

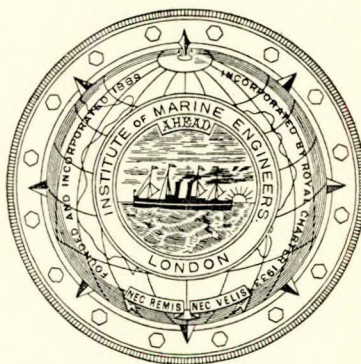
THE INSTITUTE  
OF  
MARINE ENGINEERS

FOUNDED 1889

INCORPORATED BY ROYAL CHARTER 1933

PATRON : HER MAJESTY THE QUEEN

TRANSACTIONS



Volume 71, 1959



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S. ARCHER, M.Sc.	MEE/-	Mechanical Engineering Industry Standards	R. COOK, M.Sc.	SFE/1	Nomenclature and Definitions for Solid Fuel Burning Appliances
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*Chairman:* PROFESSOR G. H. CHAMBERS, D.S.C. *Vice-Chairman:* D. G. ALCOCK. *Committee:* D. A. EATON, B.Sc.(Eng.) (*co-opted*), F. A. EVERARD (*co-opted*), G. F. GATWARD, STEWART HOGG, O.B.E., P. J. HOWARD, B.Sc.(Eng.), J. McAFEE, D. M. V. PARKINSON, M.V.O., C. H. TAYLOR-COOK, B.Sc.(Eng.).

### EDUCATION GROUP SUB-COMMITTEE FOR EXAMINATIONS

*Committee:* PROFESSOR G. H. CHAMBERS, D.S.C., D. A. EATON, B.Sc., STEWART HOGG, O.B.E., C. H. TAYLOR-COOK, B.Sc.(Eng.).

### FINANCE

*Chairman:* R. COOK, M.Sc. *Committee:* J. CALDERWOOD, M.Sc., W. R. HARVEY, STEWART HOGG, O.B.E., A. LOGAN, O.B.E., R. MUNTON, B.Sc., G. ORMISTON, C.B.E., H. J. WHEADON.

### GENERAL PURPOSES

*Chairman:* J. CALDERWOOD, M.Sc. *Committee:* H. ARMSTRONG, S. G. CHRISTENSEN, R. COOK, M.Sc., W. R. HARVEY, B. P. INGAMELLS, C.B.E., VICE-ADMIRAL SIR FRANK MASON, K.C.B., (ret.), F. M. PASKINS, O.B.E., W. SAMPSON, S. A. SMITH, M.Sc.

### JOINT COMMITTEE R.I.N.A. AND I.MAR.E.

*I.Mar.E. Representatives:* *Chairman:* W. SAMPSON. *Committee:* J. CALDERWOOD, M.Sc., REAR-ADMIRAL F. E. CLEMISTON, C.B., (ret.), ENG. CAPT. W. A. GRAHAM, O.B.E., R.N.R., T. W. LONGMUIR, H. J. WHEADON, J. STUART ROBINSON, M.A.

*R.I.N.A. Representatives:* *Chairman:* J. M. MURRAY, M.B.E., B.Sc. *Committee:* K. C. BARNABY, O.B.E., B.Sc., SIR J. M. McNEILL, K.C.V.O., C.B.E., R. B. SHEPHEARD, C.B.E., B.Sc., R. C. THOMPSON, C.B.E., M.A., JAMES TURNBULL, O.B.E., CAPT. A. D. DUCKWORTH, R.N. (ret.).

### JUNIOR SECTION

*Chairman:* F. A. EVERARD. *Committee:* B. ALDERSON, R. S. BRETT, J. P. FIELD, G. F. GATWARD (*co-opted*), A. C. HANCOCK, P. J. HUMPHREYS, T. J. McKENNA, D. L. MORGAN (*co-opted*), R. F. THOMAS.

### MARINE ENGINEERS' NATIONAL WAR MEMORIAL

*Appeal Committee:* *Chairman:* A. C. HARDY, B.Sc. *Committee:* R. F. CAPEY, E. R. CHAMBERLAIN, G. R. CHAPPEL, C.B.E., Wh.Ex., F. D. CLARK, R. W. CROMARTY, A. W. DAVIS, D.Sc., W. R. HARVEY, F. C. M. HEATH, W. Q. HENRIQUES, O.B.E., A. LOGAN, O.B.E., CDR. H. T. MEADOWS, D.S.C., R.D., R.N.R., H. Y. MOSEY, W. LYNN NELSON, O.B.E., D. REBBECK, C.B.E., Ph.D., M.A., M.Sc., J.P., T. C. ROLLAND, W. SAMPSON, H. A. J. SILLEY, D. SKAE, S. A. SMITH, M.Sc., H. E. UPTON, O.B.E., H. J. WHEADON, HAROLD WHITE.

*Building Committee:* *Chairman:* H. A. J. SILLEY. *Vice-Chairman:* H. J. WHEADON. *Committee:* J. CALDERWOOD, M.Sc., R. COOK, M.Sc., SIR WILLIAM CURRIE, G.B.E., W. J. FERGUSON, M.Eng., A. LOGAN, O.B.E., G. ORMISTON, C.B.E., W. SAMPSON, JAMES TURNBULL, O.B.E.

### MEMBERSHIP

*Chairman:* T. W. LONGMUIR. *Committee:* D. G. ALCOCK, T. W. BUNYAN, B.Sc., E. R. CHAMBERLAIN, S. G. CHRISTENSEN, REAR-ADMIRAL F. E. CLEMISTON, C.B., (ret.), F. J. COLVILL, C.B.E., B. C. CURLING, O.B.E., W. McCLIMONT, B.Sc., D. M. REID, R. R. STRACHAN, C. H. TAYLOR-COOK, B.Sc.(Eng.).

### PAPERS AND TRANSACTIONS

*Chairman:* R. COOK, M.Sc. *Committee:* R. ATKINSON, D.S.C., R.D., B.Sc., T. W. BUNYAN, B.Sc., J. CALDERWOOD, M.Sc., A. C. HARDY, B.Sc., R. MUNTON, B.Sc., CDR. E. H. W. PLATT, M.B.E., R.N.(ret.), D. W. RUDORFF (*co-opted*), W. SAMPSON, G. M. SELLAR, B.Sc., S. A. SMITH, M.Sc., H. J. WHEADON, CAPT. D. B. H. WILDISH, R.N.

### PUBLICITY AND ADVERTISING

*Chairman:* A. C. HARDY, B.Sc. *Committee:* J. CALDERWOOD, M.Sc., F. D. CLARK, R. COOK, M.Sc., G. RIDLEY WATSON, B.Sc.

### SOCIAL EVENTS

*Chairman:* STEWART HOGG, O.B.E. *Committee:* F. P. BELL, E. R. CHAMBERLAIN, CDR. F. J. CORNEY, O.B.E., R.N.(ret.), R. K. CRAIG, C.B.E., ENG. CAPT. W. A. GRAHAM, O.B.E., R.N.R., B. P. INGAMELLS, C.B.E., T. W. LONGMUIR, CDR. H. T. MEADOWS, D.S.C., R.D., R.N.R., CDR. J. WHITE, D.S.C., R.N.(ret.), W. YOUNG.

### Joint Panel on Nuclear Marine Propulsion

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

*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:* T. W. F. BROWN, C.B.E., D.Sc., S.M., PROFESSOR L. C. BURRILL, M.Sc., Ph.D.

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

*Representatives of the Joint Panel on the British Nuclear Energy Conference:*

T. W. F. BROWN, C.B.E., D.Sc., S.M., J. M. MURRAY, M.B.E., B.Sc.,  
J. STUART ROBINSON, M.A.

# Annual Report of the Council for 1959

1959 has seen further consolidation of the Institute's financial position and has also marked the initiation of a new chapter in the overseas expansion of the Institute as well as the holding of a different type of joint meeting with a kindred institution.

## EXTENSION OF THE INSTITUTE'S ACTIVITIES

The Council during the early part of the year decided to explore the possibilities of further overseas expansion of the Institute.

The growth in the United Kingdom has been so substantial since the war, largely as a consequence of the formation of the Sections and the holding of more activities that it has been felt that a similar reward could be found elsewhere.

To establish some idea of what might be done the Council asked the Secretary to visit Canada in May and June during which time he visited Toronto, Ottawa, Quebec, Montreal, Halifax, Vancouver and Victoria. From talks with members and visits to educational establishments, shipbuilding and engineering organizations, provincial professional engineers associations, the Engineering Institute of Canada, Naval Headquarters and Government Departments it was possible to propose certain ways in which the Institute might extend its influence and usefulness in Canada.

The Council has agreed that there is a future for the Institute in Canada, and that a real effort should be made to establish it.

Furthermore it has been agreed that the next step as far as overseas countries are concerned is to connect the Sections together country by country and to give them greater independence and also that this idea should be tried out in the first instance in Canada for a period of five years. To facilitate this a part-time paid Secretary is to be appointed, the filling of which post is at the moment under negotiation. Consideration is also being given to arrange for the views of the Canadian members to be made available by providing for the election of a Canadian representative to the Council.

The setting up of such an organization will in the early years cost more than will be forthcoming from the additional income and during this period the Council has decided to make any necessary funds available, it being considered that such action is a way of spending wisely the income from the Memorial Fund by providing a practical commemoration of those who died in an extension of the Institute's activities and an improvement of its services. Permission has been given by the Bank of England for the making of the necessary payments and an account has been opened with the Imperial Bank of Canada.

The co-operative relationships already in force with the Society of Naval Architects and Marine Engineers, particularly the Eastern Canadian Branch of the Society, will be continued and similar relationships have been established with the Engineering Institute of Canada.

To put into operation these ideas the Chairman of Council and the Secretary visited Canada in November, going to

Toronto, Montreal, Ottawa and Vancouver.

The Council have now confirmed the formation of Sections in Toronto and Montreal.

## JOINT MEETING WITH THE SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS, NEW YORK

The Council agreed a recommendation that joint meetings with overseas institutions were desirable. This decision was implemented by a meeting of a new character which took place in November. It took the form of a parallel meeting with the Society of Naval Architects and Marine Engineers during which two papers were read both in New York and London during November, the subsequent discussions on both being treated as one. Mr. R. T. Young represented the American Society in London and the Chairman of Council and the Secretary represented the Institute in New York. These gatherings presented an excellent opportunity for an exchange of views.

## ROLL OF HONOUR

The Council was gratified to receive from the Minister of Transport the three volumes comprising the Roll of Honour of the Merchant Navy and Fishing Fleets for the 1939/45 War. These volumes have been placed on view in the Library.

## AMENDMENTS TO THE BY-LAWS

The amendments to the By-Laws approved by the members at the Annual General Meeting on 21st April were agreed by the Privy Council.

## ACCOUNTS

There is an excess of income over expenditure for the year on the General Revenue Account of £7,717, an increase of £1,185 over the last year. Whilst the income has remained much the same as last year, the membership expenditure has fallen by £2,817 and administration expenditure increased by £2,468. The benefit of higher advertising rates has been felt in the current year, the advertising revenue increasing by £3,524, resulting in a decrease in the net cost of supplying TRANSACTIONS to members of £3,883. This has more than offset the additional cost of producing the Year Book, which amounted to £1,137. Establishment expenses have varied little from last year.

There is a surplus on The Memorial Building Revenue Account, of £27,556, as compared with £28,928 last year after provision was made for the Memorial Building Redemption fund. The decrease is due to the charge of a full year's mortgage interest in this year's accounts.

Whilst the final payment to the Contractor has not yet been made, it is not anticipated that the cost of the Memorial Building will vary greatly from the figure of £681,576 shown in the Balance Sheet as the cost of construction to date. The market value of the investments has been maintained during the year and the Council are taking advantage of the amendment to By-law 61 to review the whole of the investments.

# THE INSTITUTE OF MARINE ENGINEERS

## BALANCE SHEET

31st DECEMBER 1959

	1958				
	£	£	£	£	£
<b>CAPITAL ACCOUNT</b>					
			250,606		
			13,653		
			15,000		
	250,606		279,259		
<b>LOAN CAPITAL</b>					
<b>The Church Commissioners</b>					
			337,500		
			67,500		
	350,000		405,000		
	70,000		420,000		
	420,000		405,000		
<b>CAPITAL RESERVE</b>					
				2,000	
	1,000			2,000	
<b>ACCUMULATED FUNDS</b>					
			80,173		
			12,556		
	73,156		92,729		
	73,156		92,729		
<b>REVENUE RESERVES</b>					
			4,000		
			3,606		
			396		
	4,000		8,002		
	2,452		3,201		
	1,000		3,201		
	7,452				
	2,608		3,201		
<b>SOCIAL EVENTS ACCOUNT (Note 3)</b>					
<b>AWARDS AND PRIZE FUNDS (Note 4)</b>					
			4,876		
			574		
	1,845		5,450		
	506		5,450		
<b>CURRENT LIABILITIES</b>					
			8,176		
			8,611		
			6,512		
			1,593		
	10,474		24,892		
	8,930		24,892		
	8,430		24,892		
	1,747		24,892		
	29,581		24,892		
	29,581		24,892		
	£786,754		£820,533		

	1958				
	£	£	£	£	£
<b>FIXED ASSETS</b>					
				681,576	681,576
				—	—
				16,955	4,019
	650,882		12,936		
	13,582		12,936		
	664,464		12,936		
	664,464		12,936		
	664,464		12,936		
	698,531		4,019		694,512
	698,531		4,019		694,512
	698,531		4,019		694,512
<b>INVESTMENTS</b>					
<b>General</b>					
				38,939	
				9,300	
				29,639	
	38,939		29,639		
	9,600		29,639		
	29,339		29,639		
	29,339		29,639		
	2,671		2,671		
	2,671		2,671		
	—		—		
	32,010		32,310		
	1,083		1,083		
	33,093		33,393		
	33,093		33,393		
	33,093		33,393		
<b>CURRENT ASSETS</b>					
				6,193	
				12,827	
				5,366	
				1,232	
				15,587	
				16,819	
				30,000	
				3,201	
				18,222	
				21,423	
				92,628	
	—		92,628		
				89,197	
				89,197	
	89,197		89,197		
	89,197		89,197		
	89,197		89,197		
	£786,754		£786,754		
	£786,754		£786,754		

Annual Report of the Council for 1959

### 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, 1959 and of the income and expenditure for the year ended on that date.

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

2nd March, 1960.

WEST AND DRAKE,  
Chartered Accountants





## BALANCE SHEET

### 2. Conference Expenses

Balance at 31st December, 1958	...	...	...	...	...	...	...	...	1,000
Transfer from General Revenue Account	...	...	...	...	...	...	...	...	1,000
									<u>2,000</u>
Less: Expenditure during the year	...	...	...	...	...	...	...	...	1,604
									<u>£396</u>

### 3. Social Events Account

Balance in Hand at 31st December 1958									2,608
Add: Profit									
Dinner	...	...	...	...	...	...	...	...	755
									<u>3,363</u>
Less: Losses									
Conversaciones	...	...	...	...	...	...	...	...	92
Summer Golf Meeting	...	...	...	...	...	...	...	...	9
Autumn Golf Meeting	...	...	...	...	...	...	...	...	10
Presidential Address Dinner	...	...	...	...	...	...	...	...	51
									<u>162</u>
Balance in Hand at 31st December 1959	...	...	...	...	...	...	...	...	<u>£3,201</u>

### 4. Awards and Prize Funds

	Capital Account	Income Accounts for 1959			
		Balance 31.12.58	Income	Awards	Balance 31.12.59
	£	£	£	£	£
Akroyd Stuart Award	700	248	32	—	280
W. W. Marriner Prize	230	7	8	5	10
Adam Girdwood Award	15	5	1	—	6
Denny Gold Medal	250	85	10	—	95
Denny Award	100	53	11	7	57
Stephen Legacy	100				
Lord Inverforth Award	100				
John I. Jacobs Award	119				
W. Murdoch Legacy	62	106	12	10	108
D. F. Robertson Award	100	2	4	6	—
Frank Roberts Award	100				
William Theodore Barker Award	3,000				
	<u>£4,876</u>	<u>£506</u>	<u>£96</u>	<u>£28</u>	<u>£574</u>

## 5. The Memorial Building

	<i>To</i> 31.12.58 £	<i>Year to</i> <i>Date</i> £	<i>Total to</i> 31.12.59 £
<b>Cost of Construction to date</b>			
Foundations and Frame ... ..	70,709	—	70,709
Building and Equipment ... ..	570,000	37,676	607,676
Sundry Building Costs ... ..	868	375	1,243
Architects' Fees ... ..	40,021	1,500	41,521
Surveyors' and Agents' Fees ... ..	10,717	—	10,717
Solicitors' Fees and Stamp Duty ... ..	6,966	—	6,966
	<hr/>	<hr/>	<hr/>
<b>Less: Compensations and Tenants' Contributions ... ..</b>	699,281 48,399	39,551 8,857	738,832 57,256
	<hr/>	<hr/>	<hr/>
	650,882	30,694	681,576
	<hr/>	<hr/>	<hr/>

**Note:** The final payment to the Contractors has not yet been agreed

## 6. Investments—General

<b>At Cost Less Bonus</b>	£
£2,500 3½% War Loan ... ..	2,571
<b>At Cost</b>	
£10,700 3½% War Loan ... ..	10,065
£2,500 3½% Conversion Loan ... ..	2,668
£1,834 3% Savings Bonds 'A' 1955/65 ... ..	1,817
£1,000 3% Savings Bonds 'B' 1955/65 ... ..	1,000
£9,000 3% Savings Bonds 'B' 1960/70 ... ..	9,000
£5,500 3% Savings Bonds 'A' 1965/75 ... ..	4,705
£800 3% Treasury Stock ... ..	704
£6,000 British Transport 3% Guaranteed Stock 1978/88 ... ..	5,918
£500 Australia 3¼% Registered Stock 1956/61 ... ..	491
	<hr/>
	£38,939
	<hr/>

(Market Value at 31st December 1959, £29,638)

## 7. Sinking Fund Insurance Policies

	£	£
Single Premiums to:—		
Royal Exchange Assurance Company to secure the payment on		
1st November 2011 of ... ..	10,000	
10th June 2012 of ... ..	10,000	
Canada Life Assurance Company to secure the payment on		
10th June 2012 of ... ..	1,000	
Atlas Assurance Company to secure the payment on		
10th June 2012 of ... ..	1,000	
Sun Life Assurance Society to secure the payment on		
10th June 2012 of ... ..	1,000	
	<hr/>	<hr/>
		£23,000
		<hr/>

(The present surrender value of the above policies is £4,145)



### 8. Investments—Awards

Akroyd Stuart Award	£	
£915 3½% Conversion Loan at Cost ... ..	698	
John I. Jacobs Award		
£200 2½% Consols 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 'A' 1955/65 at cost ... ..	166	
	<hr/>	<u>£1,083</u>

### GENERAL REVENUE ACCOUNT

#### 9. Transactions

1958										
£	£							£	£	
21,045		Composition, Printing, Paper, etc. ... ..						20,311		
2,302		Reporting, Abstracting and Salaries ... ..						2,328		
5,960		Wrapping and Postage ... ..						6,069		
<hr/>								<hr/>		
29,307								28,708		
983		Student Transactions ... ..						1,438		
<hr/>	30,290							<hr/>	30,146	
19,782		Less: Advertising Revenue ... ..						23,306		
2,302		Sales ... ..						2,580		
134		Profit on Bound Volumes ... ..						71		
<hr/>	22,218							<hr/>	25,957	
	<hr/>								<hr/>	
	£8,072								<hr/>	£4,189
	<hr/>								<hr/>	

#### 10. Subscriptions

1958										
£								Received	Unexpired	Net
								£	£	£
20,442	Members ... ..							21,111	623	20,488
8,395	Associate Members ... ..							10,583	535	10,048
5,865	Associates ... ..							5,848	137	5,711
2,339	Graduates ... ..							2,764	177	2,587
690	Students ... ..							881	44	837
388	Probationer Students ... ..							452	48	404
143	Companions ... ..							185	29	156
<hr/>								<hr/>	<hr/>	<hr/>
£38,262								£41,824	£1,593	£40,231
	<hr/>							<hr/>	<hr/>	<hr/>

## Annual Report of the Council for 1959

### ABSTRACTS

The Council has decided that the Abstracts Section of the TRANSACTIONS could be increased in value by its extension by an average of two pages per issue devoted to shorter abstracts of a greater number of articles including many from overseas sources. The first issue to contain this additional material will be January 1960.

