

# *Transactions of the* INSTITUTE of MARINE ENGINEERS

FOUNDED 1889.

INCORPORATED BY ROYAL CHARTER, 1933

*To Advance the Science and Practice of Marine Engineering.*

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Patron: HIS MAJESTY THE KING

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Vol. LII.



Session 1940-41.

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President: SIR PERCY E. BATES, Bt., G.B.E.







The President.  
SIR PERCY E. BATES, Bt., G.B.E.

### SIR PERCY E. BATES, Bt., G.B.E.

Sir Percy Elly Bates was born at Liverpool on May 12th, 1879, son of the second Baronet and Constance, daughter of the late Mr. S. R. Graves, M.P., of Liverpool. He was educated at Winchester, and began his career in 1898 as an apprentice with Wm. Johnston & Co., Ltd., shipowners of Liverpool. Since 1900 Sir Percy has been a partner in the firm of Edward Bates & Sons, Merchants, of Liverpool, of which concern he is now principal. He was elected a director of the Cunard Steam Ship Co., Ltd., in 1910, deputy-chairman in 1922 and chairman in 1930; since 1934 he has served as director and chairman of Cunard White Star Ltd. He has other business interests as chairman of Charles Howson & Co., Ltd., and deputy-chairman of Thos. & Jno. Brocklebank, Ltd., and as a director of Port Line, Ltd., Midland Bank, Ltd., Cunard House, Ltd., Midland Bank Executor & Trustee Co., Ltd., Great Western Railway and Hudson's Bay Co. Overseas Settlement, Ltd.

Sir Percy has a record of distinguished public

service and during the war of 1914-1918 he served with the Ministry of Shipping as Director of Commercial Services. From 1908 to 1910 he was a member of the Mersey Docks and Harbour Board, and from 1920 to 1921 he served as High Sheriff of Cheshire, of which county he was appointed a Justice of the Peace in 1924. His services have been recognised by the distinctions of Knight Grand Cross of the Order of the British Empire, Officer of the Legion of Honour, and Commander of the Order of the Crown of Italy.

In 1903 Sir Percy succeeded his brother and became the fourth Baronet. In 1907 he married Mary Ann, daughter of the late Very Revd. W. Lefroy, Dean of Norwich. They have one son, Edward Percy, aged 25. Sir Percy's favourite sports are salmon-fishing, curling, shooting and golf, and his clubs are the Beefsteak, Oriental, Windham's, The Flyfishers' and The Royal Automobile. He holds the rank of Captain in the Royal Naval Reserve.

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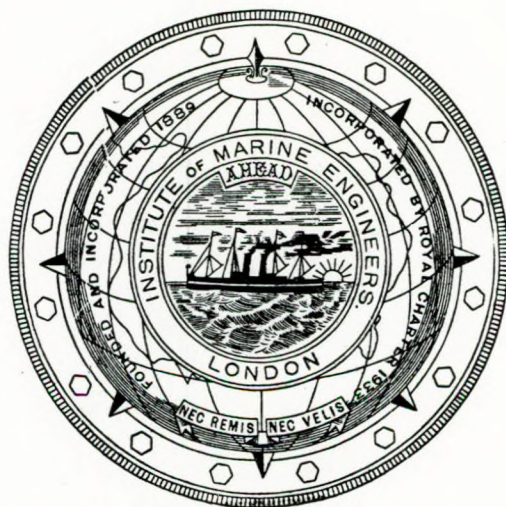
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APRIL, 1941

Session  
1940



Vol. LII  
No. 13

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SESSION  
1940.



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Part 13.

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President: Sir PERCY E. BATES, Bt., G.B.E.

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## FIFTY-SECOND ANNUAL REPORT AND FINANCIAL STATEMENT AND MINUTES OF ANNUAL GENERAL MEETING

Held on Friday, March 14th, 1941, at 12 noon, at the Connaught Rooms,  
Great Queen Street, London, W.C.2.

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PAPERS CONTRIBUTED DURING THE SESSION

JANUARY 1st TO DECEMBER 31st, 1940.

CONTRIBUTIONS BY CORRESPONDENCE.

INSTITUTE NOTES.

TECHNICAL PRESS ABSTRACTS.

TECHNICAL PRESS EXTRACTS.

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Editor: The Secretary.





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## SESSION 1940.

*President:* SIR PERCY E. BATES, Bt., G.B.E.

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*Vice-Chairman:* †T. A. CROMPTON.

