sections. Part 2, Hot-rolled hollow sections.

B.S. 1121—Methods for the analysis of iron and steel. Part 43: Alumina in iron ores and slags.

B.S. 1449—Steel plate, sheet and strip.

Part 1A: Carbon steel plate and coil rolled by the continuous process.

Part 1B: Carbon steel sheet and coil rolled by the continuous process.

B.S. 0000—Seven wire strand for pre-stressed concrete.

B.S. 0000—Steel wire for rubber hose reinforcement. Part 1: Round and flat coated mild steel wire.

B.S. 0000—Mild steel for general engineering purposes.

B.S. 3179—Comparison of British and overseas standards for steels. Part 2: Chemical composition of wrought alloy steels.

*Revised Standards published:*

B.S. 29—Carbon steel forgings for shipbuilding and general engineering purposes.

B.S. 968—High yield stress (welding quality) structural steel.

B.S. 2691—Steel wire for pre-stressed concrete.

*Amendment Slips published*

P.D. 4500—Amendment No. 2 to B.S. 309/1958 White-head malleable iron castings.

P.D. 4501—Amendment No. 1 to B.S. 310/1958 Black-head malleable iron castings.

P.D. 4506—Amendment No. 2 to B.S. 1501-6/1958 Steels for use in the Chemical, Petroleum and Allied Industries.

P.D. 4507—Amendment No. 1 to B.S. 1510/1958 Steels for use in the Chemical, Petroleum and Allied Industries; low temperature supplement requirements to B.S. 1501-6.

P.D. 4611—Amendment No. 1 to B.S. 4 Structural steel sections Part 1: 1962—hot-rolled sections.

P.D. 4707—Amendment No. 1 to B.S. 968/1962 High yield stress (welding quality) structural steel.

P.D. 0000—Amendment No. 4 to B.S. 970 Wrought Steel.

*Standards withdrawn*

B.S. 3082—Mechanical testing of steels at elevated temperatures.

Part 2: 1959. Stress rupture.

Part 3: 1959. Non-interrupted creep testing.

Part 4: 1959. Interrupted creep testing.

(replaced by B.S. 3500 Methods for Creep and Rupture Testing of Metals).

The work of the respective ISE/- technical committees has included comparison tables of British, American (S.A.E.) and German steels prepared jointly by B.I.S.F. and B.S.I. B.S. 3279: Part 1. 1959 "Wrought Carbon Steels" and B.S. 3179: Part 2. "Wrought Alloy Steels" are now available. Work is proceeding on the 3rd part covering steels generally specified by their mechanical properties.

B.S. 1501-6 "Steels for Fired and Unfired Pressure Vessels" is under revision and to provide more flexibility in preparation the standard will be divided and published separately in the following parts:

B.S. 1501. Plates.

B.S. 1502. Sections and bars.

B.S. 1503. Forgings.

B.S. 1504. Castings.

B.S. 1506. Bolting bars.

These parts will incorporate the requirements of B.S. 1510 and Supplement No. 1 to B.S. 1501-6. Also the revised B.S. 1501 will replace B.S. 14 and B.S. 1633.

Proposals for the revision of B.S. 970/1955 "Wrought Steels" are under consideration by B.I.S.F. It is hoped that these will be dealt with by B.S.I. during 1963.

*ISE/35/9 Austenitic Cast Irons.* Representative: T. A. Rush.  
The Standard for Austenitic Cast Irons drawn up during



## Annual Report of the Council for 1962

1961 was finally published at the beginning of 1962 as British Standard 3468:62. No further meetings of the Committee have been held and the only additional document received during the year was a draft copy of the Indian Standard Specification for Austenitic Iron Castings.

*ISE/62 Steels for Pressure Vessels.* Representative: W. R. Harvey, O.B.E.

The Committee is still working on the Draft Specification for incorporation in B.S. 1501-1506.

*MEE/- Mechanical Engineering Industry Standards.* Representative: S. Archer, M.Sc.

During the period under review 40 standards were approved and issued, either as new or revised publications. These include the following of interest to marine engineers:

### *New Standards Published:*

B.S. 3500—Methods for creep and rupture testing of metals.

Part 1: Uninterrupted tensile rupture testing.

Part 2: Interrupted tensile rupture testing.

Part 3: Uninterrupted tensile creep testing.