### MEMBERSHIP

The membership figures are shown in detail in the chart and graph below. The actual number of members elected is 999, and losses by death, resignation, etc., are 330. The total membership now stands at 12,997.

### PARSONS' "TURBINIA" MEMORIAL

The Council in response to a request from the North East Coast Institution of Engineers and Shipbuilders sent a donation to the Parsons' "Turbinia" Memorial Fund, and also invited members of the Institute to do likewise should they so wish. This fund has been set up to enable the "Turbinia" to be reconstructed and housed at the Museum of Science and Engineering, Newcastle. The stem and boiler of the vessel have long been included in the Museum collection and the funds now being raised will enable the stern portion to be brought to Newcastle from the South Kensington Museum.

Having in mind the outstanding significance of the "Turbinia" in the history of marine engineering and shipbuilding as the first ship to be propelled by steam turbines the Council has been pleased to be associated with this proposal.

### THE WILLIAM THEODORE BARKER AWARD

The Council wish to report that a new Award has been instituted, which will be administered by the Institute, in memory of the late Eng. Cdr. W. T. Barker, M.B.E., R.N. The sum of £3,000 has been raised by the purchase for the Liverpool Museum of five model marine engines made by Commander Barker. The present conditions of the award are that the sum of £100 should be offered annually to a selected candidate from the first six in order of merit, in the Ministry of Transport First Class Certificate of Competency Examinations, to give financial support to the selected candidate to study for the Extra First Class Certificate or a suitable course for further education to be approved by the administering body.

### ROYAL INSTITUTION OF NAVAL ARCHITECTS

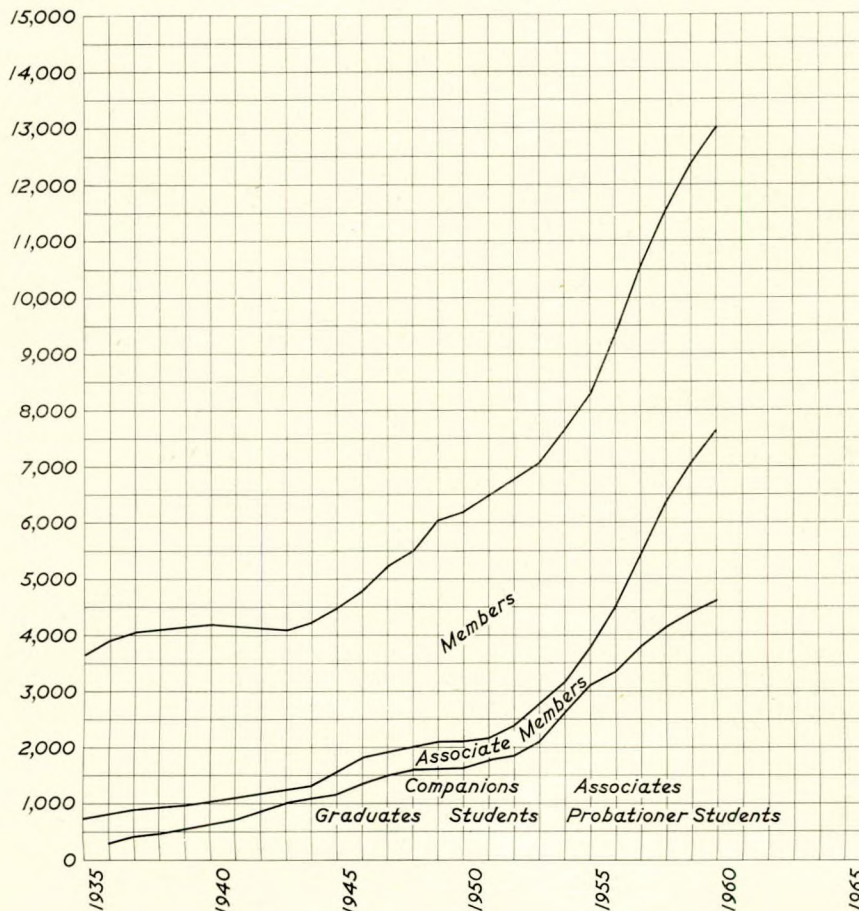
The Council wish to report that a letter of congratulation was sent to the Institution of Naval Architects upon it being announced that Her Majesty The Queen had graciously approved of the Institution being henceforth known as the Royal Institution of Naval Architects.

## SUMMARY OF THE YEAR'S ACTIVITIES

### MEMBERSHIP

The changes in the membership are shown in the following chart and table:—

*Chart of Membership*



Annual Report of the Council for 1959

Grade	Total 31st Dec. 1958	Transfer		Elected	Died	Resigned	Lapsed	Total 31st Dec. 1959	Increase or decrease during 1959
		From	To						
Past Presidents	13			1	1			13	—
Honorary Members	7				1			6	— 1
Members	5,310		46	167	68	56	55	5,344	+ 34
Associate Members	2,631	22	127	325	2	18	9	3,032	+ 401
Companions	46			1	2			45	— 1
Associates	1,701	55		66	5	22	57	1,628	— 73
Graduates	796	91	33	141		14	6	859	+ 63
Students	652	28	35	130		6	5	778	+ 126
Probationer Students	1,182	45		168	1	12		1,292	+ 110
Totals	12,338	241	241	999	80	128	132	12,997	+ 659

COUNCIL

At their meeting on 11th May 1959 the Council elected Mr. R. Cook, M.Sc., as Chairman of Council and Mr. W. R. Harvey as Vice-Chairman for the 1959/60 session.

HONORARY VICE-PRESIDENT

In November Mr. A. R. Riddell was appointed an Honorary Vice-President by the Council.

VICE-PRESIDENT

In May Mr. W. B. Johnstone, O.B.E., was co-opted as Vice-President for Glasgow (*vice* Mr. J. Gilchrist resigned).

LOCAL VICE-PRESIDENTS

The following appointments of Local Vice-Presidents have been made by the Council:—

*Bombay*: Rear-Admiral T. B. Bose, I.N. (*vice* G. E. Kerr, resigned).

*Buenos Aires*: S. Cromwell (*vice* D. H. Nicholson, resigned).

*Dublin*: H. O. Lennox (first holder of this office).

*Persian Gulf*: M. Adam (*vice* S. W. H. Gray, resigned).

*Vancouver*: W. Dey (*vice* J. Bryden, resigned).

*Wellington*: J. T. Oliver (*vice* L. Hall, resigned).

PAPERS READ

Date	Title	Author
13th January	* "The Development of Air Conditioning in Ships"	S. J. Jones, B.Sc. (Member) and J. K. W. MacVicar (Associate)
27th January	"Heavy Oil Burning"	J. S. Clarke, O.B.E., Ph.D. (Member) and G. J. Hudson, M.A.
24th February	* "Fishing Vessel Development"	A. Hunter, M.I.N.A., and G. C. Eddie, B.Sc. (Member)
3rd March	† "Some Metallurgical Features of Nuclear Reactors"	H. M. Finnieston, B.Sc., Ph.D., A.R.T.C., F.I.M.
10th March	"Advances in Steam Turbines for Marine Propulsion"	A. D. Somes, B.S.
14th April	"Boiler Refractories—Operating Temperatures and Recent Developments in Construction"	W. McClimont, B.Sc. (Member), H. M. Richardson, B.Sc., and Bryan Taylor, B.Sc.(Eng.) (Member)
6th October	Presidential Address	Sir William Wallace, C. B. E., L.L.D., F.R.S.E.

\* Read before a joint meeting of the Institute and the Royal Institution of Naval Architects.

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

13th October	"Centrifugal Purification of Oils for Marine Service"	M. E. O'Keefe Trowbridge, B.Sc., A.C.G.I.
10th November	"The Design of a Resonance Changer to Overcome Excessive Axial Vibration of Propeller Shafting"	Cdr. A. J. H. Goodwin, O.B.E., R.N. (ret.)
26th November	‡ "Human Problems in Marine Engineering"	C. C. Pounder (Vice-President)
	‡ "Co-ordinated Alignment of Line Shaft, Propulsion Gear and Turbines"	H. C. Andersen, B.S., and J. J. Zrodowski, B.S.
8th December	"Development of the Gotaverken Diesel Engine"	R. A. Lindén (Member)
15th December	† "Some Aspects of Marine Reactor Safety"	K. Maddocks, B.Sc. (Member)

PAPERS PUBLISHED IN THE TRANSACTIONS

Issue	Title	Author
January	"Recent Developments in Italian Marine Diesel Engines"	Dott. Ing. Roberto De Pieri, M.I.Mech. E.
February	"The Design and Building of Icebreakers"	A. Watson, M.B.E., P.Eng.
March	"Welding in Marine Engineering"	J. A. Dorrat, A.H.-W.C.
April	* "The Development of Air Conditioning in Ships"	S. J. Jones, B.Sc. (Member) and J. K. W. MacVicar (Associate)
May	"Heavy Oil Burning"	J. S. Clarke, O.B.E., Ph.D. (Member) and G. J. Hudson, M.A.
June	* "Fishing Vessel Development"	A. Hunter, M.I.N.A., and G. C. Eddie, B.Sc. (Member)
July	"Advances in Steam Turbines for Marine Propulsion"	A. D. Somes, B.S.
August	"Boiler Refractories: Operating Temperatures and Recent Developments in Construction"	W. McClimont, B.Sc. (Member), H. M. Richardson, B.Sc., and Bryan Taylor, B.Sc.(Eng.) (Member)
September	* "The Surface Preparation of Ship Plate (Outer Bottom Plating) for Painting"	J. C. Hudson, D.Sc., J. F. Stanners, B.Sc., and A. G. B. Miller

‡ Read before a joint meeting of the Institute and the Society of Naval Architects and Marine Engineers, New York.

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October	§ 1. "The Holmes-Werks-poor Engine: Building, Testing and in Service"    2. "Marine Proteus Engines for the Brave Class Patrol Boats" 3. Presidential Address	Bryan Taylor, B.Sc. (Eng.) (Member)  B. G. Markham, M.A.  Sir William Wallace, C.B.E., LL.D., F.R.S.E.
November	¶ "The Care and Maintenance of Watertube Boilers"	W. R. Harvey (Vice-Chairman of Council)
December	¶ "Research and Failures of Metals in Service"	C. E. Phillips, Wh.Sc., A.C.G.I., D.I.C., M.I.Mech.E., and A. C. Low, B.A.

PAPERS PUBLISHED IN THE SUPPLEMENT TO THE TRANSACTIONS		
Issue	Title	Author
May	**"Some Propulsion Problems of Tugs"	G. S. Selman, M.I.N.A. (Member)
July	†† "Some Considerations of Nuclear Installations in Ships"	R. Y. Bell
November	‡‡ "The Problem of Brittle Fracture of Mild Steel in Welded Ship Construction"	S. K. Basu, B.E. (Associate Member)

JOURNAL OF THE JOINT PANEL ON NUCLEAR MARINE PROPULSION  
Two issues of the Journal have been published and contained the following papers:—

- "Some Recent Progress in Nuclear Engineering" by Sir John Cockcroft, O.M., K.C.B., C.B.E., F.R.S.
- "Consideration of Safety in Nuclear Merchant Ships" by Richard P. Godwin, B.S., and K. William Hess, B.S.
- "Some Metallurgical Features of Nuclear Reactors" by H. M. Finnieston, B.Sc., Ph.D., A.R.T.C., F.I.M.
- "Some Engineering Developments in the Nuclear Power Field" by A. T. Bowden, B.Sc., Ph.D.
- "Characteristics and Performance of Nuclear Powered Submarine Cargo Vessels" by J. A. Teasdale, B.Sc.

### STUDENT ACTIVITIES

- The following events have taken place during the year:—
- 19th January—Technical film programme.
  - 2nd February—Panel Meeting to discuss "Watchkeeping, Maintenance, Repair and Survey of Ships".
  - 28th February—Visit to m.v. *City of Port Elizabeth*.
  - 2nd March—Technical film programme.
  - 6th March—Social evening—film programme.
  - 19th March—Lloyd's Register Lecture for Students: "Gas Turbines" by Cdr. A. A. C. Gentry, R.N. (Member), followed by a visit to the Royal Naval Dockyard at Chatham on the next day.
  - 2nd May—Visit to r.m.s. *Loch Avon* and *Loch Loyal*.
  - 5th October—Lecture on "Watchkeeping and Maintenance of a Motor Ship" by S. Speed (Member).
  - 17th October—Visit to r.m.s. *Ruahine*.
  - 31st October—Visit to r.m.s. *Essequibo*.
  - 2nd November—Panel Meeting to discuss day-to-day management of a ship and its machinery.
  - 14th November—Visit to s.s. *Corinthic*.
  - 7th December—Lecture on "The Closed Feed System" by T. O. Leith, A.R.C.S.T., A.M.I.Mech.E. (Graduate).

§ Read before a meeting of the Kingston upon Hull and East Midlands Section.

|| Read before a meeting of the Southern Joint Branch, R.I.N.A. and I.Mar.E.

¶ Read before a meeting of the Scottish Section.

\*\* Read before a meeting of the West of England Section.

†† Read before a joint meeting of the Scottish Section of the Institute and the Institution of Engineers and Shipbuilders in Scotland.

‡‡ Read before a joint meeting of the Bombay Section of the Institute and the Institute of Marine Technologists.

### PAPERS AND ARTICLES PUBLISHED IN THE STUDENT TRANSACTIONS

Issue	Title
January	"The Way of an Inventor" (reprinted from the <i>Howden Quarterly</i> , No. 34, Spring 1958). "The Problems of Fuel Injection Development" (reproduced by the courtesy of C.A.V. Ltd.).
February	"Control of Engine Torque Curves" (published by courtesy of C.A.V. Ltd.). "Notes for the Junior Engineer on Marine Machinery and Its Operation" by R. M. Dunshea (Member).
March	"A Summary of the Latest Developments in Propulsion Machinery" by A. J. S. Bennett, M.B.E., A.M.I.Mech.E. (Member) (reprinted from <i>Reed's Marine Equipment News</i> , Vol. 2.). "The Versatility of the Modern Tanker" by J. H. Clarke, M.N.E.C.Inst. (Member).
April	Propeller Design and Manufacture: Part I—"Propeller Design" by L. G. Gibbons. Part II—"The Manufacture of Propellers" by J. R. Robertson (Associate).
May	"Welding Repair to the Main Engine Crankshaft of a Cargo Vessel" (reprinted from "The Welder", Vol. XXVII). "Explosion from the Starboard Boiler of s.s. <i>Alhama</i> (taken from the Report of the Preliminary Inquiry by the Ministry of Transport). "How much is a Ton?" (reprinted from "The Compass").
June	"Nuclear Power for the Propulsion of Commercial Vessels" by M. R. Hankey (Student).
July	Discussion on "Watchkeeping, Maintenance, Repair, and Survey of Ships".
August	"Free Piston Engines" by P. Watson, B.A. (Member), Lloyd's Register Lecture for Students, 1958.
September	Discussion on "Free Piston Engines" by P. Watson, B.A. (Member). "Progress in Engineering—Materials and Testing" (reprinted from "Vulcan", Vol. XIV).
October	"The Gas Turbine: Application to, and Development for, Marine Uses" by Cdr. A. A. C. Gentry, R.N. (Member). Lloyd's Register Lecture for Students, 1959.
November	Presidential Address by Sir William Wallace, C.B.E., LL.D., F.R.S.E. "Research and Failures of Metals in Service" by C. E. Phillips, Wh.Sc., A.C.G.I., D.I.C., M.I.Mech.E., and A. C. Low, B.A.
December	"The Care and Maintenance of Watertube Boilers" (Part I) by W. R. Harvey (Vice-Chairman of Council).

### JUNIOR LECTURES

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

- 11th February at Kingston-on-Thames Technical College. "The Construction of the Ship" by G. Ridley Watson, B.Sc. (Member).
- 10th March at Borough Polytechnic. "Automatic Boiler Control" by Ll. Young, M.I.Mech.E. (Member).
- 17th March at Woolwich Polytechnic. "Petroleum Refining" by E. H. Wild.
- 9th July at Poplar Technical College. "Diesel Hydraulic Propulsion" by F. J. Mayor (Member).
- 8th October at Poplar Technical College. "The Layout and Operation of Steam Turbine Machinery" by D. M. V. Parkinson, M.V.O. (Member).
- 2nd November at Falmouth Technical College. "Construction of the Ship" by G. Ridley Watson, B.Sc. (Member).
- 3rd November at Willesden Technical College. "Modern Marine Watertube Boilers" by Cdr. A. P. Monk, D.S.C., R.N.(ret.) (Member).

## Annual Report of the Council for 1959

10th November at East Ham Technical College. "Atomic Energy" by K. Maddocks, B.Sc. (Member).

### EDUCATION GROUP

The Annual General Meeting of the Group was held on Tuesday, 17th March 1959, and was followed by a discussion on the subject, "A Review of National Certificate Schemes", which was published in the December issue of the Transactions.

### INSTITUTE AWARDS

*The Denny Gold Medal* has been awarded to C. C. Pounder (Vice-President) for his paper entitled "Human Problems in Marine Engineering" read before the Joint Meeting of the Institute and the Society of Naval Architects and Marine Engineers on 26th November 1959.

*The Institute Silver Medal* has been awarded to H. C. Andersen, B.S., and J. J. Zrodowski, B.S., for their paper entitled "Co-ordinated Alignment of Line Shaft, Propulsion Gear and Turbines" also read before the Institute at the Joint Meeting on 26th November 1959.

*The Akroyd Stuart Award for 1957/59*, value £50, has been awarded to J. J. McMullen, B.S., M.S., Dr. Ing. (Member) for his paper entitled "The Trials and Maiden Voyage of the Gas Turbine Ship *John Sergeant*", read before the Institute on 12th December 1957.

*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 1959 has been awarded, on the recommendations of the Chief Examiner of Engineers, to David Duff (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 A. J. Beedham.

### 1959 Essay Competitions.

The following awards have been made from the Denny, Stephen and Inverforth Prize Fund:—

The sum of £9 to J. B. Craig (Associate Member) for his essay entitled "A History of the Marine Boiler".

The sum of £3 to C. B. Jagger (Associate Member) for his essay entitled "Improving Reciprocating Engines".

The following award has been made from the Jacobs, Murdoch and Robertson Award Fund:—

The sum of £10 to J. R. Michaelis (Student) for his essay entitled "Management and the Marine Engineer".

*The Frank Roberts Award*, which consists of books or instruments to the value of £7 10s., is 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. On this occasion R. Hesketh (Student) and J. O. Brinkley (Student) had equal marks and the Council has made a second award available, also value £7 10s., in order that they might both receive a similar award.

### 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. J. Taylor (first year) and P. C. Smith (second year), Birkenhead Technical College.

M. J. Holland (first year) and J. R. Hollerton (second year), Bolton Technical College.

M. Winn (second year), Constantine Technical College, Middlesbrough.

J. N. Barkham (second year), Gateshead Technical College.  
R. F. Thomas (first year) and J. A. Tickner (second year), Hendon Technical College.

P. E. Lancaster (first year) and W. B. Parsons (second year), Kingston-on-Thames Technical College.

D. A. Fox (first year) and C. H. Petrie (second year), Kingston upon Hull College of Technology.

E. Green (first year), Newport and Monmouthshire Technical College.

A. J. A. Spears (first year) and S. H. MacMillan (second year), Plymouth and Devonport Technical College.

R. G. Low (first year) and G. V. Miles (second year), Poplar Technical College.

R. B. Thorburn (first year) and S. B. Hughes (second year), Riversdale Technical College, Liverpool.

P. J. Dailly (first year) and D. J. Hayes (second year), South East London Technical College.

M. I. Campbell (first year) and D. Pickering (second year), South Shields Marine and Technical College.

B. Edgar (first year) and C. Legge (second year), Stow College of Engineering, Glasgow.

D. R. Owen (first year) and R. G. Pearce (second year), Swansea Technical College.

L. Ladeji (first year) and A. Walters (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:—

D. Waugh, Arbroath Further Education Centre.

A. Lindley, Belfast College of Technology.

C. P. Chapman, Birkenhead Technical College.

K. L. White, Bootle Municipal Technical College.

J. Giles, Central College of Further Education, Barrow-in-Furness.

D. T. Foster, City of Portsmouth College of Technology.

R. A. Towler, College of Technology, Bristol.

C. K. Neal, College of Technology, Kingston upon Hull.

Beryl Ann Stainsby, Constantine Technical College, Middlesbrough.

A. K. Rowe, Cornwall Technical College.

A. A. Jamieson, Dundee Technical College.

P. M. Farrell, Falmouth Technical College.

S. R. Turnbull, Gateshead Technical College.

J. McKeegan, Greenock Technical Further Education Centre.

J. D. Rudd, Liverpool College of Technology.

D. J. S. Eager, Plymouth and Devonport Technical College.

J. Pardington, The Polytechnic, Regent Street, London, W.1.

B. R. Tolliday, Poplar Technical College.

J. C. Law, Riversdale Technical College, Liverpool.

W. Thain, Robert Gordon's Technical College, Aberdeen.

R. B. Large, Rutherford College of Technology.

G. R. Pemberton, Southampton Technical College.

P. E. Anning, South East London Technical College.

W. H. Griffiths, South Shields Marine and Technical College.

P. F. Lee, South West Essex Technical College and School of Art.

W. L. Chatmers, Stow College of Engineering.

D. Taylor, Sunderland Technical College.

B. A. Wasley, Swansea Technical College.

N. Redhead, West Ham College of Technology.

I. P. Williams, West Hartlepool Technical College.

J. E. Appleton, Woolwich Polytechnic.

## Annual Report of the Council for 1959

### 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 G. B. Sturges.

### INSTITUTE EXAMINATIONS

*Associate Membership Examinations.* Six candidates entered for the Part I Examination and two passed. Three candidates entered for the Part II Examination and one passed. Two candidates entered for the Part III Examination and one passed.

*Common Preliminary Examination* Eighteen candidates entered for this examination and ten passed.

*National Certificates and Diplomas in Mechanical Engineering.* The following have been issued and signed by the President during 1959: Ordinary National Certificates, 845; Endorsements, 60; Higher National Certificates, 270; Endorsements, 21; Ordinary National Diplomas—alternative entry for seagoing engineers, 252; Higher National Diplomas, 44.

### INSTITUTE PUBLICATIONS

There has been a continued heavy demand for the Institute's publications, namely, "The Running and Maintenance of Marine Machinery", "Electricity Applied to Marine Engineering" and "Naval Architecture and Ship Construction". It became necessary during the year to have the latter publication reprinted.

### INSTITUTE REPRESENTATION ON OUTSIDE ORGANIZATIONS

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

#### *British Standards Institution*

ELE/32/6—Radio Interference Suppression in Marine Installations—T. G. Boys.

MEE/93—Lubricating Nipples used for Grease Lubrication in Machinery and Vehicles—G. F. Gatward.

#### *East Ham Technical College: Engineering Advisory Committee*

—R. S. Brett.

#### *Standing Committee which advises the Department of Scientific and Industrial Research on U.K. policy in relation to the International Institute of Refrigeration*

—K. C. Hales.

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

#### *British Standards Institution*

GLC/4 Glass Level Gauges for Pressure Vessels—E. F. Barton *vice* W. E. Hoes.

ISE/- Iron and Steel Industry Standards—W. Rennie *vice* J. Turnbull, O.B.E.

ISE/31 Wrought Steels; ISE/31/1 Gear Steels; ISE/31/2 Alloy Steels—W. Rennie *vice* H. N. Pemberton.

MEE/- Mechanical Engineering Industry Standards—S. Archer, M.Sc., *vice* H. N. Pemberton.

### HONOURS

The Council congratulates the following members upon whom Her Majesty Queen Elizabeth II conferred honours during the year:—

Vice-Admiral N. E. Dalton, C.B., O.B.E. (Vice-President for the Royal Navy)—Knight Commander of the Bath.

J. A. Milne, C.B.E. (Member)—Knight Bachelor.  
G. R. Chappel, Wh.Ex. (Member)—Commander of the Order of the British Empire.  
L. T. Morton, B.Sc. (Member)—Commander of the Order of the British Empire.  
J. M. Storey (Member)—Commander of the Order of the British Empire.  
Cdr. W. H. Arnold, R.N.(ret.) (Member)—Officer of the Order of the British Empire.  
J. Graham (Member)—Officer of the Order of the British Empire.  
D. C. Leathley (Member)—Officer of the Order of the British Empire.  
G. A. Plummer (Member)—Officer of the Order of the British Empire.  
G. W. Hill (Member)—Member of the Order of the British Empire.  
F. E. Rees (Member)—Member of the Order of the British Empire.  
J. S. H. Stevenson (Member)—Member of the Order of the British Empire.

### DEATHS

Amongst the losses by death recorded throughout the year were those of the following who will be remembered particularly for their services for the Institute:—

The Right Honourable the Viscount Weir of Eastwood, P.C., G.C.B., D.L., LL.D. (Past President and Member).

A. Burrows (former Member of Council).

H. P. Southwell (former Member of Council).

### REMEMBRANCE DAY

The Vice-Chairman of Council, Mr. W. R. Harvey, laid a wreath on the Mercantile Marine War Memorial, Tower Hill, London, E.C.3, on Sunday, 8th November 1959.

### ANNUAL NATIONAL SERVICE FOR SEAFARERS

The Chairman of Council, Mr. R. Cook, M.Sc., represented the Institute at the Annual National Service for Seafarers held in St. Paul's Cathedral on 21st October 1959.

### PREMISES

Additional space in the basement has been let during the year to the Orion Insurance Co. Ltd.

### SOCIAL EVENTS

The following social functions have been held:—

Annual Dinner, at Grosvenor House, London, W.1, on 13th March.

Summer Golf Meeting, at the Berkshire Golf Club on 2nd June.

Autumn Golf Meeting, at Stoke Poges Golf Club on 1st October.

Annual Conversazione, at Grosvenor House, London, W.1, on 4th December and 18th December.

It was necessary to hold the Conversazione in two parts this year. The decision has been taken that this shall be repeated in 1960.

R. COOK (*Chairman of Council*)  
J. STUART ROBINSON (*Secretary*)

## Annual Reports of the Sections

### HOME

#### KINGSTON UPON HULL

Membership of the Kingston upon Hull Section at 31st December was as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	70	66
Associate Members ...	56	63
Associates ... ..	25	18
Companions ... ..	—	1
Graduates ... ..	14	24
Students ... ..	13	23
Probationer Students ...	24	33
	202	228

During 1959 six lectures were given:

- 15th January. "The Holmes Werkspoor Engine: Building, Testing, and in Service" by Bryan Taylor, B.Sc.(Eng.) (Member).
- \*19th February. "A Junior Engineer's First Trip to Sea" by H. C. Gibson (Associate Member).
- 12th March. "Corrosion in Scotch Marine Boilers" by G. Butler, M.A., Ph.D.
- 19th March. "Oil Operated Gears for Ship Propulsion" by I. Wans (Member), at Leeds.
- 15th October. A Marine Engineering Forum.
- 16th December. Joint Meeting with the Hull Association of Engineers: "Steam and Steam Generation" by J. Anderson.

The standard of lectures throughout the year was high, although the attendance was disappointing, the average being forty-five, made up of twenty-five members and twenty non-members. It was very satisfactory, however, that there was a good attendance for the lecture in Leeds for the third year in succession. It is hoped that the joint meeting with the Hull Association of Engineers will become an annual event. The Section broke new ground in October when a Marine Engineering Forum was held; this proved to be a very successful occasion and no doubt more meetings of the kind will be held.

The ninth Annual Dinner was as usual an all-round success. It was held on 6th November and was attended by the President of the Institute, Sir William Wallace, C.B.E., LL.D., who made an excellent speech and contributed a great deal to a very enjoyable evening.

H. F. Hesketh (*Chairman*)  
E. Barnett (*Honorary Secretary*)

#### *Annual General Meeting*

The ninth Annual General Meeting was held at the Royal Station Hotel, Kingston upon Hull, at 7.30 p.m. on Thursday, 21st January 1960, under the chairmanship of Mr. F. C. M. Heath (Vice-President).

The Chairman said that it had been another successful year for the Section in both their technical and social activities. The number of members continued to grow but he urged that the high existing standard required at entry should not be sacrificed in any way. He thanked the six retiring Committee members, Messrs. H. F. Hesketh (Chairman), J. G. Charlton,

\* Junior Lecture.

P. F. Dilnot, F. T. Green, F. T. Morris and Bryan Taylor, B.Sc.(Eng.), for their service and guidance during the year and welcomed the new members, hoping that they would find their service enjoyable and rewarding.

Mr. P. F. Dilnot then proposed, and Mr. J. G. Charlton seconded, a vote of thanks to the retiring Honorary Secretary, Mr. E. Barnett, for his excellent work during his term of office. Mr. D. A. Taylor was appointed to succeed him and Mr. C. J. Potter agreed to continue as Honorary Treasurer.

The meeting ended at 8.45 p.m.

A Committee meeting was then held, when Mr. Bryan Taylor was unanimously elected Chairman of the Section and Mr. G. W. Hill Vice-Chairman for the coming year. The newly constituted Committee is therefore as follows:

Vice-President: F. C. M. Heath  
Chairman: Bryan Taylor, B.Sc.(Eng.)  
Vice-Chairman: G. W. Hill, M.B.E.  
Committee: J. E. Bayram  
J. G. Charlton  
W. A. Corp  
P. F. Dilnot (co-opted)  
A. W. B. Edwards  
P. H. V. Evers  
H. F. Hesketh (co-opted)  
G. H. M. Hutchinson  
J. Jackson  
A. W. Kemp  
R. Rawlings  
R. R. Triggs  
J. Whitaker, B.Sc.  
Honorary Secretary: D. A. Taylor  
Honorary Treasurer: C. J. Potter

#### MERSEYSIDE AND NORTH WESTERN

It is pleasant to report that local interest in the Institute has been maintained during 1959 and that membership figures for the Section show a slight increase as compared with last year.

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

- 5th January. An Open Meeting at which a Panel of Practising Marine Engineers answered questions from the floor on Marine Engineering Problems.
- 2nd February. Annual General Meeting: followed by "Heavy Oil Burning" by J. S. Clarke, O.B.E., B.Sc., Ph.D. (Member), and G. J. Hudson, M.A.
- 2nd March. "Welding in Marine Engineering" by J. A. Dorrat, A.H.-W.C.
- 5th October. \*"Marine A.C. Distribution Equipment with Particular Reference to H.R.C. Fuses" by M. J. Bolton.
- 2nd November. "Nuclear Propulsion of Ships" by R. Anscumb, O.B.E. (Member).

Also, on 4th February 1959, in conjunction with "Ladsirlac", the paper entitled "Nuclear Propulsion of Ships"

\* To be published in the TRANSACTIONS.

## Annual Report of the Council for 1959

was presented in the International Library, William Brown Street, Liverpool, by R. P. Kinsey, A.I.E.E.

At the invitation of the Liverpool Engineering Society, members attended the Thomas Lowe Gray Lecture on 3rd February, when D. L. Pratt read his paper on "Engineering Problems Met with in Sub-zero Temperatures".

Six Junior Lectures were provided for colleges within the areas, as follows:

- 4th February (Riversdale). "Launching of Ships" by R. S. Hogg (Member).  
 24th February (Bolton). "Steam Reciprocating Engines" by G. Yellowley (Member).  
 17th November (Barrow). "Marine Electrical Engineering" by D. Gray, B.Sc. (Member).  
 †17th November (Bolton). "Watchkeeping in a Motor Ship" by S. Speed (Member).  
 25th November (Birkenhead). "Modern Marine Watertube Boilers" by Lieut. Cdr. A. P. Monk, D.S.C., R.N.(ret.) (Member).  
 2nd December (Riversdale). "Watchkeeping in a Motor Ship" by S. Speed (Member).

Attendances at senior meetings have continued at an encouraging level, averaging sixty—seventy at each lecture.

While attendances at the Junior Lectures in the early part of the year were disappointing, every effort is being made to encourage the interest of students in the Institute, and there is hope of better support in future.

On 24th March Committee Members were invited by Shell-Mex and B.P. Ltd. to visit the Research Centre at Thornton, and this proved to be a most instructive visit.

At the invitation of Shell Tankers Ltd., a party of Committee Members visited the newly engined gas turbine ship *Auris* in Cammell Laird's shipyard on Wednesday, 19th August 1959, and they were indebted to the owners and to Cammell Laird and Co. Ltd. for their co-operation in making the visit so interesting.

During the afternoon of 24th February, there was a small ceremony in the rooms of Lloyd's Register of Shipping, Reliance House, Liverpool, when the President, Mr. E. L. Denny, presented a Parchment to Mr. S. D. Casebourne (Member 2060) in recognition of his fifty years' membership of the Institute. The ceremony was witnessed by Committee Members, members of Lloyd's Register of Shipping, and Mr. Casebourne's son.

The annual Dinner Dance was held in the main lounge of the Adelphi Hotel, Liverpool, on Friday, 6th November, when they were honoured by the presence of Mr. B. P. Ingamells, C.B.E., and Mrs. Ingamells. Some 320 guests attended.

There was general satisfaction that Mr. G. Keenan, a staunch supporter of the Section, had been elected an Associate Member of Council.

J. L. Snowdon (*Chairman*)  
 T. Kameen (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting of the Section was held on Monday, 1st February 1960 in the rooms of the Liverpool Engineering Society, The Temple, 24 Dale Street, Liverpool, 2, at 6.0 p.m.

The annual report and financial statements were approved. The retiring Committee Members, Messrs. W. H. Falconer, G. Keenan and J. A. Smith, D.S.C., B.Sc., were replaced by Messrs. W. L. Coventry, C.G.I.A., and W. M. Maguire, and Captain W. S. C. Jenks, O.B.E., R.N.(ret.) The new Committee therefore consists of the following *ex officio* and duly elected members:

Vice-President, Liverpool: T. McLaren, B.Sc.  
 Local Vice-Presidents:  
     Barrow: R. McVie, B.Sc.  
     Manchester: J. A. Clay  
 Chairman: D. S. Tod

Vice-Chairman: L. Deakin

Committee: A. D. Bridgwater  
 R. F. Capey  
 W. L. Coventry, C.G.I.A.  
 J. Farnie  
 Captain W. S. C. Jenks, O.B.E.,  
     R.N.(ret.)  
 G. Keenan (Associate Member of  
     Council)  
 W. M. Maguire  
 Co-opted: J. L. Snowdon (Chairman, 1959/60)  
 T. C. Shaw (Birkenhead Technical  
     College)  
 G. Kenworthy-Neale (Riversdale Techni-  
     cal College)  
 Honorary Secretary: T. Kameen  
 Honorary Treasurer: J. E. Shields

### NORTH EAST COAST

The number of members registered with the North East Coast Section has increased from 727 to 776 during 1959 and it is hoped that members will endeavour to interest all marine engineers who are suitably qualified in joining the Institute. The numbers are made up as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	282	74
Associate Members ... ..	259	36
Associates ... ..	55	17
Companions ... ..	—	3
Graduates ... ..	75	11
Students ... ..	43	6
Probationer Students ... ..	62	26
	776	173

The following meetings were held:

- 5th February (Newcastle). "The Centrifugal Purification of Oils" by M. E. O'K. Trowbridge, B.Sc., A.C.G.I.  
 19th February (Newcastle). "Heavy Oil Burning" by J. S. Clarke, O.B.E., Ph.D. (Member), and G. J. Hudson, M.A.  
 \* 26th February (Newcastle). "Auxiliaries" by P. Storer (Member).  
 19th March (Newcastle). "Some Developments in the Design of Self-priming Pumps for Marine Service" by Cdr. R. Warren, R.N.(ret.), V.P.N.L.  
 22nd October (Newcastle). "Corrosive Wear in Cylinder Liners of the Slow Speed Marine Diesel Engine" by Miss R. van der Horst.  
 \* 15th November (Newcastle). "Refrigerating Machinery and Its Application in Ships" by B. A. Phillimore.  
 \* 19th November (South Shields). "Marine Diesel Engines" by D. B. Stables (Associate Member).  
 \* 25th November (Sunderland). "Auxiliaries" by P. Scorer (Member).  
 3rd December (Newcastle). "Some Human Problems in Marine Engineering" by C. C. Pounder (Vice-President).

The average attendance at these meetings was sixty-seven. Compared with last year, the average attendance at the senior meetings fell by some 30 per cent and it is hoped that this trend will be reversed during 1960.

The meeting addressed by Miss van der Horst was particularly successful, and she captured the attention of her audience by the masterly way in which she dealt with the subject, as well as by her own personality.

The Annual Dinner Dance, held on 6th February at the Royal Station Hotel, Newcastle upon Tyne, was as strongly supported and as greatly enjoyed as ever.

\* These lectures were of particular interest to Junior Members.

† To be published in the STUDENT TRANSACTIONS.



## Annual Report of the Council for 1959

On 11th April a visit was made to the Chapel Cross Power Station of the United Kingdom Atomic Energy Authority. Unfortunately the party had to be limited to thirty-three, but those who went were very pleased with the visit.