Part 4: Interrupted tensile creep testing.

Part 5: Production acceptance tests.

B.S. 3518—Methods of fatigue testing.

Part 1: General principles.

Part 2: Rotating bending fatigue tests.

B.S. 3525—Dimensions of dry type unflanged and flanged interference fit cylinder liners (for I.C. engines with cast iron cylinder blocks).

B.S. 3526—Dimensions of wet type cylinder liners for I.C. engines.

B.S. 3537—Dimensions of gudgeon pins for I.C. engines.

B.S. 3538—Hobbing machines for general purposes.

B.S. 3550—Involute splines.

B.S. 3555—Ring spanners.

B.S. 3556—Nomenclature for pistons for internal combustion engines.

### *Revised Standards Published:*

B.S. 10—Flanges and bolting for pipes, valves and fittings.

B.S. 18—Methods of tensile testing of metals.

B.S. 131—Methods for notched bar tests.

Part 3: The Charpy V-notch impact test on metals.

Part 4: Calibration of pendulum impact testing machines for metals.

B.S. 240—Method for Brinell hardness test.

B.S. 365—Galvanized steel wire ropes for shipping purposes.

B.S. 408—Ships' cargo blocks.

B.S. 427—Vickers hardness test.

Part 2: Verification of the testing machine.

B.S. 891—Method for Rockwell hardness test.

Part 1: Testing of metals.

B.S. 1580—Unified screw threads.

Parts 1 and 2: Diameters  $\frac{1}{4}$  in. and larger.

*MEE/6/19 Gear Hobbing Machines.* Representative: J. Rogerson.

No meetings of the above Committee were held during 1962.

*MEE/11/4 Marine Flanges.* Representative: J. Liddell, B.Sc.

No meetings of this Committee were held during the year.

*MEE/12 Chains and Fittings.* Representative: F. P. Bell.

No meetings of this Committee were held during 1962.

*MEE/13 Engine Testing Fittings.* Representative: J. Calderwood, M.Sc.

There is nothing to report on the work of this Committee.

*MEE/17/7 Gears for Turbines and Similar Drives.* Representative: J. Rogerson.

No meetings of this Committee were held during the year and there is nothing to report.

*MEE/21/3 Welded Steel Air Receivers.* Representative: T. D. Shilston.

A number of meetings of the Sub-Committee MEE/21/3 has been held in order to consider the comments of industry following the issue of B.S. 487 Part II in draft form and it is hoped to complete this Standard shortly.

*MEE/29 Pump Tests.* Representative: C. Winyard.

No meetings of the above Committee have been held during the year 1962 and in consequence there are no new Standards to report on.

A Draft British Standard—"Method of Tests for Pumps", for revision of British Standard 599, 722, 723 and 724 has been circulated to the industry for comment.

The British Standards Institution has prepared and issued in November, a Draft Proposal for the setting up of an ISO Technical Committee to prepare "International Recommendations for Methods of Testing Pumps".

*MEE/34 Land Boilers.* Representative: J. Liddell, B.Sc.

The Committee met on one occasion to consider and review the results of discussions carried out over the last nine years by the Technical Committee of the International Standards Organization, ISO/TC11, on Unification of Boiler Codes. The United Kingdom views on these discussions had been well presented through the British Standards Institution Panel MEE/34/-/5 and a preliminary draft, which contained the anticipated technical requirements of the official draft now being prepared by the U.S.A. Secretariat of ISO/TC11, had been drawn up. It was decided that the appropriate British Standards boiler sub-committees be asked to review the Standards for which they are responsible and amend them as necessary to conform with the I.S.O. Boiler Code.

*MEE/34/1 Cylindrical Boilers.* Representative: J. Liddell, B.Sc.

The Committee met on one occasion for the purpose of reviewing British Standard 2790:1956 "Cylindrical Land Boilers of Welded Construction (other than Water Tube Boilers)" and it was decided that as a result of experience in the use of the first edition of this Standard, a number of amendments was desirable. A Draft British Standard for the revised B.S. 2790, incorporating the decisions taken at the meeting, has been prepared and circulated to industry for technical comments. The work on the revision of the Standard will be resumed in the near future when the comments from industry have been collated and circulated to members of the Committee for consideration.

*MEE/34/2 Water Tube Boilers.* Representative: J. Liddell, B.Sc.