The Committee wishes to express its thanks to the Chairman, Mr. P. Jackson, M.Sc., to the lecturers, and to others who have contributed to the programme during the year.

P. Jackson (*Chairman*)  
A. W. Jones (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting was held on 18th February 1960 at Stephenson Building, King's College, Newcastle upon Tyne.

The Annual Report and Accounts were approved.

Seven nominations for membership of the Committee had been received, but, as Mr. L. S. Candlish withdrew his nomination, the remaining six were automatically elected, namely: Messrs. A. W. Bell, B.Sc., A. J. S. Bennett, M.B.E., J. W. Corney, T. D. Morton, J. Orange, J.P., and G. H. Turner. The retiring members of Committee were Professor G. H. Chambers, D.S.C., and Messrs. M. Adams, W. Embleton, W. C. Grant, J. Willcock, and G. Yellowley.

The newly constituted committee is therefore as follows:  
Vice-President, Newcastle upon Tyne: J. Bulman  
Local Vice-Presidents:

Hartlepool: S. H. Dunlop

Middlesbrough: E. T. Middleditch

Member of London Council: W. R. Jones

Chairman: *To be appointed*

Committee: R. Atkinson, D.S.C., R.D., B.Sc.

A. W. Bell, B.Sc.

A. J. S. Bennett, M.B.E.

J. W. Corney

J. G. Gunn, B.Sc.

P. Henry

A. B. Ives

P. Jackson, M.Sc.

E. Lea

T. D. Morton

D. G. Ogilvie, B.Sc.(Eng.)

J. Orange, J.P.

Cdr. J. R. Patterson, O.B.E., D.S.C.,  
R.N.(ret.)

R. Shaw

G. H. Turner

Honorary Secretary: A. W. Jones, B.Sc.

Honorary Treasurer: E. C. Cowper

### NORTHERN IRELAND PANEL

A very successful meeting of the Northern Ireland Panel was held on 27th November when a lecture on "Reactor Design, Particularly of Types Suitable for Marine Propulsion" was given by E. Long, Deputy Chief Engineer of the Civil Reactor Design Office, Risley.

A Lecture by J. E. Garside, M.Sc.Tech., Ph.D., on "Metallurgy in Marine Engineering" that was to have been given on 17th February 1959 had to be postponed until 23rd February 1960 due to the illness of the lecturer.

### SCOTTISH

The total membership of the Scottish Section continues to increase and is now 1,156, consisting of 719 registered members and 437 non-registered members.

Mr. Henry Robb succeeded Sir William Wallace, C.B.E., LL.D., as Vice-President for Leith on Sir William's election as President of the Institute. Mr. W. B. Johnstone, O.B.E., was appointed Vice-President for Glasgow in succession to Mr. James Gilchrist.

Two joint meetings were held with the Aberdeen Mechanical Society in Aberdeen, and a paper was read in Edinburgh, followed by an informal dinner.

The full list of papers or lectures presented during 1959 is as follows:

\*14th January (Glasgow). "Research and Failures of Metals in Service" by C. E. Phillips, Wh.Sc., A.C.G.I., and A. C. Low, B.A.

16th January (Aberdeen). Joint Meeting of the Scottish Section and the Aberdeen Mechanical Society: "Research and Failures of Metals in Service" by C. E. Phillips, Wh.Sc., A.C.G.I., and A. C. Low, B.A.

†11th February (Glasgow). "The Care and Maintenance of High Pressure Watertube Boilers and Ancillary Equipment" by W. R. Harvey (Member of Council).

18th March (Edinburgh). "The Development of Some Sea-going Hydraulic Machinery" by A. E. G. Clement, B.Sc., and R. C. Russell, A.H.-W.C.

14th October (Glasgow). "The Survey of Marine Machinery" by G. J. Thomas.

‡28th October (Glasgow). "The Engineer Surveyor" by A. T. Willens (Member).

6th November (Aberdeen). Joint Meeting with the Aberdeen Mechanical Society: "Fishing Vessel Development" by Ambrose Hunter and G. C. Eddie, B.Sc. (Member).

11th November (Glasgow). "Notes on Development, Design and Operation of Harbour and Coastal Tugs" by R. Beattie (Member).

1st December (Glasgow). "Co-ordinated Alignment of Line Shaft Propulsion Gear and Turbines" by J. J. Zrodowski and H. C. Andersen.

9th December (Glasgow). "Recent Development in Free Piston Gasifiers" by M. G. Macgregor, B.A.

The average attendance at senior meetings in Glasgow was ninety-nine. The average attendance at the Aberdeen and Edinburgh meetings was seventy-two. The attendance at the Junior Lecture was twenty.

The fifth Annual Dinner was held on 20th February, and the third Dinner and Dance on 12th December, both functions being well supported.

G. J. Thomas (*Chairman*)

A. W. Clark (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting was held on 10th February 1960 at the Institution of Engineers and Shipbuilders in Scotland, 39 Elmbank Crescent, Glasgow, at 7.30 p.m.

Mr. G. J. Thomas (Chairman of the Section) presided, and after opening the meeting obtained formal approval of the Annual Report of the Committee and the Honorary Treasurer's Report.

A vote of thanks to the Committee for their past year's work, and in particular to the two retiring members, Mr. G. J. Thomas and Mr. D. W. Low, O.B.E., was proposed by Mr. D. S. Macfarlane. The Chairman announced that the two new Committee members were Mr. R. Beattie and Mr. R. Yates.

Mr. J. B. Stewart and Mr. W. Paterson were re-appointed as scrutineers.

The newly constituted Committee is therefore as follows:

Vice-Presidents:

Glasgow: W. B. Johnstone, O.B.E.

Leith: Henry Robb

Local Vice-Presidents:

Aberdeen: A. C. West, B.Sc., Ph.D.

Dundee: W. O. Gardiner

Greenock: J. P. M. Ferrier

Chairman: *To be appointed*

Vice-Chairman: T. W. D. Abell

\* Published in the December 1959 issue of the TRANSACTIONS, page 357; and in the November 1959 issue of the STUDENT TRANSACTIONS.

† Published in the November 1959 issue of the TRANSACTIONS, page 333.

‡ Junior Lecture.

## Annual Report of the Council for 1959

Committee: R. Beattie  
 J. W. Bull  
 A. W. Davis, D.Sc.  
 R. M. Dunshea  
 D. Lyon  
 A. McColl  
 M. G. Macgregor, B.A.  
 D. D. McGuffie  
 T. M. Murdoch  
 J. Rorke, B.Sc., Ph.D.  
 F. R. Topping, B.Sc.(Eng.)  
 A. T. Willens  
 R. Yates

Honorary Secretary: A. W. Clark  
 Honorary Assistant Secretary: J. D. B. Mundie  
 Honorary Treasurer: R. Marshall

### SOUTH WALES

The strength of the South Wales Section is now as follows:

	<i>Registered</i>	<i>Non-registered</i>
Members ... ..	119	33
Associate Members ...	57	26
Companions ... ..	2	—
Associates ... ..	21	3
Graduates ... ..	14	5
Students ... ..	24	13
Probationer Students ...	36	36
	273	116

The total membership of 389 is an increase of thirty-seven in the last year.

During the year the Section suffered the loss by death of two of their valued members: Mr. J. H. Evans, who had been their first Chairman; and Mr. George Thomas, who was Honorary Treasurer from 1954 when the Section was formed until his death.

Mr. G. K. Beard succeeded as Honorary Treasurer in November.

During 1959 the following meetings were held:

20th February (Cardiff). "Nuclear Steam Propulsion for Merchant Ships" by W. R. Wootton.  
 19th October (Cardiff). "Cavitation" by E. E. Williams, B.Sc.  
 18th November (Cardiff). "Heavy Oil Burning" by J. S. Clarke, O.B.E., Ph.D. (Member) and G. J. Hudson, M.A. As Dr. Clarke was unable to be present, Mr. C. K. J. Price presented this paper.

The senior meetings were held at the South Wales Institute of Engineers, Park Place, Cardiff.

Mr. A. H. Stobbs (Honorary Secretary) was awarded the Denny, Stephen and Inverforth Essay prize for a paper entitled "Nuclear Energy Applied to Ship Propulsion".

Two Probationer Students qualified for the Annual Lloyd's Register Shipping Award; they were Edward Green from Newport Technical College and K. T. Maunders from Swansea Technical College.

The Section continues to support the arrangements by which a joint Annual Calendar is produced by the professional institutions in the district. Members are invited to attend any lecture advertised in the Calendar and as a result of the co-operation exercised by the various societies the duplication of meetings on any particular date can be avoided.

The Annual Dinner was held at the Royal Hotel, Cardiff, on 6th November.

The Annual Golf Meeting was held at the Glamorganshire Golf Club, Penarth, on 12th June, once again in fine weather. The "David Skae" Cup was won by Mr. W. B. James.

J. E. Church (*Chairman*)  
 A. H. Stobbs (*Honorary Secretary*)

### Annual General Meeting

The Eighth Annual General Meeting of the Section was held on 6th January 1960 at the South Wales Institute of

Engineers, Park Place, Cardiff. Mr. J. E. Church (Chairman of the Section) presided and twenty-seven members attended.

In presenting the Annual Report of the Committee, the Chairman commented upon the outstanding success of the Annual Dinner, and thanked the Dinner Sub-committee and Mr. T. C. Bishop in particular for the arrangements they had made.

He expressed some concern about the dwindling attendances at technical meetings; whereas a few years ago they were able to fill the lecture theatre with eighty or more people there were now seldom more than thirty or forty people present, which was disconcerting, to say the least, to a lecturer who had gone to considerable trouble to prepare and present his paper, often travelling long distances to do so. Mr. Church thought they might have to consider reducing the number of lectures given in each session and by making a special event of them to attract a larger audience.

He thanked especially the Honorary Secretary and Honorary Treasurer for their invaluable work for the Section, and also the Members of the Committee for their co-operation and support during his year of office.

Messrs. W. E. Brennan, M. R. L. Hayes, H. S. W. Jones, W. J. Quinnell, P. D. Thomas and P. L. D. Thomas retired from the Committee and were replaced by Messrs. R. F. J. Black, A. J. Cant, F. R. Hartley, J. L. Hindmarsh, J. Osborne, R. H. Rees, O.B.E., and T. G. Whitelaw, B.Sc.

At a Committee meeting following the Annual General Meeting, Mr. F. F. Richardson was elected Chairman and Mr. F. R. Hartley Vice-Chairman, and the Committee for 1960 is therefore constituted as follows:

Vice-Presidents:

Cardiff: David Skae  
 Swansea: G. Thompson, M.Eng.

Chairman: F. F. Richardson  
 Vice-Chairman: F. R. Hartley  
 Committee: T. Bishop

R. F. J. Black  
 A. J. Cant  
 J. E. Church  
 J. L. Hindmarsh  
 J. Osborne  
 R. H. Rees, O.B.E.  
 G. S. Taylor  
 R. G. Turnbull  
 T. G. Whitelaw, B.Sc.  
 H. G. Wickett, M.B.E.  
 J. Wormald, B.Sc.

Honorary Secretary: A. H. Stobbs  
 Honorary Treasurer: G. K. Beard, B.Sc.(Eng.)

The scrutineers were Mr. G. Taylor and Mr. R. G. Turnbull.

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

There are now 498 registered members of the Branch, almost equally divided between naval architects and marine engineers.

Mr. J. P. Campbell has been succeeded by Mr. H. E. Steel, C.B.E., as President of the Branch.

Meetings were held during 1959 as follows:

7th January (Southampton). "Shipyard Organization" by D. L. Nicholson, B.Sc.  
 19th February (Portsmouth). "Some Interesting Aspects of Model Test Work" by W. A. Crago, B.Sc.  
 \*17th March (Southampton). "Marine Proteus Engines for Brave Class Patrol Boats" by B. G. Markham, M.A.  
 30th September (Portsmouth). "Some Aspects of Design and Construction of All-welded Small Craft" by R. Du Cane.  
 14th October (Southampton). "Train and Car Ferries" by J. P. Campbell.

\* Published in the October 1959 issue of the TRANSACTIONS, page 316.

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26th November (Portsmouth). "Marine Lubricants and Use of Additives" by R. W. Bale.

The high average attendance at meetings, about 100, reflects the quality of the papers that have been read, and interesting discussions have invariably followed. The Section is indebted to the authors of the six papers read during the year.

The two social functions that have been held have also been well attended. The Council regrets that some members were unable to obtain tickets for the Annual Ball that was held at Mayes Restaurant, Southampton, on 13th February, but alternative accommodation is being sought to remedy this situation on future occasions. At the Annual Dinner, which was held at the Royal Beach Hotel, Southsea, on 30th October, and in addition to officials of the parent societies, they were honoured by the company as guest of honour of Mr. I. K. King, C.B.E., Director of Dockyard Division, Admiralty, and Mr. J. H. B. Chapman, C.B., Director of Naval Construction, as a private guest.

R. N. Newton (*Chairman*)  
T. W. Paradise (*Honorary Secretary*)

### WEST MIDLANDS

The steady increase in membership that was commented on in last year's report has continued and the number of members in the Section now totals 245. An analysis of the present membership is as follows:

		<i>Registered</i>	<i>Non-registered</i>
Members ... ..	83	10	
Associate Members ... ..	55	9	
Associates ... ..	28	6	
Graduates ... ..	15	3	
Students ... ..	15	3	
Probationer Students ... ..	15	3	
	211	34	

Six meetings have been held during the year:

- 7th January. "Nuclear Steam Propulsion for Merchant Ships" by W. R. Wootton.
- 19th February. "Marine Machinery Breakdowns" by J. H. Milton (Member).
- 9th April. "Heavy Oil Burning" by J. S. Clarke, O.B.E., Ph.D. (Member), and G. J. Hudson, M.A.
- 22nd October. "Electrical Marine Equipment" by S. A. G. Emms.
- 26th November. "The Manufacture of Thick-walled Seamless Pressure Tubes" by R. R. Gilchrist, M.A. (Associate Member).
- 30th December. "Energy from the Atom" by Professor C. F. Powell, M.A., Ph.D., Sc.D., F.R.S. (This lecture was originally planned for presentation in March 1959 but had to be postponed due to the speaker's illness.)

The average attendance at these meetings was forty-four.

On 17th June a whole day visit to the Berkeley Nuclear Power Station site was organized and twelve members availed themselves of this opportunity. The visit was most thorough and instructive and the party was very much indebted to Mr. L. D. Trenchard (Member of Committee) for making the arrangements.

It had been planned to hold the seventh Annual Dinner in November 1959 but unfortunately the date clashed with one subsequently fixed for the Joint Meeting in London of the Institute and the American Society of Naval Architects and Marine Engineers, and it was considered advisable to postpone the event. Arrangements have now been made to hold this dinner on Thursday, 25th February 1960, and as in previous years it will be an informal occasion.

R. S. Robinson (*Chairman*)  
G. W. H. Collins (*Honorary Secretary*)

### Annual General Meeting

The seventh Annual General Meeting of the Section was held at the Birmingham Exchange and Engineering Centre on Thursday, 28th January 1960. Mr. R. S. Robinson, B.Sc. (Chairman of the Section) presided and there were fifteen members present.

The Annual Report and Statement of Accounts were presented and approved.

The Chairman then thanked the Members of Committee for the support they had given him and the very real work they had done for the Section during the year. He mentioned particularly Mr. L. D. Trenchard and Mr. J. E. Mason who, in common with himself, were retiring in accordance with the By-Laws; they had both put an enormous amount of work into the affairs of the Section and had contributed very greatly to its success.

The Chairman went on to thank Mr. G. W. H. Collins for his work as Honorary Secretary, and the Honorary Treasurer, Mr. F. Wilson, for his services during the year; members would appreciate that both these difficult offices required of their holders a great deal of time and enthusiasm. Messrs. Collins and Wilson were re-elected respectively as Honorary Secretary and Honorary Treasurer.

Three nominations for membership of the Committee, duly proposed and seconded, had been received: Messrs. R. R. Gilchrist, M.A., H. E. Muckley, and D. F. O'Dwyer. In the absence of other nominations they were elected to replace the retiring members.

The chairman announced that Mr. J. R. Cotterill, J.P., had been elected to the Chair.

The Officers and Committee for 1960 are therefore as follows:

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

Chairman: J. R. Cotterill, J.P.

Vice-Chairman: *To be appointed*

Committee: J. A. Forrest, M.B.E., B.Sc., Wh.Ex.

J. H. Gilbertson

R. R. Gilchrist, M.A.

K. H. Harrison

Lieut.(E) D. S. Kennedy, R.N.R.(ret.)

H. E. Muckley

G. R. Murison

D. F. O'Dwyer

Honorary Secretary: G. W. H. Collins

Honorary Treasurer: F. Wilson

### WEST OF ENGLAND

During 1959 the registered membership of the West of England Section has increased by thirty-two, making the total on 31st December 221. This figure is made up as follows:

Members ... ..	90
Associate Members ... ..	56
Associates ... ..	31
Graduates ... ..	15
Students ... ..	10
Probationer Students ... ..	19
	221

The total number of non-registered members residing in the area covered by the Section on the same date was twenty-two, which shows a decrease of twenty-two as compared with the corresponding total for 1958.

Nine meetings were held during the year and the papers presented on these occasions covered a wide field of interest. The average attendance, including visitors, was thirty-six. This figure is rather disappointing, even after consideration has been given to the fact that many of the Section's members do not live within easy reach of Bristol or Bath. Details of the meetings are as follows:

- 19th January (Bath). "Welding in Marine Engineering" by J. A. Dorrat, A.H-W.C.

## Annual Report of the Council for 1959

- 9th February (Bristol). "The Design and Building of Ice-breakers" by A. Watson, M.B.E., P.Eng. (This paper was read by A. R. Webster of the Canadian Department of Transport.)
- 23rd February (Bristol). Films entitled "How a Thermal Reactor Works" and "Construction of Calder Hall".
- 16th March (Bath). "The Application of Nuclear Power to Marine Propulsion" by H. W. Bowker, M.A.
- 27th April (Bristol). Films entitled "Engineering at Calder Hall", "Criticality", and "Radioisotopes in Industry".
- 19th October (Bristol). "Marine Machinery Breakdowns" by J. H. Milton (Member).
- 9th November (Bristol). A Joint Senior and Junior Lecture: "Automatic Boiler Control" by P. A. Gill.
- 23rd November (Bath). "The Controllable Pitch Propeller" by H. Twitchen (Member).
- 14th December (Bristol). Films entitled "ADMA for Short", "Birth of a Tanker", "Tanker Story", and "Special Marine Cylinder Lubricants".

In addition to the foregoing ordinary meetings, two visits were arranged for members during the year. The first was on Saturday, 25th April, when, by courtesy of the Resident Superintendent, seventy-two members and their guests took part in a conducted tour of the site of Hinkley Point Nuclear Power Station. The party found that construction of the Station was sufficiently well advanced to create much interest and an instructive morning was appreciated by all present. It is hoped that another inspection of the Station may be arranged during the spring of 1960. The second visit was to the Ramjet High Altitude Test Plant at Bristol Siddeley Engines Ltd., which took place on 15th November. This event was made possible by the efforts of one of the Section members, Mr. R. H. G. Neal, who escorted the party. Those taking part found the installation exceedingly interesting. Owing to the nature of the plant, visiting parties have to be small in number and in the first instance those participating were mostly Committee members. It is hoped that further visits for other members may be arranged in the future.

The Section Committee co-operated with the Careers Master at Bristol Grammar School to give the VIth form boys the chance of learning more about marine engineering as a profession, with the object of enabling them to consider more fully the opportunities available. On 13th February two films entitled "Men of Ships" and "Horizons Unbounded" were shown at the school and this was followed by a session when Mr. D. W. Gelling (Local Vice-President), Mr. W. John, M.B.E. (Chairman) and Mr. F. C. Tottle, M.B.E. (Vice-Chairman) answered many pertinent questions. On 4th May Mr. W. Girvan (Member) visited the school and after showing a short film gave a lecture on marine engineering that was well received.

On 29th May approximately sixty members and their ladies attended an enjoyable and informal Social Evening at the White Lion Inn, Thornbury.

The Section's Fifth Annual Cocktail Party was held at the Royal Hotel, Bristol, on 25th September, when those attending were honoured by the presence of the Secretary, Mr. J. Stuart Robinson, M.A., and Mrs. Robinson. The function was very successful and was enjoyed by members, their ladies and guests, numbering 145 in all.

W. John (*Chairman*)  
J. P. Vickery (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting of the Section was held at Queens Building, University of Bristol, on 22nd February 1960 at 8.45 p.m. Mr. F. C. Tottle, M.B.E. (Vice-Chairman of the Section) was in the Chair and opened the proceedings by conveying the Chairman's apologies for his unavoidable absence. There were twenty-six members present.

The Chairman reviewed the Section's activities during

1959 and said that under the able leadership of Mr. John it had been a very successful year. The papers presented at Ordinary Meetings had covered a wide field of interest that should have appealed to all; he thought that those dealing with nuclear energy subjects had been particularly appropriate, especially for the younger members. The visit to Hinkley Point Nuclear Power Station had been one of the outstanding events of the year, as it had combined successfully a high degree of interest with an enjoyable day's outing. The events arranged at Bristol Grammar School appeared to have been beneficial to the boys there. Both the Social Evening and the Fifth Annual Cocktail Party had been very enjoyable functions and both had been a financial success. Perhaps the only disappointing aspect of the whole year was the rather poor attendance at Ordinary Meetings.

The Honorary Treasurer presented the Section's Annual Financial Statement and reported that there was an excess of income over expenditure in both the main account and in the Social Fund. He explained that this improvement in the financial position was largely due to the small nominal fee charged by the University in respect of accommodation for Ordinary Meetings, and also to the generosity of Charles Hill and Sons Ltd., who provided free of charge a room for Committee meetings. The annual report was then read by the Honorary Secretary. Mr. T. A. Fawcett thanked the Honorary Treasurer and Honorary Secretary for their work during the year and proposed the adoption of the financial statement and Annual Report. This proposal was seconded by Mr. G. S. Selman.

Captain W. R. Stewart, R.N., proposed a vote of thanks to Mr. W. John, M.B.E., the retiring Chairman, and paid tribute to his efforts, which were largely responsible for the progress of the Section. Mr. Tottle expressed his pleasure in having the opportunity of seconding this proposal.

The Scrutineers, Messrs. G. B. Dawson and D. V. Hyde, reported the results of the ballot to the Local Vice-President, Mr. D. W. Gelling, who informed the meeting that three nominees had received an equal, and lowest but one, number of votes. As only two of these three nominees could be admitted to membership of the Committee a show of hands was called for. As a result of the ballot and show of hands the following members were elected to the Committee. Messrs. R. S. Brown, W. Brunton, W. John, M.B.E., Commander P. R. Marrack, R.N., J. A. L. Peck, G. S. Selman and J. P. Vickery. The retiring members, who were eligible for re-election, were Messrs. W. Brunton, W. John, M.B.E., S. Jones-Frank, Commander P. R. Marrack, R.N., and Captain W. R. Stewart, R.N.

The Chairman thanked Mr. A. J. A. Davies for agreeing to continue as Honorary Treasurer, no other nomination for this office having been received. The only nomination received for the office of Honorary Secretary to replace Mr. J. P. Vickery, whose resignation from this post was reluctantly accepted, was Mr. J. E. Gander, whose appointment was therefore confirmed.

A vote of thanks to the Scrutineers was proposed by Mr. J. A. L. Peck and seconded by Mr. F. Bourne.

At a meeting of the Committee held after the Annual General Meeting, Mr. W. John was re-elected Chairman of the Section, and Mr. F. C. Tottle Vice-Chairman. The Committee for 1960 is therefore now constituted as follows:

Local Vice-President: D. W. Gelling  
Chairman: W. John, M.B.E.  
Vice-Chairman: F. C. Tottle, M.B.E.  
Committee: R. S. Brown  
W. Brunton  
G. B. Dawson  
T. A. Fawcett  
D. V. Hyde  
Commander P. R. Marrack, R.N.  
J. A. L. Peck  
T. A. Rees  
G. S. Selman

## Annual Report of the Council for 1959

C. W. J. Stow  
A. L. Thomas  
J. P. Vickery  
O. Watson

Honorary Secretary: J. E. Gander

Honorary Treasurer: A. J. A. Davies

There being no further business, the meeting was closed at 9.25 p.m.

### OVERSEAS

#### BOMBAY

The number of members registered with the Bombay Section on 31st December was 151, compared with 131 in 1958, an increase of 15 per cent.

During the year under review Mr. G. E. Kerr laid down his office as the Local Vice-President of the Section. He had held this office with great distinction since 1956. His guidance and leadership had been invaluable assets to the Section. The Section Committee in particular is grateful to him for his ready co-operation and assistance at all times. The Section extends to Mr. Kerr its best wishes for a very happy period of retirement and rest.

On the unanimous recommendation of the Committee, the Council in London appointed Rear Admiral T. B. Bose, I.N. (Member) as Local Vice-President to succeed Mr. Kerr. The Committee records their appreciation of Rear Admiral Bose's earlier services as Chairman of the Committee and expresses the hope that under his guidance the Section will grow in strength.

Mr. B. S. Sood (Member) was unanimously elected Chairman, in place of Rear Admiral Bose, on 22nd October.

Three technical meetings were held during the year. These were well attended by members and visitors. The first two were joint meetings with the Institution of Marine Technologists and the last was organized by the Section for the benefit of students and apprentices.

13th March "Marine Centrifugal Pumps" by R. G. Sathaye (Associate Member).

8th July "Generation of Power from Nuclear Energy and Its Application to Ship Propulsion" by S. Kasturi (Member).

\*19th November "Shipbuilding and Shipyard Practice with Particular Reference to India" by D. B. Irani.

The Committee particularly thanks the authors of the above papers for their keen interest in the affairs of the Section.

A very interesting visit to the Atomic Energy Establishment at Trombay was held on 17th December. There were 34 members and guests in the party, who were shown around the "Apsara", the Canada-India Reactor, and other departments, by the staff of the Establishment. The Committee thanks Mr. M. Gopalkrishnan, Public Relations Officer of the Atomic Energy Establishment, for arranging this visit.

A moonlight harbour cruise was held on 20th March on the s.l. *Begum*. Members with their wives and guests totalling 110 attended. A buffet dinner was served on board and entertainment was provided by a mathematician and a ventriloquist. Everyone enjoyed the trip, which afforded an opportunity for members to meet together informally. The thanks of the Section are due to Mr. Kerr, who assisted in several ways, not least by obtaining the use of s.l. *Begum* free of cost.

The following Institute of Marine Engineers' awards were presented by Mr. Kerr at a meeting held on 8th July:

*The Institute Silver Medal* for the candidate who secured the highest marks in the Ministry of Transport Extra First Class Engineer's Certificate examinations held in 1958, to N. Chakraborty (Associate Member).

*The Essay Prize* from the Denny, Stephen and Inverforth Prize Fund to S. Kasthuri (Member) for his essay entitled "Petroleum in Engineering, 1859-1959: A Centennial Review".

Three papers read during 1959 to the Section have been

accepted for publication by Headquarters, as follows:

- a) The paper on "The Problem of Brittle Fracture of Mild Steel in Welded Ship Construction", by S. K. Basu, B.E. (Associate Member), read on 15th December, was published in the Supplement to the November 1959 TRANSACTIONS.
- b) The paper by R. G. Sathaye (Associate Member) on "Marine Centrifugal Pumps", read on 13th March, has been accepted for publication in the Student TRANSACTIONS.
- c) The paper by S. Kasthuri (Member) on "Generation of Power from Nuclear Energy and Its Application to Ship Propulsion", read on 8th July, has been accepted for publication in the Supplement to the TRANSACTIONS.

The Committee congratulates these authors.

Advance copies of papers to be read at Institute meetings in London are available to members who wish to take part in discussions by correspondence.

A free copy of the Institute TRANSACTIONS is provided monthly by Headquarters in London as a contribution to the Library, and this service is acknowledged with thanks.

The following bound volumes of TRANSACTIONS have been purchased for the Bombay Library; Royal Institution of Naval Architects, 1958; Institution of Engineers and Shipbuilders in Scotland, 1958/59; and North East Coast Institution of Engineers and Shipbuilders, 1957/58.

The Ministry of Transport and Communications, Government of India, invited the Bombay Section to be represented on the Standing Metric Committee on 24th January and the Advisory Committee on Ancillary Industries related to Ship Building and Shiprepairs on 30th March. The Institute was represented by Mr. G. E. Kerr (Local Vice-President) and Mr. C. S. Sundaram (Honorary Secretary) on the respective committees.

The Committee sincerely thanks all members of the Section for their co-operation and enthusiasm, which have contributed to their success; also, the following organizations for assistance received during the year: The Institution of Marine Technologists; The B.E.S.T. Undertaking; The Atomic Energy Commission; Mazagon Dock (Private) Ltd.; The Examiner Press; The Directorate of Marine Engineering Training; The Times of India, The Indian Express and the Free Press Journal; Caltex (India) Ltd.; and Alcock, Ashdown and Co. Ltd.

B. S. Sood (*Chairman*)

C. S. Sundaram (*Honorary Secretary*)

#### Annual General Meeting

The Annual General Meeting was held on 17th February 1960 at 5.30 p.m. at the B.E.S.T. Conference Hall, Bombay-1. Rear Admiral T. B. Bose, I.N. (Local Vice-President) presided and there were thirty members present.

The annual report and statement of accounts for 1959 were adopted.

Mr. C. S. Sundaram was unanimously re-elected unopposed as Honorary Secretary. Mr. D. Dyer was elected Honorary Treasurer in place of Mr. S. Kasthuri, who had resigned this post. Messrs. J. E. Radcliffe, S. Kasthuri, B. Ananda and Commander(E) W. P. Bapat were elected to the new Committee, which is now constituted as follows:

Local Vice-President: Rear Admiral T. B. Bose, I.N.

Chairman: B. S. Sood

Committee: B. Ananda

Commander(E) W. P. Bapat, I.N.

D. B. Daruwala

S. Kasthuri

A. C. Kidd

P. N. Rabady

J. E. Radcliffe

R. G. Sathaye

Honorary Secretary: C. S. Sundaram

Honorary Treasurer: D. Dyer

\* Junior Meeting.

## Annual Report of the Council for 1959

A vote of thanks to the Chair and retiring members of the Committee, Messrs. H. A. Amos and S. Ratra, was received with acclamation. The meeting terminated at 6.30 p.m.

### CALCUTTA

During 1959 a scheme for a Junior Section of the Calcutta Section was inaugurated with the object of presenting papers suitable for students and junior members. This scheme received very active support from the Marine Engineering College, which put up a prize for the best paper written by one of their students. Four papers by students were read at meetings on the 3rd and 8th June. A committee of senior members agreed that the paper read by Cadet S. N. Hussain was the best. It is hoped that similar competitions can be held annually in future.

Two senior papers have been read: "Spheroidal Castings" by K. C. Sen, on 18th March; and "Present Day Trends in Boiler Design and Manufacturing Practice and Their Influence in Use" by S. C. Roy, on 29th April.

The affairs of the Section have been conducted by a committee consisting of:

Local Vice-President (and Chairman *ex officio*):

J. Connal  
Committee: B. Hill  
H. Kidd  
A. Krishnan  
T. K. T. Srisailam  
J. Connal (*Chairman*)

### CAPE TOWN

The Cape Town Section ended 1959 with a membership of thirty-five, which compares favourably with the figure of twenty-nine for 1957.

It is regretted that two valued members died during the year, C. L. Evans, D.S.C., and E. F. Partridge.

Three meetings were held during the year, as follows:

- 23rd January "Cylinder Wear and Lubrication in Large Diesel Engines" by R. K. Aldrige, A.M.I. Mech.E., of the Shell Company of South Africa Ltd. Attendance 17.
- 17th September "The Non-destructive Testing of Materials" by J. P. Nell, Head of the Non-destructive Testing Section of the South African Bureau of Standards. Attendance 22.
- 3rd December "The Manufacture of Hot and Cold Finished Seamless and Welded Steel Tubing, together with a Few of Their Latest Applications" by T. H. Hunter of Stewarts and Lloyds of South Africa Ltd. This was a joint meeting with the Cape Western Local Centre of the South African Institution of Mechanical Engineers with the Cape Town Section acting as hosts. Attendance about 65.

It is unfortunate that the premises of the South Atlantic Corporation, having been re-arranged, are no longer available for meetings.

On 27th January fifteen members enjoyed a visit of inspection to the *Pendennis Castle* when she arrived at Cape Town on her maiden voyage.

The Institute continues to be represented on the South African Nautical Training Advisory Board by Mr. C. S. Russell and on the Committee for Advanced Nautical Training by Mr. I. W. Jones Evans (Local Vice-President).

C. S. Russell (*Chairman*)  
C. Ritchie (*Honorary Secretary*)

### Annual General Meeting

The fourth Annual General Meeting was held on 29th January 1960 at the Marine Survey Office, when the Section Committee was reconstituted as follows:

Chairman: I. W. Jones Evans (Local Vice-President)  
Committee: W. S. Boreland

R. G. Kinnell  
H. J. Stokes  
Lieut. Cdr. T. R. Warnes, R.N.(ret.)  
R. J. Wilson

Honorary Secretary: T. F. Russell  
Honorary Treasurer: A. L. Brown  
Honorary Auditor: D. E. Willis

### DURBAN

The programme of the Durban Section in 1959 has been interesting and varied and has included the following meetings:

- 30th January. Annual General Meeting followed by a paper entitled "An Historic Review of Boiler Construction".
- 18th March. Visit to R.M.S. *Pendennis Castle*, by courtesy of the Union Castle Mail Steamship Co. Ltd.
- 5th May. "Non-destructive Testing with Particular Reference to Marine Applications".
- 6th August. "The Manufacture of Heavy Marine Oil Engines" by J. D. Smith. This paper was read by Mr. T. Ratcliffe (Local Vice-President).
- 3rd November. "The Grand Fleet of South Africa" by H. T. V. Horner (Chairman of the Section).

A very successful Cocktail Party was held on 9th October in the Hotel Edward, Durban. It was attended by sixty-six members and guests.

The Committee for 1960 is constituted as follows:

Local Vice-President: T. Ratcliffe  
Chairman: H. T. V. Horner  
Committee: F. R. Eales  
S. J. Harrison  
W. W. Hutchinson  
G. C. Loveleace  
L. M. Olsen  
Honorary Secretary: D. McGregor Clark  
Honorary Treasurer: J. R. Holdsworth  
H. T. V. Horner (*Chairman*)  
D. McGregor Clark (*Honorary Secretary*)

### KARACHI

Membership of the Karachi Section has increased to sixty-three, an increase of thirty since its formation in 1957.

There was one change in the constitution of the Committee, which resulted from the return to England of Commander M. N. Stevenson, M.B.E., D.S.C., R.N., in April 1959, and the consequent appointment of Commander M. A. Ansari, P.N., as Honorary Secretary.

Three successful meetings have been held during the year at the Merchant Navy Officers' Club, New Queens Road, Karachi, and there have been large attendances.

- 14th April "Lloyd's Register of Shipping" by J. R. Conolly (Member). Members found this paper most useful and informative and its presentation was followed by a long and lively discussion. There was an attendance of ninety.
- 10th July "Stability" by the Naval Architect of the Karachi Shipyard and Engineering Works. The subject matter of this paper was of great interest to the members who attended.
- September "This Is Oil" by J. R. W. Richmond, B.Sc., of Burmah Shell. This lecture was illustrated by films and was greatly enjoyed by a large audience of members and visitors.
- I. K. Mumtaz (*Chairman*)  
M. A. Ansari (*Honorary Secretary*)

### SINGAPORE

Active corporate membership of the Singapore Section at the end of 1959 was fifty-four whilst other members totalled sixteen, giving an overall local membership of seventy, an increase of six over the 1958 total.

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A very enjoyable visit was made to the Singapore Polytechnic on 7th March by forty members with their ladies and friends. They saw a film of the Building of the Polytechnic and were then shown round the different departments. A detailed report of this occasion appeared in the May 1959 TRANSACTIONS, page 173.

Forty-eight members and guests attended a meeting to see two films, entitled "The First British Free Piston Powered Ship" and "The Free Piston Generator". The films, shown by courtesy of the Free Piston Engine Co. Ltd., were introduced by Mr. M. H. Morris, A.M.I.Mech.E.; and Mr. W. Smith, B.Sc., A.M.I.Mech.E., answered the numerous and varied questions which resulted from the screening.

Other occasions arranged by the Joint Oversea Group of the Institutions of Civil, Electrical and Mechanical Engineers, to which members of the Section were invited, were as follows:

24th September Paper on "Automatic Telephone Switching in the Netherlands".  
10th October Visit to 40 Base Workshop R.E.M.E.  
12th December Visit to the St. James's Power Station (the first free piston power station in the area).

These functions have been well supported by members of the Section.

F. Helm (*Chairman*)  
J. P. Crawford (*Honorary Secretary*)

### Annual General Meeting

The Annual General Meeting of the Section was held on Friday, 22nd January 1960 at 5.30 p.m. in the Shell Theatre, Collyer Quay, Singapore. Mr. F. Helm, the outgoing Chairman, welcomed the members present. The annual report and accounts were presented and approved.

It was reported that the 1960 Committee is constituted as follows:

Local Vice-President: S. A. Anderson  
Chairman: J. R. Watson  
Vice-Chairman: P. F. Chesters  
Committee: R. J. Bann  
A. M. Carson  
J. F. Crane  
F. Helm  
R. B. Hughes  
D. Litherland

Honorary Secretary: J. P. Crawford  
Honorary Treasurer: R. N. Moffett

Following the business meeting the outgoing Chairman, Mr. F. Helm, presented two papers, entitled "Technical Education in Singapore with Particular Reference to Marine Engineering" and "Brief Recollections of a Marine Engineer", which were very well received. Mr. J. R. Watson, the new Chairman, proposed a vote of thanks to the author.

The meeting ended at 6.20 p.m.

### SYDNEY

The Sydney Section Committee presents the eleventh Annual Report of their proceedings.

There has been an increase of two members during the year, making a present total of 159; and enquiries regarding membership have been received from eight prospective members.

It is regretfully reported that the deaths of two members, Messrs. A. MacNeill and J. R. Robertson (Honorary Treasurer of the Section), occurred during the year.