Several meetings of the drafting panel of this Committee were held to consider revisions to British Standard 1113:1958 "Water Tube Boilers and their Integral Superheaters". Amendment No. 3 to the Specification was published in February 1962 and work on the general revision of the Specification was continued.

*MEE/34/6 Boiler Mountings and Fittings.* Representative: J. Liddell, B.Sc.

The Committee met towards the end of the year to consider the revision of British Standard 759:1955—"Valves, Gauges

## Annual Report of the Council for 1962

and other Safety Fittings for Application to Land Boilers and to Piping Installation for and in Connexion with Land Boilers". In the light of the comments received from industry and the general feeling of members of this Committee, it was decided to proceed with the revision of the Standard rather than issue Amendments to the present Standard.

*MEE/34/8 Pipes and Piping.* Representative: J. Liddell, B.Sc.

The drafting panel of this Committee met on several occasions to continue with the revision of British Standard 806: 1954 "Ferrous Pipes and Piping Installations for and in Connexion with Land Boilers". Good progress was made, but there is still much to be done before the work on the revision of the Specification is completed.

*MEE/34/9 Boilers and Superheater Tubes.*

*MEE/34/15 Corrugated Furnaces for Cylindrical Boilers.*

Representative: J. Liddell, B.Sc.

No meetings of the above Committees were held during the year.

*MEE/36 Shaft Couplings.* Representative: S. Mathews

No meetings of the above Committee have been held during the year.

*MEE/39 Compressors, Exhausters and Fans.*

*MEE/39/4 Fans for General Purposes.* Representative: S. J. Jones, B.Sc.

There have been two meetings during the year and Final Draft Revision of British Standard 848 and British Standard 707 has been prepared and approved by Sub-Committee MEE/39/4. This is now going forward for publication in accordance with the decisions of the Mechanical Engineering Industry Standards Committee MEE/-.

*MEE/63 Ships' Side Scuttles and Frames.* Representative:

E. F. J. Baugh.

Final Draft Specifications have now been completed and will be submitted to the Committee for their approval this year.

*MEE/81 Valves for Gas, Water and Steam.* Representative:

A. Logan, O.B.E.

No meetings of the above Committee were held during 1962.

*MEE/81/3 General Purpose Valves (Drafting).* Representative:

A. Logan, O.B.E.

A drafting panel of the above Committee met four times during the year to consider the revision of British Standards 2060:1952 and 1953 and prepare draft revisions for submission to the Sub-Committee. Work continues on the revision.

The Sub-Committee met seven times during the year when consideration was given to the first Draft British Standard for "Cast Iron Globe Valves for General Purposes" and the second Draft British Standard for "Cast Iron Screw down Stop Valves".

British Standard 3464 "Cast Iron Valves for General Purposes" was published in February.

*MEE/84 Ignition Equipment for Compression Ignition Engines.* Representative: J. Calderwood, M.Sc.

There is nothing to report on the work of this Committee.

*MEE/91 Jointing Materials and Compounds.* Representative: Lieut. Cdr. A. P. Monk, D.S.C., R.N.

The sixth meeting of the Technical Committee MEE/91 took place on 1st March 1962, to consider new British Standards Specifications to cover paper jointing and cork/paper

jointing. It was agreed that a new Sub-Committee should be formed to prepare these Specifications on the lines of the existing specifications of the Engineering Standards Co-ordinating Committee of the Defence Administration Committee, Ministry of Defence. This Sub-Committee (MEE/91/6) was formed with representatives of manufacturers, users' organizations and of the Engineering Standards Co-ordinating Committee, Ministry of Defence and it held its first meetings on 20th November 1962. The representative of the Institute was elected as Chairman of the Sub-Committee owing to the neutral aspect of the Institute. Very good progress was made at this meeting and the second meeting was arranged for 6th February 1963.

*MEE/93 Lubricating Nipples Used for Grease Lubrication in Machinery and Vehicles.* Representative: G. F. Gatward.

Part II of British Standards 1486 was revised in 1962.

An item—Lubricating Nipples—was included in the agenda for the meeting of British, American and Canadian Standards Institutions, held in September 1962. However, it was subsequently deleted and will be discussed at the next meeting.

*MEE/119 Plain Bearings.* Representative: R. W. Cromarty.

No meeting of this Committee was held during 1962. A Draft of Part 4—"Dimensions of Thin-walled Bearing Half Liners and Thrust Half Washers"—was circulated for comments.

*MEE/123 Diesel and Gas Engine.* Representative: A. Logan, O.B.E.

No meetings of the above Committee were held during 1962.

*MEE/131 Dished Ends for Tanks and Pressure Vessels.* Representative: T. D. Shilston.

The above Committee has been dormant during 1962.

*MEE/158 Mechanical Balancing of Rotating Machinery.* Representative: S. Archer, M.Sc.

The above Committee met three times during 1962. The work of two sub-committees, namely: nomenclature and testing machines respectively, has now been completed and Draft Specifications have been issued for comment. In the case of the marine sub-committee drafting is nearing completion.

This Committee was represented during the year in discussions of the Informal International Panel on Balancing (I.I.P.B.) meeting at Stuttgart, set up to prepare proposals for balancing standards for study by an I.S.O. Committee when this is formed. Following this meeting the United Kingdom have accepted the responsibility of the Secretariat of the I.I.P.B.

*MEE/158/2 Mechanical Balancing of Rotating Machinery (Marine Applications).* Representative: S. Archer, M.Sc.

The above Committee met eight times during 1962 and good progress has been made with the drafting of the final version of the Specification.

*MEE/161 Engine Conventions and Definitions.* Representative: J. Calderwood, M.Sc.

This Committee has now appointed representatives to the International Standards Organization, Committee TC70/WG1, which is dealing with the same subject matter. Any British Standard will probably be based on the outcome of the International Standards meetings.

*P/139 Prevention of Corrosion.* Representative: Cdr. F. M. Paskins, O.B.E., R.D., R.N.R.

The Revision of British Standard 1133, Section 6 is pro-



## *Annual Report of the Council for 1962*

gressing very slowly, but the work has now reached its final stages and it is hoped to conclude revision of this document within the next few months.

*PTC/2 Fuel Oils.* Representative: R. Munton, B.Sc.

Only one meeting of the above Committee has been held during 1962, when the subject under consideration was limited

to Domestic Fuels.

*USM/2/5 Thermodynamics.* Representative: C. H. Taylor-Cook, B.Sc.(Eng.).

As reported last year, this Committee has completed its work and the new British Standard has been published. The Committee has therefore been disbanded.

# Minutes of Proceedings of the Seventy-fourth Annual General Meeting

23rd April 1963

The 74th Annual General Meeting of the Institute was held in the Memorial Building, 76 Mark Lane, London, E.C.3, on Tuesday, 23rd April 1963, at 5.30 p.m.

The SENIOR VICE-PRESIDENT, Mr. J. Calderwood, M.Sc., occupied the Chair.

The minutes of the preceding Annual General Meeting having been published in the June 1962 issue of the TRANSACTIONS, were taken as read, confirmed and signed.

## *Introductory remarks by the Chairman*

The CHAIRMAN gave a reminder that only members were entitled to be in the Hall during the Annual General Meeting, and that only those who had paid their subscriptions could vote on any resolution.

## *Presentation of Annual Report*

The SECRETARY (Mr. J. Stuart Robinson, M.A.) presented the Annual Report for 1962.

## *Presentation of Annual Financial Statement*

The CHAIRMAN OF COUNCIL (Vice-Admiral Sir Frank Mason, K.C.B.) said that members had had the Accounts in their hands for some time but there were one or two points that he wished to make in presenting them.

The General Revenue Account contained two items of a non-recurring nature; the charge for library books and periodicals covered the cost of binding periodicals which had accumulated over the last five years, and the charge for TRANSACTIONS included the cost of publishing papers and discussions of the International Conference in the October issue. This additional cost was estimated at £3,000.

Last year's Annual Report referred to the decline in advertising revenue and it was disappointing to note that this had continued during the year. After allowance had been made for the special advertising included in the October issue there had been a further decrease of approximately £2,500 over the revenue for the last year. If the advertising revenue could be increased by the measures now being taken it should be possible for the net cost of supplying the publications to members to be kept within reasonable proportions. This was essential as it represented 34 per cent of the total expenditure.

Membership income followed the trend in the membership figures and the amount received from entrance fees had fallen accordingly.