Four general meetings were held; also, the eleventh annual meeting for students and apprentices, as follows:

4th March Annual General Meeting: followed by "Propellers Used for the Main Propulsion and Manœuvring of Merchant Ships" by W. J. Knight. This was followed by a short talk on "Cycloidal Propellers" by A. Betts-Brown.  
27th May "Refrigeration Equipment for Cold Stores" by A. B. Thornton (Member).  
29th June Meetings for Students and Apprentices:

"The Scotch Boiler and the Triple Expansion Steam Engine" by G. Dempster (Member).

22nd July "Computing in Industry and Commerce" by Professor D. M. Myers, B.Sc., D.Sc.(Eng.).

30th September Film Evening: films of technical and general interest were shown.

The Annual Dinner was held at the Wentworth Hotel on 22nd October 1959. This most successful function was attended by fifty-five members and fifty-two guests.

The Annual General Meeting will be held on 23rd March 1960. The constitution of the Committee during the past year has been as follows:

Chairman: Captain G. I. D. Hutcheson, R.A.N.  
(Local Vice-President)  
Committee: W. G. C. Butcher  
W. T. Matheson  
J. Munro  
Captain(E) R. G. Parker, O.B.E., R.A.N.  
F. J. Ward  
G. B. Williams  
Honorary Secretary: N. A. Grieves  
Honorary Treasurer: J. R. Robertson (until July) and then N. A. Grieves

The Section is grateful for the continued keen interest taken by the London Council, which is most encouraging. Also, to all members for their support, as only through them can the Section continue to function successfully.

G. I. D. Hutcheson (*Chairman*)  
N. A. Grieves (*Honorary Secretary*)

### VICTORIA

The membership of the Victoria Section is now forty-four. The following meetings were held during 1959:

8th May. A lecture on the development of marine nuclear power propulsion by C. Bie (Member).  
2nd June. A Picture Night, held jointly with the Institute of Hospital Engineers, Australia, and the Royal Commonwealth Society.  
14th August. A lecture on nuclear development by D. A. Jones of Riley Dodds Australia Ltd.  
29th September. The Awards Night for Apprentices, which was held in the Radio Theatre of Melbourne Technical College. Presentations were made to successful candidates, including a slide rule contributed by the Institute, as in previous years.  
13th November. A lecture on marine applications of plastics by N. Hardy of Monsanto Chemicals (Aust.) Ltd.

The third annual dinner was held in the University Union dining hall on 16th October. Amongst the guests were Mr. W. N. Pack, representing the Institution of Mechanical Engineers; Mr. H. G. Furphy, the President of the Institution of Engineers, Australia; and Mr. D. A. Jones, who had presented a paper to the Section earlier in the session. The guest speaker was Mr. T. Norris of the Department of Shipping and Transport, Commonwealth of Australia. Thirty-three members and guests were present at the dinner, which proved to be a very enjoyable occasion.

### Annual General Meeting

At the Annual General Meeting on 12th February 1960, the following Committee was re-elected:

Committee: C. Bie  
P. Bossen  
J. E. North  
G. Seales  
J. B. Thomson  
D. W. K. Vagg  
Honorary Secretary: K. Paxton  
Honorary Treasurer: J. H. Coles  
K. Paxton (*Honorary Secretary*)

## 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 British Conference on Automation and Computation has offered twenty-eight papers as the British contribution to the International Federation of Automatic Control Congress that is to be held in Moscow from 27th June—6th July 1960, though it is not yet certain that all of these can be presented. It has been suggested that a conference should be arranged later to allow of the repetition of these papers in this country in September or October 1960; the Institution of Mechanical Engineers has been asked to undertake the arrangements for such a conference and further particulars will be announced in the B.C.A.C. Bulletin, which is issued monthly.

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

Membership remained at twenty-three organizations with the addition of one co-opted individual expert.

The National Committee sat five times, but, in addition to this, various sub-committees sat six times.

As a result of a meeting arranged by the Institute of Physics to discuss the needs of industry in the non-destructive testing field, the National Committee has set up a working party to study these needs, and a further member was co-opted who has had previous experience of a similar investigation carried out by the Ministry of Supply. This working party has invited certain representatives of industry to discuss techniques and equipment considered to be in need of development, and in due course recommendation on action to be taken will be made.

The National Committee has focused considerable attention on the third International Conference on Non-destructive Testing which is to take place in Tokyo in March 1960. On two occasions a member of the Japanese Organizing Committee visited London to receive views and advice from the National Committee regarding the Conference arrangements. In accordance with a request from the Japanese, a Conference Sub-committee prepared a draft "Terms of Reference" for the Standing Committee for International Co-operation.

It is anticipated that very few contributions in the way of technical papers will be provided from Great Britain but National Committee members are preparing a National Report for submission to Tokyo.

Further consideration has been given to the establishment of future Summer Schools, similar to the one held in Manchester in 1958 but with a more limited scope, and also to a proposal to hold a short course or symposium at Imperial College in 1960.

At the request of the National Committee, the Institution of Electrical Engineers has undertaken to organize a symposium on the application of Non-destructive Testing in Electrical Engineering and the Testing of Non-metals, to be held, most likely, in November 1961. An approach has also been made to the Society of Non-destructive Examination to sponsor in 1961 a symposium on the subjects, "The Economics of Non-destructive Testing" and "The Recruitment and Training of Non-destructive Testing Inspectors".

The Non-destructive Testing Society of Great Britain has produced a new journal called "The British Journal of Non-destructive Testing" and the National Committee considers this a most praiseworthy effort, as it has been felt all along that there has been a need for such a journal.

In response to an invitation from the British Standards Institution, the National Committee has nominated one of their members to represent it on B.S.I. Committee E/85/4, which has been set up to make an effective contribution to the I.S.O. Sub-committee concerned with Radio Isotopes.

*The British Shipbuilding Research Association, Research Board.* Representative: T. W. Bunyan, B.Sc.

Sir Victor G. Sheppard, K.C.B., was appointed Director of Research of B.S.R.A. at the commencement of the year and under his direction the Association's activities have continued to be prosecuted with vigour. New terms of grant aid have been successfully negotiated with the Department of Scientific and Industrial Research and will apply for three years.

The various activities of the Association in the Ships' Machinery Section of its Research Programme have made considerable progress. A report has been issued to member firms describing the first stages in an investigation of the forces and stresses in steam pipes under advanced steam conditions. These preliminary tests were carried out at room temperature and were confined to a two-dimensional piping system. Tests at elevated temperatures were subsequently carried out and similar work is in hand on a three-dimensional system. As part of the work under this item, a programme has also started to develop and prove electrical resistance strain gauges at elevated temperatures as it would help the research to be able to measure actual stresses in pipes in service.

The Association now possesses an instrument for measuring and recording the dissolved oxygen present in boiler feed water and measurements have been made on a number of vessels during coastal passages between United Kingdom ports.

Internal combustion engine research has continued and is an important section of the machinery programme. Two series of noise measurements have been carried out on a free piston gas generator, the first being taken during the course of test bed trials, and the second after the machinery had been installed in a ship. The investigations into the scavenging and super-charging of two-stroke engines have continued, using the special engines constructed for the Association at Vickers Armstrongs (Engineers) Ltd., Barrow. The work with these engines is to be complemented by investigations at Liverpool University into unsteady flow problems in exhaust systems.

Experimental work has been commenced to determine the most effective and economical method of heating cargo oil tanks. A quarter-scale model of a wing tank has been constructed, and the flow patterns and mixing of the oil have been determined, using a scale model of a conical heating coil. To determine its optimum location the coil has since been moved to different positions in the tank.

Two machinery items on which the Association's investigations have been completed are the corrosion fatigue of mild steel under conditions similar to those existing in the water cooling circuit of Diesel engine pistons and the corrosion of tubes in Scotch boilers.



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Studies into the possibilities of applying nuclear energy to merchant ship propulsion have continued steadily during the year and are dealt with by a special section of the staff. Members of the B.S.R.A. team are stationed at the Industrial Group Headquarters of the Atomic Energy Authority at Risley and also at the Research Establishments at Winfrith Heath and Harwell. In addition to participating in studies of possible applications of existing reactor technologies, members of the team have also taken part in researches directed at reactor technologies which are at present less developed but which may hold greater promise for eventual economic marine applications. The team have also assisted the Ministry of Transport in investigations on the safety aspects of the problem. Two men from the Association spent three months in the U.S.A. observing and participating in the work of constructing the n.s. *Savannah* at the New Camden Shipyard: they are at present preparing full reports on their mission.

Steady progress has continued in all the other sections of the Research Programme and numerous reports have been

tion in Cargo Handling. Examination results for 1958 and 1959 were received and approved.

Concern was expressed at the small number of candidates in Yacht and Boat Building. In attempting to solve this problem, two major difficulties were faced: one, the lack of reliable statistics on the number of apprentices; and, two, the small number of colleges offering the course. Reference was made to the block release system in Scotland which appeared to be working satisfactorily.

*Engineering Joint Examination Board.* Representatives: F. H. Reid, B.Sc., Wh.Ex., and F. S. Gander, B.Sc.

The Common Preliminary Examination was held from 7th to 10th April and from 6th to 9th October 1959.

The Annual General Meeting was held on 19th June 1959 to receive the report for 1958/59, including the statement of accounts and the reports of the Moderating Committee on the examination results.

The examination results are shown in the following table:

Examination	Whole examination				Part examination				Total sat
	Sat	Passed	Referred in 1 or 2 subjects	Failed	Sat	Passed	Referred in 1 subject	Failed	
*Oct. 1958	108	31 (29%)	27 (25%)	50 (46%)	147	70 (48%)	26 (18%)	51 (34%)	255
†April 1959	58	17 (29%)	10 (17%)	31 (54%)	168	76 (45%)	11 (7%)	81 (48%)	226

\*Home and overseas

†Home centres only

issued to members. Methodical series tests on models of ocean going merchant ship forms have continued and this programme is now in a very advanced stage. The effectiveness or otherwise of conventional bilge keels is being studied. Ships' structures investigations have continued on a range of subjects. A programme of sea-keeping investigations has been put in hand by B.S.R.A. in conjunction with the Ship Division of the National Physical Laboratory and with valuable help from the National Institute of Oceanography. Trials were carried out in the autumn on a weather ship, the *Weather Reporter*, which was already equipped with a wave height recorder. The vessel was extensively equipped with instruments to record every aspect of its performance, including the motion of the vessel, and also to record the sea and weather conditions. A similar investigation is to be carried out early this year on the cargo liner *Cairndhu*. Thereafter model experiments will be undertaken in the new sea-keeping basin at Feltham and it is hoped to establish whether a satisfactory correlation can be achieved between models tested in irregular waves and the performance and behaviour of a vessel under varying sea states. The *Weather Reporter* trials also provided the opportunity to secure information on the correlation between the magnitude of stress reversals experienced in the vessel for this purpose.

Vibration and ships' performance investigations have also continued. An important item in the latter is concerned with recording the falling off of a vessel's performance with the deterioration of her hull surface in operation. It is hoped to shot blast the hull of a ship that has been in service for some time to ascertain to what extent the original trial performance can be regained by such treatments.

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

There has been one meeting only of this Committee—the first for two years. It was reported that the amended syllabus for Yacht and Boat Building had been approved by the Examinations Board of the City and Guilds of London Institute. It was also reported that the Examinations Board had decided to take no further action at present in organizing an examina-

The Board agreed that

- a) Mr. C. W. Tonkin (representing the Institution of Mechanical Engineers) be Chairman for the year 1959/60.
- b) The examinations to be held on 5th—8th April and 4th—7th October 1960.
- c) The Israeli Bagrut (Matriculation) Certificate required for entry upon a regular course of engineering study leading to the degree of the Technion—Israel Institute of Technology—be accepted as exempting from the Common Preliminary Examination.
- d) They would recommend to Constituent Institutions that the qualifications at present recognized by the Board for exemption from the Common Preliminary Examination be accepted for admission purposes.
- e) All bodies whose qualifications are recognized be notified of the dissolution of the Board at the end of 1960.

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

The various sub-committees have held a number of meetings during the year, and a first comprehensive draft of the fourth edition of these regulations has been compiled.

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

The D.S.I.R. Standing Committee on the International Institute of Refrigeration met three times in 1959. The purpose of the Committee is to advise the D.S.I.R., which represents the United Kingdom government in the Institute, on matters of policy.

The tenth four-yearly Congress having been held at Copenhagen in August 1959, the main task of the Committee at the first two meetings was to consider the policy of the U.K. delegation for the business meetings at the Congress. These concerned the election of officers for the next four years, admission of new member countries, the subscription to be paid by member countries, and other matters concerning the general direction of the Institute.

Other matters discussed during the year were: the

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appointment of an assistant to the Director in Paris, who should preferably be an engineer of British nationality; the U.K. contribution to an International dictionary of refrigeration terms; a catalogue of refrigeration terms; and relationship with the International Standards Organization.

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

At the Annual Meeting in March 1959, Mr. C. H. Stanger was re-elected to the office of Chairman of the Joint Committee.

A sub-committee was set up to investigate the possibility of conducting a comprehensive review of test methods and techniques, with a view to establishing those methods which are in need of further development, and to discover any fields where entirely new techniques are required.

The difficulties of such an investigation were realized, and as a first step it was decided to plan a two-day conference under the general title of "Inspection" as a first step. This, it is hoped, will be organized with the aid of the Institution of Engineering Inspection and will deal with the subject both from the managerial and from the inspector's viewpoint. The date—probably 1961.

There has still been some hesitation about the organization of a symposium on Testing Machine Design, and the Institution of Mechanical Engineers is now considering an informal discussion of the subject instead of a meeting with printed papers.

The Joint Committee is now satisfied that the subject of the testing of plastics is being adequately dealt with by the Society of Chemical Industry, a further symposium being planned by them for 1960.

With a view to making available for future conferences the funds held in trust since the 1937 London Congress of the International Association for Testing Materials, negotiations with the Trustees have been opened during the year.

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

This committee continued its regular meetings for the assessment of examination papers and the approval of examination results.

During the year, the constitution of the committee was amended so that each institution participating in the work of the committee would have permanent representation. This removed the possibility that the Institute might at some future date have had no voice in the conduct of the examinations.

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

One meeting of the main Committee was held during 1959—on 11th November—and several meetings of the four Panels—Tanker, Electrical, Nuclear and Steel—were also held in the course of the year.

The reports of the four Panels were considered at the main Committee meeting as follows:

### *Tanker Panel*

Three meetings were held—in March, May and July—to consider proposals for the revision of Rules for Oil Tankers.

The extensive revision made to the Rules in 1949 covered tankers up to 620 feet in length, but since then tankers have increased in length to 900 feet and the present revision of the Rules is designed to cover vessels of these large dimensions. In determining the scantlings of tankers of over 620 feet in length built since 1949, it has been the practice of Lloyd's Register to take into account the stresses sustained by the vessel in still water and in wave conditions, whereas under the 1949 Rules for tankers up to 620 feet in length, the scantlings were based on the principal dimensions of the ship, and the method did not take account of design effects on the bending moment to which the tanker was subjected. The proposed revisions incorporate in the Rules the stress methods used for determin-

ing scantlings for longitudinal strength in large tankers since 1949, the actual limiting values for normal stresses in still water and waves having been determined from service experience. Similar methods are proposed for longitudinals, transverses and other individual members of the ship structure.

The Panel has so far dealt with the Rules covering the ship between the fore and after cofferdams, and these were approved by the main Committee, with minor alterations. The proposals covering the remainder of the structure will be considered at a later meeting.

### *Electrical Panel*

This Panel held three meetings during 1959. A complete revision of the Electrical Rules is being considered, in which it is proposed that the Rules for Electric Propelling Machinery and Electrical Equipment should be combined. It is expected that the revision will be completed during 1960.

### *Nuclear Panel*

A preliminary meeting was held in October to establish a policy for the preparation of Nuclear Ship Classification Requirements. The proposals will be studied by the Panel in due course when the chief surveyors have completed their preparatory work.

### *Steel Panel*

The Report of the Working Party of Classification Societies' representatives which was set up in 1958 to consider proposed Unified Requirements for Hull Structural Steel has been presented to the Societies and to the Panel, and a revised draft of the proposed Unified Regulations was subsequently drawn up for further study.

In addition to the above Panel reports, minor amendments were approved relating to the Rules for:

- 1) Quality and Testing of Materials—Anchors.
- 2) Steel Ships—Deep Tanks and Peak Tanks Carrying Oil—Strengthening for Navigation in Ice.
- 3) Boilers and Other Pressure Vessels.
- 4) Pumping and Piping.
- 5) Internal Combustion Engines.

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

Representation on the Board of Governors at the Poplar Technical College has continued; extra duties, as a member of the Staff Sub-Committee, were taken on by the Institute representative.

Most of the work concerned was of a detailed nature but it has again been pleasant to note the drive and effort of the Principal and Staff of the College in all matters relating to Marine Engineering.

It is considered that the close association with the College is a valuable asset in furthering the cause of the Institute.

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

During the year under review there were several meetings of the Governing Body, the Administrative Committee, and the Engineering Advisory Committee; the Institute representative serves on all of these.

The Principal of the College feels some concern about certain educational aspects of the Marine Engineering Classes, and particularly:

- a) The short time some students spend in the College before taking the Ministry of Transport examinations.
- b) The fact that, by tradition, students can present themselves for enrolment, and for commencement of attendance, on any day. This militates seriously against the running of well organized courses.

### BRITISH STANDARDS INSTITUTION COMMITTEES

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

This sub-committee has not met for several years but drafts emanating from Drafting Panel CHE/18/2/1 are circulated as they arise to the sub-committee and to the Technical

## Annual Report of the Council for 1959

Committee CHE/18 for comment. In this way a draft revision of B.S. 1706, namely A(CHE) 4205 has just been circulated for approval with a view to submission to the Chemical Engineering Industry Standards Committee CHE. This draft is a revision following comments received from industry, so it is approaching the final stage.

*C37/2/2 Sampling of Steam.* Representative: W. McClimont, B.Sc.

One meeting has been held, and a draft Standard has been completed for the sampling and testing of superheated steam from steam generating units. This has now been circulated to industry and a considerable amount of comment has been received. A meeting has been arranged to discuss these comments.

Little progress has been made with the two further Standards that are proposed, one dealing with saturated steam and steam with a low degree of superheat, and the other with saturated steam before superheating, the primary uses envisaged for these Standards being respectively for process steam and for sampling from boiler drums.

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

When B.S. 2949 was published, it was stated that a draft specification for propulsion machines was being prepared. In preparing a specification for propulsion machines it has been found convenient to base it on B.S. 2949. The draft has been circulated to industry for comment and will be published in the form of an amendment to B.S. 2949.

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

This committee has met during the year to prepare a standard for asbestos-silicone-rubber-insulated and asbestos-varnish-cambic-insulated cables.

*ELE/28 Electrical Fans.* Representative: J. K. W. MacVicar.

No progress has been made during the last year in the revision of B.S. 367, "Performance of Ceiling Type Electric Fans". However, the Committee has had under consideration draft IEC specifications for "Electric Ceiling Fans and Regulators" and for "Electric Table Fans". Representatives of the Committee attended a meeting of IEC/TC 43: Electric Fans, in Madrid in July 1959, when these specifications and the British comments were discussed.