There was little to comment on in the Memorial Building Revenue Account. The increase in the cost of servicing and administering the building had been absorbed by the annual reduction in mortgage interest. It should be noted that £15,000 had been transferred to the Capital Account, as in other years. This represented the annual capital repayments under the mortgage, and the nominal £1,000 had been transferred to the Memorial Building Redemption Fund.

The net cost of the International Conference, £6,373, was

met from moneys already appropriated to the Conference Expenses Reserve. A further allocation of £2,000 had, however, been made, leaving a balance of £2,480 to carry forward.

The Development Fund had been allocated £4,000, and after charging the costs of the Indian and Canadian Offices there was a balance of £2,700 to carry forward.

An allocation of £10,000 had been made to inaugurate an Educational Fund. The Council felt it was right at this stage that a Fund should be created from the surplus on the Building Revenue Account to make money available for the Institute's contribution to the special problem of the training and education of the professional marine engineer. It was felt that in this the Council would be fulfilling the principle implicit in the Memorial Building Scheme. All outstanding matters had now been dealt with on the Memorial Building and the final cost of £691,084 now appeared in the Balance Sheet.

He had much pleasure in submitting the Accounts.

## *Adoption of Annual Report and Accounts*

MR. S. MATHEWS (Member), in proposing the adoption of the Annual Report and Accounts, said that all members could feel reasonably satisfied with the Report of the Institute's activities and also with the financial statement for the year under review. He felt it was refreshing to have a statement which was not full of the hackneyed phrases met so often in the Press, such as "lip service", "commuter", "ad hoc", etc. It had been an eventful year. Firstly, they had been privileged to have His Royal Highness The Prince Philip as President, and, secondly, there had been the International Conference. Unfortunately the year had not been without its sorrow, in the loss of Mr. Philip Ingamells.

COMMANDER E. TYRRELL, R.N. (Member) in seconding the adoption of the Annual Report and Accounts, said that it had indeed been a most momentous year. He felt sure that all members of the Institute would wish him to say how much the work of the Council and the Honorary Treasurer had been appreciated, and on behalf of all members he thanked them for the valuable work they had done.

The highlight of this year's Accounts was the formation of an Educational Fund in which the Council had placed the sum of £10,000. There were, however, one or two pieces of information contained in the Report and Accounts which showed cause for anxiety. He hastened to add that this was the first time he had found reason to make any suggestions at an Annual General Meeting, and the suggestions he would be making tonight should not be construed in any way as a criticism of the admirable manner in which the Institute had been run in the past; rather he wanted to draw attention to the difficulties now being experienced by the marine engineering industry and to make a few suggestions as to how the Institute could help to overcome them.



## Minutes of Proceedings of the Annual General Meeting

At the beginning of the century British shipyards built 80 per cent of all vessels constructed throughout the world, and the marine engineering industry was in an even stronger position and supplied many of the engines of ships built abroad. The picture was far different today, when the United Kingdom's share of the shipbuilding market had fallen to about 15 per cent, and many of the engines manufactured in this country were built under licence to foreign design, and some were actually imported from abroad.

During the industrial revolution Britain became the shipyard of the world but no one seemed to understand the true cause of this good fortune. People were vaguely aware that wealth could be obtained from building ships and engines, and that output at that time had risen and costs had been reduced by the use of machines, but very few gave attention to studying the science and technology upon which this wealth was based. They seemed to have a misguided faith that if they kept on saying that British ships and machinery were the best in the world it would inevitably be so.

Today the proportion of technically qualified men employed in marine engineering was much lower than that in comparable industries in this country—for example, it was one-eighth that in the heavy electrical industry—yet today they were going through a period of very rapid technical change comparable with and probably surpassing that of the industrial revolution. The only certainty of success in the future lay in the hard work of highly qualified men directed towards the application of technical development to marine engineering.

Commander Tyrrell felt that this Institute could, by its action and persuasion, do much to improve the status and educational standard of the industry, but in his opinion the Institute would have to spend much more money on education than was being spent at present.

For the first time in several years there was an excess of expenditure over income and this amounted to £6,275. Although the Chairman of Council had said that much of this was non-recurring, it must be assumed that spending would increase during the coming year, particularly if the more ambitious educational programme were adopted, and this was essential if the industry and the Institute were to survive.

He wished, therefore, to propose that the Council should consider a number of steps designed to increase income: firstly, by raising the subscriptions, in line with those of the other professional and learned institutions; for example, the subscription for a full member should be increased from four to seven guineas a year, which would make it the same as that of the Institution of Mechanical Engineers. The other subscriptions, should be increased *pro rata*. Secondly, the credit balance of the Social Events Account should be raided and transferred to the Educational Fund. Social Events should be regarded as a means of raising money, and the aim must be always to make a profit; a balance of £500 credit should only be kept to be set against unforeseeable losses, as apparently occurred during the last year. Any money in excess of this sum to be transferred to the Educational Fund. Thirdly, he noted that the Awards and Prize Fund had a balance of £4,677 on deposit at the bank. A far higher rate of interest could be obtained from a building society or a finance company. It was essential that the Institute should put its financial house in order and run at a healthy profit if the aim of improving the educational status of the marine engineer were to be fulfilled. Although comparisons were odious he could not help pointing out that in the Institution of Mechanical Engineers, out of a total income of £313,000, no less than £196,000 was spent on educational services, including publications and transactions. This amounted altogether to almost 60 per cent of the total income. It was difficult to make comparisons because accounts were often presented in slightly different forms, but in this Institute something like £25,000 was spent out of a total income of £48,000, or about 43 per cent.

In conclusion, Commander Tyrrell thanked the Council once again for their efforts during the past year.

The CHAIRMAN OF COUNCIL said that he was very grateful to Commander Tyrrell for his comments. Many of the suggestions related to matters which the Council already had under consideration, and he did not think it would be proper for him, while they were still *sub judice*, to talk about them, but he could say that the Council were fully alive to the situation, and in particular to the responsibility of the Institute for education and training and the need to spend more money on these things. Perhaps before very long it would be possible to disclose some of the results of the Council's deliberations. The Council were most grateful to Mr. Mathews and Commander Tyrrell for their helpful remarks.

There being no questions or comments, the motion was put to the meeting and *carried unanimously*.

### Presentation of Awards for 1962

The CHAIRMAN then presented the following awards:

*Denny Gold Medal* to Commander E. H. W. Platt, M.B.E., R.N. (Member) and G. Strachan, B.Sc. (Member) for their paper entitled "Post-war Developments and Future Trends of Steam Turbine Tanker Machinery".

*Institute Silver Medal* to A. Dearden for his paper entitled "Residual Thermal Stresses in Compression Ignition Engines".

*Yorkshire Award 1961/62* to J. B. Main (Member) for his paper entitled "The Design and Layout of a 22,000 s.h.p. Tanker Machinery Installation".

*Extra First Class Certificate Examination: Institute Award* to R. L. Gray (Associate Member).

*Frank Roberts Award* to K. M. Howes (Student).

*W. W. Marriner Award* to R. G. Rees.

The award to Mr. Howes who was at sea, was received on his behalf by his mother.

### Report of the Scrutineers

The CHAIRMAN read out the report of the Scrutineers and announced that the President for the next Session would be Sir Nicholas Cayzer, Bt., and that the following had been elected:

Vice-Presidents:

*United Kingdom:* Rear-Admiral F. E. Clemitson, C.B.

R. Cook, M.Sc.

W. R. Harvey, O.B.E.

R. Munton, B.Sc.

*Pakistan:* Captain S. Z. Hasnain, P.N.

Members of Council: Professor G. H. Chambers, D.S.C.

B. Hildrew, M.Sc.

N. Macleod

S. Mathews

R. R. Strachan

Associate Member of Council: R. M. Duggan, M.A.

### Vote of Thanks to Scrutineers and re-appointment for 1963/64

The CHAIRMAN said that it was now his pleasant duty to propose a vote of thanks to the Scrutineers for carrying out once again what he always regarded as a most thankless task.

*The vote of thanks was carried by acclamation.*

The CHAIRMAN regretted that their old friend Mr. B. C. Curling was resigning as a scrutineer this year as he felt that his health might keep him away, although he usually managed to attend on these occasions and many others.