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

A number of meetings of this committee have been held and a draft specification has been circulated to industry for comment.

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

Five meetings have been held during 1959 and a draft specification dealing with dimensional, quality, and test requirements has been finalized, to be circulated for general comment by the interested sections of industry.

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

Five meetings were held during 1959 and in December a first draft B.S. for "Safety Glass for Ships: Requirements and Recommendations" was prepared and will be considered at the next Technical Committee Meeting, to be held on 17th February 1960.

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

The sub-committee's final draft of the specification is now before the main committee for approval.

*INE/6 Pressure Gauges.* Representative: R. A. Collacott, B.Sc., Ph.D.

The final report is now ready for publication.

*INE/6 Pressure Gauges (Drafting).* Representative: A. J. Mann.

The Standard published in 1951 (B.S. 1780) was the first British Standard on pressure gauges and has entailed many meetings in revision, which is now concluded. The revised Standard will be published very shortly, when, amongst others, the following revisions will be noted:

The Standard is confined to circular dial pressure gauges, edgewise gauges being excluded.

The unit of pressure is defined, whilst nomenclature is extended to include terminology.

There have been some amendments to Materials and Construction.

There is valuable information to the purchaser and much guidance from him to the manufacturer under the heading of "Information to be supplied".

The turning radius of direct mounting and surface mounting gauges as related to their screwed connexion is defined and dimensions are quoted.

Union nuts and tailpipes have been transferred to the Appendix, which has been expanded with a considerable amount of information for both user and manufacturer.

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

No meetings were held during 1959, but draft Specifications Parts 1 and 2, relating to the obtaining of representative data on Elevated Temperature Properties for a selected steel, were circulated to the industry for technical comment.

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

This committee has met twice during the year.

*Work Completed*

(a) *New Standards published*

These include:

B.S. 3135—Test Code for Gas Turbines.

B.S. 3134—Dimensions of Tapered Roller Bearings.

B.S. 3170—Characteristics of Flexible Couplings for Power Transmission.

(b) *Revised Standards published*

A number of amendments to existing standards has been published. These include standards dealing with notched bar testing, gear cutting hobs, machine cut gears, hardness testing, shaft keys and coupling flanges, boiler rivets, fire hose couplings, vertical cross tube and multitubular boilers, horizontal multitubular boilers, water tube boilers and integral superheaters and steel boiler and superheater tubes.

*Work in Hand*

*Screw Threads*—extension of work on Unified threads.

*Pipes and Tubes*—good progress has been made on the rationalization of low and medium carbon steel pipes and tubes and this work is being extended to austenitic steels.

*Automation*—work on automatic control of machining and other production processes is now nearing completion.

*Valves*—a start has been made on standards for general purpose cast iron valves, the first being for gate valves.

*Pipe Flanges*—revision of B.S. 10 is proceeding but comments on the draft will take a long time to analyse.

*Mechanical Testing*—the position of various testing standards is being reviewed to bring them in line as far as possible with recommendations of ISO/TC17—Steel.

Creep testing standards for steels are being revised and brought up to date.

*MEE/6/19 Gear Hobbing Machines.* Representative: Cdr. E. H. W. Platt, R.N.(ret.).

The four meetings of this committee held during 1959 were mostly concerned with further consideration of the draft British Standard for Gear Planing and Shaping Machines. Discussion was completed in December 1959 and a final draft has been submitted to members by post, for final approval prior to submission for publication.

## Annual Report of the Council for 1959

A draft standard for Gear Hobs for Turbines and Similar Drives, being a revision of Part 2 of B.S. 2062, has been circulated to members and will be discussed during the coming months.

The possible requirement for a British Standard covering commercial Hobbing Machines, referred to in the last Annual Report, is still on the Committee's agenda, one proposal being that Class B—B.S. 1498 may be found suitable to cover this requirement.

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

The draft British Standard for "Fittings for Cylinder Pressure Indicators for Reciprocating Engines" was issued in June for comment from industry and the final Standard should now be nearly ready for publication.

*MEE/17/7 Gears for Turbines and Similar Drives.* Representative: Cdr. E. H. W. Platt, R.N.(ret.).

No meetings of this committee were held during 1959. An *ad hoc* committee under the joint chairmanship of Rear Admiral J. G. C. Given, C.B., C.B.E., (ret.), and Dr. C. Timms has been formed from representatives of leading marine gear cutters and machine tools manufacturers engaged in the design and production of large hobs. The purpose of this Committee is to resolve certain matters arising from the manufacture and testing of these machines. In November 1959 this committee wrote to members of both MEE/6/19 and MEE/17/7, drawing attention to various doubts and discrepancies in British Standards 1807 and 1498. This letter has now been referred to Committee MEE/6/19 for discussion at their next meeting in order to see whether a draft revision of B.S. 1498 is required to meet the points raised by the *ad hoc* committee. Following upon this meeting it is intended to convene Committee MEE/17/7 to discuss points arising within their province.

*MEE/21/1 Solid Drawn Air Receivers.* Representative: T. D. Shilston.

The revised B.S. 430 Solid Drawn Air Receivers is now in galley proof form, ready for editorial checking.

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

Revised B.S. 487 Welded Air Receivers: Part I, For pressures not exceeding 500lb./sq. in., is now in galley proof form, ready for editorial checking. Part II, For pressures exceeding 500lb./sq. in., is under active consideration. A new Standard for Small Fusion Welded Air Receivers for Road and Rail Vehicles has been drafted and is in galley proof form, ready for editorial checking.

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

Several meetings of the drafting panel of this committee were held during 1959 and the work was mainly concerned with the consideration of amendments to B.S. 1113:1958, "Water Tube Boilers and Their Integral Superheaters". Amendment No. 1, published in December 1959, covers the revised Clause 64, Fitting of Tubes, and also corrections to the specifications for materials, together with editorial corrections. Draft Amendment No. 2 has been issued for comment and should be published at an early date.

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

The Committee met on several occasions to continue with the revision of B.S. 806, "Ferrous Pipes and Piping Installations for and in connection with Land Boilers". It was appreciated that the complete revision of B.S. 806 would take some considerable time and it was agreed that an Amendment should be issued to this Standard, covering design stresses, design formulae, hydraulic test, etc., as soon as decisions had been reached on these matters. It is expected that the Amendment will be published in the near future.

*MEE/34/9 Boiler and Superheater Tubes.* Representative: J. Liddell, B.Sc.

To meet the demand for E.R.W. boiler tubes of 27 tons/sq. in. minimum tensile strength, the committee approved a Draft Amendment No. 1 to B.S. 3059. The Amendment slip for inclusion in this Standard was published in December 1959 and contains the addendum, B.S. 3059/13, "Electrically Welded Carbon Steel Boiler and Superheater Tubes" (27 tons/sq. in. minimum tensile strength), also minor revisions to the Standard occasioned by the inclusion of requirements for this type of tube.

*MEE/63 Ships' Side Scuttles and Frames.* Representative: E. F. J. Baugh.

Since there has been considerable work involved in preparing the necessary drawings, etc., to cover both brass and light alloy side scuttle frames, three meetings only were held during 1959 and it is anticipated that this committee will conclude its work during the second half of 1960.

A fourth draft revision of B.S. 3024, "Ships' Side Scuttles and Frames", is being prepared and will be submitted to the committee for review at the meeting to be held on 24th and 25th February.

*MEE/81 Valves for Gas, Water and Steam.* Representative: A. Logan, O.B.E.

One meeting was convened during the year, when proposals put forward by the British Valve Manufacturers' Association in connexion with general purpose iron and steel valves were considered.

It was decided that the work of preparing a draft British Standard for cast iron gate valves based on the B.V.M.A. document CZ(MEE) 6949 should be passed over to the Subcommittee MEE/81/3.

*MEE/81/3 General Purpose Valves.* Representative: A. Logan, O.B.E.

The committee met once during the year.

Work commenced on the draft Standard for cast iron gate valves for general purposes and the committee considered documents prepared by the British Valve Manufacturers' Association on manufacturers' standard practices.

The committee is scheduled to meet twice early in 1960 to continue work on the draft Standard.

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

No meeting of the committee was held in 1959, although its sub-committee MEE/91/5, "Jointing Compounds for use in Liquid Petroleum Gas Installations and Appliances", has been active. A draft British Standard has been prepared by this sub-committee and has been circulated to the industry and others for technical comment. As the sub-committee deals with oil refinery requirements and has little or no marine application, the Institute representative was not selected for membership of this committee.

*MEE/91/4 Dimensions of Gaskets.* Representative: Lieut. Cdr. A. P. Monk, D.S.C., R.N.(ret.).

As stated in last year's report, the work of this sub-committee was completed and approval given by the main technical committee MEE/91 for the Specification to be passed to the Industry Standards Committee for publication. This Specification has now been published under the title, B.S. 3063:1959, "The Standard for Dimensions of Gaskets for Pipe Flanges".

*NFE/27/3 White Metal Bearing Alloys.* Representative: N. Macleod.

Comments have now been received from industry and other interested parties and these comments are under consideration by this sub-committee.

## Annual Report of the Council for 1959

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

British Standard 3109:1959, "Gas and Dual Fuel Engines", was published following work over the preceding year by the committee.

The committee met once during the year to discuss various proposed amendments to B.S. 649:1958. Two of the more important proposed amendments are "Definition of Rotation of Engines" and a proposal to include Diesel electric propulsion for ships in the Standard.

These and other amendments are still to be circulated.

A delegation was sent to the International Combustion Engine Congress in Madrid.

*SFE/— Solid Fuel Industry Standards Committee.* Representative: R. Cook, M.Sc.

Two meetings were held during 1959, on 18th March and 27th November. The following draft British Standards were approved for publication:

B.S. 1016 Methods for the analysis and testing of coal and coke: Part 15, Fusibility of coal ash and coke ash.

B.S. 2845 Coke-burning inset open fires without boiler and without convection: Part 2, Performance and constructional requirements.

B.S. 3128 Inset open fires with boiler and without convection.

B.S. 1251 Open fireplace components: Part 1, Firebacks for use with inset open fires.

Part 2, Fireplace surrounds and hearths.

Part 3, Adjustable chimney-throat restrictors (insertible).

B.S. 3140 Fireguards for solid fuel combination grates.

B.S. — Code for testing coke screening plant.

B.S. 2742 Miniature smoke charts.

B.S. 3142 Manufactured solid smokeless fuels for household use: Part 1, Coke for domestic open fires.

B.S. — Thermal testing of solid fuel burning appliances with convection: Part 1, Flue loss method.

New work undertaken by the committee includes the preparation of Part 4, Lintels, and Part 5, Throat units, of B.S. 1251, "Open fireplace components"; an investigation into constructional materials for domestic boilers; the preparation of specifications for thermal insulating materials and of a glossary of thermal insulation terms; the preparation of standards relating to the determination of the calorific value of gases and to gas-liquid chromatography; and an enquiry into the possibility of standardization work in relation to the quality of domestic coal.

Considerable further progress was made with the international standardization work relating to ISO/TC 27, "Solid Mineral Fuels"; and ISO/TC 64, "Methods of Testing Fuel using Equipment". Two meetings of the latter committee were held during the year, in Paris in January and in Berlin in October.

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

This committee has met once only, to examine the printer's proof of the specification. This was approved and has been forwarded to the main committee for incorporation in the full standard.



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

26th April 1960

The Annual General Meeting of the Institute of Marine Engineers was held on Tuesday, 26th April 1960 at 5.30 p.m. The President, Sir William Wallace, C.B.E., LL.D., was in the Chair.

The Minutes of the preceding Annual General Meeting, held on 21st April 1959, were confirmed and signed.

## *Introductory Remarks by the Chairman*

The CHAIRMAN welcomed those present and said that he had also been asked to remind them that only those who had paid their subscriptions could vote.

## *Examination of Voting Papers*

On the invitation of the CHAIRMAN, the Scrutineers retired in order to examine the voting papers.

## *Presentation of Annual Report*

The SECRETARY (Mr. J. Stuart Robinson, M.A.) presented the Annual Report of the Council for 1959.

## *Presentation of Annual Financial Statement*

The HONORARY TREASURER (Mr. J. Calderwood, M.Sc.) said that, as would be seen from the Report, the excess of income over expenditure was £7,717, which was £1,185 greater than last year. Income had remained much the same, but by various economies, particularly in the TRANSACTIONS, the expenditure had been less. On the other hand, administration expenditure had increased. Part of the improvement had been due to the higher advertising rates they had been able to obtain, so that in fact, even including production of the 1959 Year Book (no edition having been produced last year) the total cost of the TRANSACTIONS and the Year Book together had been rather less than last year.

On the Building Fund there was a surplus for this year of £27,556. Provision would have to be made eventually on a fairly large scale out of that surplus for the Building Capital Reserve Redemption Fund. For the moment the Council had simply opened that fund by putting in a fairly small nominal amount each year; obviously they had ultimately to work out the possible long-term rate of depreciation and replacement for the building in their great-grandchildren's time, and put in a suitable amount out of surplus.

Finally, the Council were taking action on the new rule which governed investments. They had made arrangements with leading merchant bankers to advise on that; there were very clear types of investment they wanted; they did not want to play the Stock Exchange, but to get good long-term investments likely to appreciate, and not depreciate, as had happened with so many Government securities in the past. The Rules permitted 50 per cent of industrial investment.

## *Adoption of Annual Report and Accounts*

MR. J. P. CAMPBELL (Member) said that during the year

1959 the recession in merchant shipping had continued; although probably not profitably employed, there was less idle tonnage than twelve months ago. It was therefore very gratifying to note the continued increase in membership. If this continued at the present rate, before the end of the year the increase would be 200 per cent since 1945. This gave an indication of the value marine engineers attached to being associated with the Institute.

Mr. Campbell said that the reports of the Sections in the United Kingdom and Commonwealth were of great interest to him. He said he happened to be a member of one of the Sections and claimed to be a regular member at their meetings. All were exceptionally well attended and of great interest, invariably giving rise to very informative discussions. Thanks were due to the enthusiastic members who made time available to organize the Sections' activities so competently. When it was decided to start the Sections, there had been considerable doubt as to whether they would serve a useful purpose, but he claimed these doubts had been dispelled, if only by the increased membership in the areas where the Sections were operating so splendidly.

The Council's plan to extend the Institute's activities to North America was very ambitious. They all hoped the visit of the Chairman of Council and the Secretary to Canada would eventually show a similar dividend to that shown by the introduction of the Sections.

Membership of the Institute was, of course, international; he understood that of the 13,000 members there were probably at least 400 members in other countries, many of them being engineers of great eminence.

He thought everyone would also agree that the visit of the Chairman of Council and Secretary to New York for a joint meeting with the Society of Naval Architects and Marine Engineers in that city would prove to be well worth while, if only to cement friendship between the countries and kindred institutions and further exchanges of technical information.

In the Annual Report there was reference at some length to the work by representatives, and among the reports from these gentlemen it would be noted that a number of members gave a considerable amount of their valuable time representing the Institute on 38 different committees and technical conferences, covering research associations, technical college boards, etc. These voluntary duties were generally not known to the members but he wished to record that they were very greatly appreciated.

With reference to papers and abstracts, an extremely high standard of papers continued to be read and discussed at the Institute and published in the TRANSACTIONS. Many of these were read by non-members and Mr. Campbell said that on several occasions he had been approached by engineers in other branches of the profession, who had asked him to sign their nomination papers as Associates, simply for the purpose of obtaining copies of the TRANSACTIONS. This would be of

## Minutes of Proceedings of the Annual General Meeting

interest to the authors who spent so much of their time preparing these valuable papers.

Referring to the Parsons' *Turbina* Memorial Fund, Mr. Campbell said he thought that all members of the Institute would be pleased to know they were being associated with the reconstruction of this historic ship in the Museum of Science and Engineering in her home port, Newcastle upon Tyne.

The balance sheet required a lot of study, and one had to be a financial wizard to understand it. For his own part, seeing the names of the people who had signed it, he was prepared to take it as read and in order. It had many pleasing and pleasant features. Among the items that were of particular interest to him was the cost of £694,512 for the Memorial Building with furniture and fittings. When the building was first envisaged the cost was expected to approximate £400,000.

Referring to the Capital Account there was a pleasing item of £13,653, representing donations made by generous members and friends of the Institute; these donations nearly met the interest payable on the mortgage. The mortgage on the building was repayable over 37 years, and this was due for repayment before the end of the century.

An item that had interested him was the Sinking Fund Insurance Policies; it would be noted that they would mature in 2011 and 2012 and their value would be £23,000. He thought that showed great foresight, but in the post-war period they had all learned that currency had a habit of depreciating in value through the years and in consequence the annual purchasing value of this sum of money in 2012 was anyone's guess.

Their members' livelihood depended on a reasonably stable shipping industry and when one considered the extent of the subsidies extended to their competitors in the aircraft industry, the Government's fiscal policy towards British shipping did not augur well for the future. By the year 2012, if the present trend continued, their Merchant Navy members were likely to find themselves sailing under the protection, if any, of foreign flags. In this nuclear age and with the progress made in guided missiles, the large surface Royal Naval vessels were likely to be greatly reduced in numbers and their members in that service were likely to get their seagoing experience in submarines.

They had been able to carry forward in the Memorial Building Revenue Account the sum of £12,556, which was very satisfactory.

Mr. Campbell then formally proposed the adoption of the Annual Report and Accounts as published.

MR. W. McCLIMONT, B.Sc. (Member), seconding the motion, said that Mr. Campbell had given a very thorough survey of the impact made by this year's Report and Accounts, but there were one or two things he felt he might properly add. He would like to endorse Mr. Campbell's remarks about the healthy membership position and at the same time to add one or two observations about the constitution of the membership. There had been during the past few years a rapid and desirable increase in the grade of Associate Membership, dating from the changes to the By-Laws in 1954. In the five years since 31st December 1954, the total in this grade had risen from 686 to 3,032, an increase of 340 per cent. This should be compared with an increase in the total membership of 54 per cent. Five years ago, in proposing the adoption of the 1954 report, Mr. McClimont had looked forward hopefully to such a development but he had to confess that the growth had much exceeded his hopes. The ratio of Members to Associate Members was now only 1.8 compared with 6.8 five years ago. He looked forward to it settling down eventually at 0.8 or less, at which point he felt a sound balance of grades of membership would have been achieved. In the past five years the total in the grade of Associate had fallen from 2,015 to 1,628. This was also a welcome change, since this grade at nearly 25 per cent of the total membership had been much too high five years ago. If it eventually settled down at about 10 per cent, that would be a satisfactory level.

Reference had been made in the Report to the overseas activities of the Institute and it might be of interest to note

that of the 5,310 Members at the end of 1958, no less than 1,375, or 26 per cent, were overseas Members. The continuation of this feature was indicated by the fact that of 71 new Members in the past two months, 30 were from overseas, a percentage of 42. The Council was therefore to be commended for the attention it was giving to meeting the interests and needs of the growing overseas membership.

The reduction in the net cost of the TRANSACTIONS was welcome and had been achieved at a time when the reputation of the TRANSACTIONS had been rising. The Papers and Transactions Committee was to be commended on the standard maintained in the TRANSACTIONS, which to most members were the most tangible advantage of their membership of the Institute.