He therefore proposed the re-appointment of the remaining Scrutineers, Messrs. G. H. Garner, M. W. Dunham and E. R. Hall, and the appointment of Mr. A. L. Covell to replace Mr. B. C. Curling. *This was agreed.*

### Resolution of thanks to the President, His Royal Highness The Prince Philip

The CHAIRMAN OF COUNCIL proposed that a resolution should be sent to His Royal Highness The Prince Philip, from the Council and members, expressing their humble duty and gratitude to His Royal Highness for his support of the Institute



## *Minutes of Proceedings of the Annual General Meeting*

and agreeing to be its President for the past year, and in particular for his Presidential Address, which was most stimulating and would always be remembered by those who heard it.

The VICE-CHAIRMAN OF COUNCIL, Commander F. M. Paskins, O.B.E., R.D., R.N.R. said that it was his great privilege and honour formally to second the motion.

*The motion was carried by acclamation.*

### *Vote of thanks to the Council and Officers*

COMMANDER V. M. LAKE, R.N. (Member) said that he was very honoured and pleased to be given the opportunity of proposing a vote of thanks to the Council and staff for their efforts in the past year.

Annual General Meetings were usually looked upon as something of a bore, but the Secretary's report to this meeting had been far from boring. Nevertheless, this was really the only opportunity the members had of thanking the Council and Officers of the Institute for all the hard work put in by them behind the scenes. All would agree that in 1963 the Council and Officers had once again succeeded in upholding the position of marine engineering in the world, in spite of the difficulties which beset them all in the industry. He felt sure that they would continue to play a leading part and help in the industry's recovery by encouraging academic interest in this particular sphere of engineering; by encouraging members to shew by their reading of papers that our ideas were not dormant or unworkable; by fostering a greater spirit of co-operation and understanding between all those connected with shipping and continuing to raise the status of the Institute throughout the world. He was sure that those present would all join with him in thanking the Council and the Officers for all their work on behalf of the Institute.

MR. E. G. HUTCHINGS, B.Sc. (Member) in seconding the vote of thanks, said that it had been his lot in recent years to travel over Europe visiting shipowners, shipbuilders and marine engineers and, despite remarks which from time to time appeared in the daily Press and in other quarters which ought to be a bit more informed, he was encouraged to hear from these Continental sources of the great interest they still had in British marine engineering. Indeed, many important Continental ships were based on British ideas and British designs, and in several cases even on British specifications. He found also that the people one met abroad were, surprisingly, often more familiar with the activities of the Institute than were many of his colleagues here at home. Several important Continental engineers of his acquaintance were already members of the Institute or were extremely interested in joining. This foreign interest in the Institute never failed to fill him with pride, and he felt that the very high reputation the Institute and its members had acquired was due in no small part to the untiring and often unnoticed efforts of the Officers of the Institute and the Council. It was for this reason, among others, that he felt honoured indeed to have the privilege of seconding the vote of thanks to the Council and the Officers of the Institute so ably proposed by Commander Lake.

### *Reply of the Chairman of Council*

The CHAIRMAN OF COUNCIL, in thanking Commander Lake and Mr. Hutchings for their kind remarks, said that he would

like, on behalf of the Council, to thank the whole staff, including the house staff, for all they had done behind the scenes and otherwise to keep the work of the Institute going; and not least the Secretary, on whose shoulders rested so much that redounded to the well being of the Institute. A great deal was owed to the foresight and, indeed, the imagination of the Secretary. How much was owed, perhaps only people like himself, who had the privilege of working closely with the Secretary for a year, could even remotely guess.

If he might be allowed a personal word, he wished to say that it had been the very greatest of pleasure to him to be Chairman of Council, as well as a privilege. He had even enjoyed it! He was glad to be able to say this now because he had been somewhat daunted when he started. The Council were a very formidable body of men when they faced one around the table, but in fact individually they were extraordinarily nice people!

It had, of course, been a memorable year. The International Conference, to which reference had already been made more than once, was staged in a manner which other and bigger bodies might well envy. He could say this as he had had nothing to do with it. It was splendidly organized and very much appreciated. The direct result of it was that the Secretary and himself, and their wives, were invited to Berlin. The fact that it snowed all the time did not detract from their enjoyment, because they met a large number of interesting people.

Another memorable event was the formation of the Engineering Institutions Joint Council. This was an historic step which one might even say was long overdue.

Domestically, there was the setting up of the Special Committee on Education.

From the Institute's point of view the most outstanding thing of all was the holding of office as President by Prince Philip, to whom a letter of gratitude and deep appreciation would be sent.