To a layman, the accounts presented a reassuring picture, and the Honorary Treasurer and the Secretary were to be congratulated.

Mr. McClimont said that it was with great pleasure that he formally seconded the adoption of the Annual Report and Accounts for the year ended December 1959.

*The motion was carried unanimously.*

### *Presentation of Awards for 1959*

The CHAIRMAN presented the following Awards for 1959:  
*Denny Gold Medal:* Mr. C. C. Pounder (Vice President), for his paper entitled "Human Problems in Marine Engineering".

*Institute Silver Medal:* Mr. H. C. Andersen, B.S., and Mr. J. J. Zrodowski, B.S., for their paper entitled "Co-ordinated Alignment of Line Shaft, Propulsion Gear and Turbines" (received on their behalf by Mr. J. L. Goodall).

*Essay Competition Award:* Mr. J. B. Craig, for his essay entitled "A History of the Marine Boiler".

The CHAIRMAN said there were several other awards, but as their recipients were unable to be present at the meeting, they would be sent to them.

### *Report of the Scrutineers*

The CHAIRMAN read the Scrutineers' Report, as follows:  
President: The Right Honourable The Viscount Simon, C.M.G.

Vice-Presidents: *Belfast:* C. C. Pounder  
*Glasgow:* W. B. Johnstone, O.B.E.  
*London:* J. Calderwood, M.Sc.  
R. W. Cromarty  
W. Lynn Nelson, O.B.E.  
G. Ormiston, C.B.E.  
H. J. Wheadon

*Honorary Treasurer:* J. Calderwood, M.Sc. (Vice-President)

Members of Council: R. Munton, B.Sc.

J. McAfee  
D. G. Alcock  
J. P. Campbell  
T. W. Longmuir

Associate Member of Council: A. C. Hardy, B.Sc.

### *Vote of Thanks to the Scrutineers and Re-appointment for 1960/61*

MR. S. HOGG, O.B.E. (Member) said all jobs relating to the smooth operation of the Institute were not equally onerous nor did they get the same amount of limelight; the work of the scrutineers, however, called for special qualities, and he was perfectly happy that the gentlemen selected had these qualities.

He therefore moved a vote of thanks to the scrutineers and proposed that Messrs. B. C. Curling, O.B.E., L. J. Fulford, G. H. Garner and E. R. Hall, B.Sc., be re-appointed.

*The motion was carried unanimously.*

### *Special Business*

The CHAIRMAN drew attention to the resolutions printed in the notice convening the meeting, as follows:

1. "That subject to the provisions of Article 20 of the Royal Charter, the By-Laws of the Institute be and they are hereby



## Minutes of Proceedings of the Annual General Meeting

amended as follows:

By-Law 2 at present reading as follows:—

‘The Council shall have power to elect Honorary Vice-Presidents, Honorary Members, and Life Members. In the case of a Corporate Member elected Honorary Vice-President or Honorary Member (whether before or after the adoption of these By-Laws) he shall after such election remain a Corporate Member and shall continue to exercise and be deemed always to have been entitled to exercise all the rights of a Corporate Member, even though he may have been or may be relieved by the Council on such election from the liability to pay further subscriptions.’ shall be amended to read as follows:—

‘The Council shall elect from time to time two Honorary Vice-Presidents, one representing the Royal Navy and one representing the Merchant Navy and shall have power to elect additional Honorary Vice-Presidents and also Honorary Members and Life Members. In the case of a Corporate Member elected Honorary Vice-President or Honorary Member (whether before or after the adoption of these By-Laws) he shall after such election remain a Corporate Member and shall continue to exercise and be deemed always to have been entitled to exercise all the rights of a Corporate Member, even though he may have been or may be relieved by the Council on such election from the liability to pay further subscriptions.’

By-Law 30(b) at present reading as follows:—

‘An annual donation not less than the annual subscription payable by a Member shall be paid by each Companion’.

shall be amended to read as follows:—

‘An annual subscription of £6 6s. shall be paid by each Companion’.

By-Law 34 at present reading as follows:—

‘The Student Examination Fee shall be that which is determined from time to time by the Engineering Joint Examination Board; an annual subscription shall be paid by each Student and each Probationer Student as follows:—

STUDENT	£	s.	d.
Under 21 years of age (receiving STUDENT TRANSACTIONS) ... ..	10	6	
Under 21 years of age (receiving TRANSACTIONS) ... ..	1	11	6
Over 21, under 25 years of age ... ..	1	11	6
Over 25, under 28 years of age ... ..	3	3	0

#### PROBATIONER STUDENT

Under 20 years of age (receiving STUDENT TRANSACTIONS) ... ..	10	6	
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shall be amended to read as follows:—

‘The Student Examination Fee shall be that which is determined from time to time by the Council; an annual subscription shall be paid by each Student and each Probationer Student as follows:—

STUDENT	£	s.	d.
Under 21 years of age (receiving STUDENT TRANSACTIONS) ... ..	10	6	
Under 21 years of age (receiving TRANSACTIONS) ... ..	1	11	6
Over 21, under 25 years of age ... ..	1	11	6
Over 25, under 28 years of age ... ..	3	3	0

#### PROBATIONER STUDENT

Under 20 years of age (receiving STUDENT TRANSACTIONS) ... ..	10	6	
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By-Law 41 at present reading as follows:—

‘The Vice-Presidents, not exceeding twenty-one in number, shall include ten Vice-Presidents representing the

London area, nine Vice-Presidents representing such provincial areas as may be specified by the Council from time to time, one Vice-President representing the Royal Navy and one Vice-President representing the Merchant Navy’.

shall be amended to read as follows:—

‘The Vice-Presidents, not exceeding twenty-one in number, shall represent the United Kingdom and such other national areas as may be specified by the Council from time to time. The Council may decide that a national area be represented by more than one Vice-President’.

By-Law 42 at present reading as follows:—

‘There shall be Local Vice-Presidents representing the Institute at such places both at home and overseas as the Council may decide from time to time. The above-mentioned Local Vice-Presidents shall not be included in the Council; they shall be appointed by the Council, must be Corporate Members of the Institute and must be resident at the place for which they are appointed. Each Local Vice-President shall retire after three years in office and shall be eligible for re-appointment during such time as he shall remain resident as aforesaid’.

shall be amended to read as follows:—

‘There shall be Local Vice-Presidents and Corresponding Members representing the Institute at such places both at home and overseas as the Council may decide from time to time. The above-mentioned Local Vice-Presidents and Corresponding Members shall not be included in the Council; they shall be appointed by the Council with such powers and responsibilities as the Council may determine, must be Corporate Members of the Institute and must be resident at the place for which they are appointed. Each Local Vice-President or Corresponding Member shall retire after three years in office and shall be eligible for re-appointment during such time as he shall remain resident as aforesaid’.

By-Law 46 at present reading as follows:—

‘At each Annual General Meeting there shall retire from office such number (if any) of Vice-Presidents as may be necessary to bring the number of Vice-Presidents retiring at that Meeting, after taking into account Vice-Presidents retiring under By-Law 49, to seven. The Vice-Presidents so to retire shall be those longest in office. As between persons who were last elected on the same day, those to retire shall (unless they otherwise agree amongst themselves) be determined by lot’.

shall be amended to read as follows:—

‘At each Annual General Meeting there shall retire from office such number (if any) of Vice-Presidents as may be necessary to bring the number of Vice-Presidents retiring at that meeting, after taking into account Vice-Presidents retiring under By-Law 49, to seven. The Vice-Presidents so to retire shall be those longest in office. As between persons who were last elected on the same day, those to retire shall (unless they otherwise agree amongst themselves) be determined by lot. Vice-Presidents retiring from office pursuant to this By-Law shall be eligible for immediate re-election’.

Provided that the Council be and are hereby authorized to agree to any changes to the foregoing amendments which may be required by the Lords of Her Majesty’s Privy Council’.

2. ‘That for the purposes of By-Law 41, as amended by the last preceding Resolution, the present Vice-Presidents of the Institute be and they are hereby deemed to be appointed pursuant to such By-Laws as amended as aforesaid to represent the United Kingdom’.

The HONORARY TREASURER (Mr. J. Calderwood) said

## *Minutes of Proceedings of the Annual General Meeting*

the resolutions were set out clearly in the notice of the meeting but members might wish to have a brief explanation of why these alterations were desirable.

The Annual Report had made it clear that they were extending their activities overseas, and it was essential to have Vice-Presidents situated in any of the countries where there were considerable activities. Under the present By-Law 41, ten of the Vice-Presidents must represent London. There were also several others required in the various areas in this country, which left very little for the Overseas Sections. The revisions would still retain the number of Vice-Presidents at twenty-one, as these must not exceed the number of elected members of Council, but under the proposed revision, according to circumstances from time to time, the allocation to particular areas of these twenty-one Vice-Presidents might be revised; almost certainly fewer would represent London and more would represent overseas areas.

The second of the two resolutions, which was a very short one, was necessary as an interim measure to avoid complete chaos when the first resolution was brought into force. All the existing Vice-Presidents would be able to continue to the end of their present term of office under the second resolution, and changes would only be made under the new rules at the end of those various respective terms of office.

With that explanation, Mr. Calderwood proposed that the two resolutions be adopted.

MR. R. COOK, M.Sc. (Chairman of Council) seconded the motion.

*The resolutions were approved unanimously.*

### *Vote of Thanks to the Retiring President*

MR. R. COOK, M.Sc. (Chairman of Council) said it was customary on these occasions for the Chairman of Council to propose a vote of thanks to the retiring President and he was specially pleased to have this privilege because, if he might be excused a personal note, he had a very high regard and affection for Sir William Wallace. He would go further, and assert that these sentiments were shared by the entire Council, and, he had no doubt, by all the members who had had the pleasure of making his acquaintance. Sir William had many engaging qualities, but, if he might single out a few, he would refer to his very high sense of duty. He had worked very hard, he had a great gift of kindness and warm regard for the welfare of others, and an utter lack of pretentiousness, also a great sense of humour which had enlightened many of the functions over which he had presided with such grace and distinction. Sir Winston Churchill had once said of a distinguished colleague that "he banked his treasures in the hearts of his friends". Mr. Cook said he was sure that applied to the President. They all hoped he had enjoyed his term of office, and that they would have the pleasure of seeing him from time to time at their meetings and at their social functions for many years to come.

Mr. Cook then formally proposed a vote of thanks to be accorded to Sir William Wallace for his work during the year as President of the Institute.

MR. W. R. HARVEY (Vice-Chairman of Council) said he was very happy to second this vote of thanks to the President, and would like to emphasize the particular work he had done during his year of office in the Sections. During the year the President had visited every Section of the Institute. Mr. Harvey said he himself had had the privilege of being with him on many occasions, and could vouch for the pleasure and encouragement that he had given to the Sections.

*The motion of thanks was carried with acclamation.*

The CHAIRMAN, in reply, said he had really enjoyed his year of office because it was on very rare occasions they had honoured one of their own members by electing him as President.

Sir William said he wished seriously to say "Thank you" and to say how grateful he was to the Secretary and

the Council who had allowed him to attend the meetings, and to the Secretary and Staff particularly for their great kindness.

MR. P. S. ROSSETER (Member) said they were now drawing to the conclusion of another Annual General Meeting, and he would say a very successful one, with one exception. He hoped he was not out of order in mentioning this, which bore no relation to the nice things he was going to say later about the Council: but he did think the attendance at the meeting was very poor, and certainly did not do justice to the Institute and all they had said and published about it. He did not know why the attendance was so poor; there must be a reason, but he would like this remark to be minuted. Apart from the usual matters dealt with at an Annual General Meeting, which he would have thought of interest to all members, he thought they owed it, as Sir William had said, to those eminent engineers, people who had contributed the very best, to be present when they came along to receive their prizes, and he certainly would have thought the recipients were worthy of better acclamation than the small number present could give.

Casting aside his belligerent attitude, he would like to congratulate the members that had been elected to Council for the ensuing year. He noticed that numerous Members of Council had been elected on previous occasions, so they were old hands and must like punishment. For the information of those who were not aware of the commitments involved, there were eleven Council meetings each year, and approximately fifty sub-committee meetings, and most members of Council served on one, two or three of these sub-committees. There were the Section meetings, there being seven sections in the British Isles, and at least one major meeting which the Chairman or Vice-Chairman had to attend. This meant giving up a great deal of time.

He wished to refer to one item in the Report with particular reference to the Council, and that was the general emphasis on expansion overseas. He thought that this was wonderful, particularly the expansion in Canada, together with other things—that the Sections country by country were to be given greater independence, the appointment of a part-time paid Secretary in Canada, and of a Canadian representative on the Council, the formation of Sections in Toronto and Montreal, the joint meeting with the Society of Naval Architects and Marine Engineers in New York, and an increasing number of pages in the TRANSACTIONS with material from overseas. The whole tendency was this encouragement of overseas membership and what better country than Canada to concentrate on to start with? He was very pleased to see that.

The report said that initially there would be a financial loss, but he thought their Council was very far-seeing to go ahead on these projects. Seeds were being sown that might result in a loss for the time being, but they would come to fruition later, and he wished the Council every success.

Mr. Rosseter then formally proposed, with very great pleasure, a vote of thanks to the Council and Officers.

COMMANDER E. TYRRELL, R.N.(ret.) (Member) said he had great pleasure in being able to second Mr. Rosseter's proposal.

He thought Mr. Rosseter was very right in praising the Council for the work they were now doing and which was aimed at the expansion of the influence and membership of the Institute. Expansion overseas, however, was a difficult problem because of the distances involved and the difficulties of communication. It was therefore only likely to be successful if it were sustained whilst there was something solid behind it. He was sure that all would agree that the Council had shown by its actions in the past that it only undertook difficult work of this sort on behalf of the Institute if it was satisfied that there was a solid foundation for success.

An Institute of this sort, or indeed any other business or organization, could never stand still; it either went forward,

## *Minutes of Proceedings of the Annual General Meeting*

or declined. He was sure they would all agree that the Council had ensured, by the way it had dealt with the Institute's affairs during the last year, that it was going forward very rapidly and that there was no sign of a decline of any kind. He thought that the Council and Staff were to be congratulated on the singlemindedness of purpose they had shown over recent years in fostering the well being of the Institute. He had great pleasure in seconding the motion of thanks to the Council and to the Institute's Officers.

*The motion was carried with acclamation.*

MR. R. COOK, M.Sc. (Chairman of Council) replying, said Mr. Rosseter and Commander Tyrrell had said some very nice things about the Council and the Staff, and so far as the rest of them were concerned they had said no more than was due to them. Speaking as their Chairman, he would say they were a fine lot of chaps, a bit difficult at times, but always ready to help the affairs of the Institute. Of course, while it was always very pleasant to have their efforts praised, he hoped the proposer and seconder would not take it amiss when he said that Members of Council found their real satisfaction and reward in playing a part, be it ever so small, in forwarding the affairs of the Institute. They were all very proud of the Institute, and nothing pleased them so much as to see it a vigorous and flourishing organization. On their behalf he

would say "Thank you" for their very kind reception of the motion.

Finally, a word about the Staff: Mr. Cook said he cordially endorsed the praise that had been accorded to them. They were fortunate in their Staff, who gave time and enthusiasm to the cause of the Institute, without stint. It was up to them to be equally generous, and to see that the salaries and conditions of service were commensurate. During the year this was a matter that had not escaped the Council's attention. Their reception of the motion would doubtless please the Staff, and he thanked the meeting on their behalf.

### *Closing Remarks by the Chairman*

The CHAIRMAN said his duty was a very pleasant one, and he was indeed proud tonight that the Institute had elected as their President the Viscount Simon. Lord Simon had had many great responsibilities, culminating in his present position of Chairman to the Port of London Authority. In the name of everyone concerned, he welcomed Lord Simon as their new President for the ensuing year. (*Applause.*)

The Rt. Hon. the VISCOUNT SIMON, C.M.G., said he would like to thank the Chairman very much indeed for his very kind remarks.

*The proceedings then terminated.*

# Twentieth Annual General Meeting of the Education Group

Tuesday, 15th March 1960

The Twentieth Annual General Meeting of the Education Group of the Institute was held on Tuesday, 15th March 1960. The Chair was occupied by Professor G. H. Chambers, D.S.C., Chairman of the Group.

The Minutes of the preceding Annual General Meeting held on Tuesday, 17th March 1959, were confirmed and signed by the Chairman.

## *Annual Report*

The CHAIRMAN said that the first item in his report on the past year's work of the Executive Committee was the William Theodore Barker Award. The Council had been invited to administer an award from the interest on the sum of £3,000, which had been the purchase money from five marine engine models made by the late Commander W. T. Barker, and had been asked to make proposals for the use of this money. The Committee had proposed to the Council and the Council had approved that the sum of £100, the rough interest, should be awarded annually to a selected candidate passing the Ministry of Transport examination for the First Class Certificate of Competency and who wished to study for the Extra First Class Certificate.

The second item dealt with the Brighton Technical College Diploma. The Institute had received a request from the Principal that the College Diploma should be recognized as exemption in all or part from the Associate Membership Examination. The syllabus had been scrutinized by the Sub-committee for Examinations, and it had been agreed that the Diploma should exempt a holder from Parts I and II of the examination and also from Part III if it had been endorsed "for Industrial Administration".

A request had been received from the Directorate of Marine Engineering and Training in Bombay that students at the centre who had passed inter-science examinations of the Indian Universities should be exempted from the subject, English Language. The Examination Sub-committee had studied a number of syllabuses and had decided to recommend that, while in principle such exemption should be granted, each case should be considered on its merit in so far as was practicable.

The next item was the examination results, which were as follows: Common Preliminary Examination (17 candidates)—9 passed and 8 failed; Part I Examination (6 candidates)—

2 passed and 4 failed; Part II Examination (3 candidates)—1 passed and 2 failed; Part III Examination (2 candidates)—1 passed and 1 failed. Those were all the direct examination results.

That completed the formal business the Chairman had to report, but he asked the Committee to join him in thanking Mr. Franklin and his staff for the noble work they had done in connexion with the committee's work during the past year, and, in particular, for the help Mr. Franklin had given him personally.

## *Election of Chairman*

The CHAIRMAN said that the Executive Committee had nominated Mr. D. G. Alcock as Chairman for the ensuing session.

There being no further nominations, the CHAIRMAN declared Mr. Alcock elected.

## *Election of Vice-Chairman*

The CHAIRMAN said that the Executive Committee had nominated Mr. J. McAfee as Vice-Chairman for the ensuing session.

There being no further nominations, the CHAIRMAN declared Mr. McAfee elected.

## *Election of a Committee Member*

The CHAIRMAN said that there was a vacancy on the Executive Committee caused by the retirement, under the time rule, of Mr. G. F. Gatward, and that the Committee had nominated Mr. D. A. Eaton, B.Sc.(Eng.), to fill this vacancy.

There being no further nominations, the CHAIRMAN declared Mr. Eaton elected.

The CHAIRMAN added that the Committee had recommended that he himself should continue to serve in a co-opted capacity for a further year.

This was agreed.

## *Date of Next Annual General Meeting*

It was agreed that the next Annual General Meeting should be held on Tuesday, 21st March 1961.

This concluded the formal business of the meeting. An informal discussion on "The Part the Institute Should Play in Relation to Education" was then opened by Commander A. F. Smith, R.N.(ret.) (Member).