This occasion could not be allowed to pass without mention of Philip Ingamells. Anybody who was at the Mansion House on the first day of the International Conference would have been struck by the extraordinary example of courage and by the triumph of spirit over bodily afflictions. It was the most extraordinary example that he personally had ever seen. Although Philip Ingamells left prematurely he left in harness, as there was no doubt he wished to do. It was very moving to hear his speech at the Mansion House. Anybody who heard it would never forget it. It was altogether an extraordinary example of courage and devotion. His widow showed exactly the same qualities.

In conclusion, the Chairman of Council expressed his gratitude for the support given to him personally by everybody; by members of Council, members of the staff, by the Secretary, and, last but not least, by his good friend and special colleague the Senior Vice-President, without whose kindness and understanding he would not have got through the year.

### *Closing remarks by the Chairman*

The CHAIRMAN, in closing the meeting, thanked the members present for their attendance and support.

*The proceedings terminated at 6.13 p.m.*



# Twenty-third Annual General Meeting of the Education Group

Tuesday, 19th March 1963

The Twenty-third Annual General Meeting of the Education Group of the Institute was held on Tuesday, 19th March 1963. The Chair was occupied by Mr. P. J. Howard, B.Sc. (Eng.), Chairman of the Executive Committee.

The Minutes of the preceding Annual General Meeting, which had been circulated, were confirmed and were signed by the Chairman.

## *Annual Report*

The CHAIRMAN reported that it had not been a terribly busy year. The Committee had mostly been concerned with arrangements for papers, for presentation and discussion. The subject matter of the papers to be presented after this meeting was discussed in September 1962 and it was agreed then that the White Paper "Better Opportunities in Technical Education", issued a while back was of so much interest to people generally that it would be worth while having some papers on it and on its effects. The Committee accordingly invited Mr. George Sutton, one of H.M. Inspectors of Schools at the Ministry of Education, Mr. C. J. Cutler of Woolwich Day College, and Mr. A. W. Bell, B.Sc., a Member of the Institute, to present short papers expressing their views on the White Paper.

The Committee also proposed to the Council of the Institute that as training and qualification were so important these days it might be perhaps worth while to have a symposium on that subject at the Institute, the papers to be read by marine engineers from European countries. The Council had approved the suggestion in principle and exploratory action was being taken.

The Committee had reviewed the lectures given to the technical colleges during the winter session and one or two lectures had been removed from the list because there seemed to be no demand for them, and three had been added to the list. One of them was on marine boilers, by Babcock and Wilcox Ltd, and there were two papers by Mr. J. Harle, on the lubrication of machinery and the operation of Diesel engines on marine fuel oils, which had been added to the list of lectures available.

The Committee had also been asked to look at the course run at Crawford Engineering Institute in Cork to see whether

it could give certain exemptions from the Institute of Marine Engineers' examinations, and that matter was now under consideration.

Finally, the Examination Sub-Committee had continued their work on the assessment of examination question papers and markings for the comparatively small number of candidates who took the Institute's examinations.

## *Election of Chairman*

The CHAIRMAN announced that the Executive Committee had nominated Mr. S. Hogg, O.B.E. as Chairman for the ensuing session.

There being no further nominations, the Chairman declared Mr. Hogg duly elected.

The CHAIRMAN reminded the Meeting that it was customary for the Chairman not to relinquish the Chair at this juncture but to remain until the completion of the evening's business.

## *Election of Vice-Chairman*

The CHAIRMAN announced that the Executive Committee had nominated Mr. D. M. Reid as Vice-Chairman for the ensuing session.

There being no further nominations, the Chairman declared Mr. Reid duly elected.

## *Election of Committee Members*

The CHAIRMAN said that the Committee had asked him to stay on as a co-opted member, although he had been on the Committee for three years and therefore was due to stand down. The nominations were: Mr. J. McAfee and Mr. D. G. Alcock; with Mr. D. A. Eaton, B.Sc.(Eng.), Mr. C. H. Taylor-Cook, B.Sc.(Eng.) and himself as co-opted members.

The recommendation was adopted.

## *Date of next Annual General Meeting*

It was agreed that the next Annual General Meeting should be held on Tuesday, 17th March 1964.

That concluded the formal business of the meeting.