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\*Retire in 1941.

†Retire in 1942.

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\* Deceased January, 1941.



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# THE INSTITUTE OF MARINE ENGINEERS

INCORPORATED BY ROYAL CHARTER.

PATRON: HIS MAJESTY THE KING.

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## PROGRAMME OF THE FIFTY-SECOND ANNUAL GENERAL MEETING

HELD ON

FRIDAY, MARCH 14th, 1941, at 12.0 noon  
at the CONNAUGHT ROOMS, LONDON, W.C.2.

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Chairman . . . SIR PERCY E. BATES, Bt., G.B.E.

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Introductory—THE CHAIRMAN.

Scrutineers retire to examine Voting Papers.

Annual Report—THE SECRETARY.

Financial Statement—THE HONORARY TREASURER.

Adoption of Reports—

Proposed by A. F. C. TIMPSON, M.B.E.                      Seconded by E. F. SPANNER, R.C.N.C. (Ret.)

Presentation of Awards by the Chairman—

Denny Gold Medal—S. A. SMITH, M.Sc.

Institute Silver Medal—Professor E. FORSBERG.

Junior Silver Medal and Premium—R. A. COLLACOTT, B.Sc.

Extra First Class Engineer's Medal—Lieut. (E) J. F. TUCKER, R.N.

Vote of thanks to the PRESIDENT—

Proposed by F. W. YOULDON (Chairman of Council).

Seconded by T. A. CROMPTON (Vice-Chairman of Council).

Report of Scrutineers—

A. E. WHITESIDE and G. B. PLOWS.

Vote of thanks to Scrutineers and Honorary Auditors, and appointment for 1941—

Proposed by H. MACKEGG.

(Honorary Auditors, 1940—W. D. HECK, B.Sc. and H. J. VOSE).

Vote of thanks to Council and Officers—

Proposed by R. H. GUMMER.

Reply by F. W. YOULDON (Chairman of Council).

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## Minutes of Proceedings AT THE ANNUAL GENERAL MEETING

*MARCH 14th, 1941.*

CHAIRMAN: THE PRESIDENT

The fifty-second Annual General Meeting of The Institute was held at the Connaught Rooms, Great Queen Street, London, W.C.2, on Friday, 14th March, 1941, at 12 noon.

The President, Sir Percy E. Bates, Bt., G.B.E., presided over a large gathering of members, and was supported by the Chairman of Council, Mr. F. W. Youldon, the Vice-Chairman of Council, Mr. T. A. Crompton, the Honorary Treasurer, Mr. Alfred Robertson, C.C., and the Secretary, Mr. B. C. Curling.

**The President**, opening the proceedings, was

cordially welcomed by the meeting, and in his introductory speech referred to the excellence of the work and direction of The Institute implied by the attendance, which was very much larger than was to be expected in these difficult days. Proceeding to the business of the meeting he requested the Scrutineers, Messrs. A. E. Whiteside and G. B. Plows, to retire for the purpose of examining the voting papers and of reporting to him in due course. The Scrutineers thereupon retired.

**The President** next called upon the Secretary to read the Annual Report as follows:—



# Annual Report of the Council.

President. Re-Nomination of Sir Percy Bates, Bt., G.B.E.

The acceptance by Sir Percy Bates of a unanimous invitation to be nominated for a third year of office as President has given the Council much satisfaction, which will be shared by all our members at home and overseas.

## Appointment of an Emergency Committee to Exercise the Powers of the Council.

Towards the close of 1940 it became apparent that conditions in London would prevent the holding of regular meetings of the Council. The Chairman of Council proposed, in view of the provisions of By-Law 49, that the Council should delegate their powers for the remainder of the session to a Committee of three, consisting of the Chairman of Council, the Vice-Chairman of Council and the Honorary Treasurer.

As a result of a postal questionnaire the proposal received the unanimous approval of the Council on the understanding that the Emergency Committee would co-opt additional Members should this be found desirable. During the latter part of the past session, therefore, the affairs of The Institute have been carried on on this basis. The Emergency Committee has been assisted by the Chairmen of the various standing Committees in dealing with matters which would normally have been referred to those Committees for their reports and recommendations.

With the exception of the publication of the TRANSACTIONS and the conduct of the annual examinations, all the normal activities, i.e. ordinary meetings for the reading and discussion of papers, junior lectures, senior and junior social events, and meetings of the standing and special committees

have remained in abeyance throughout the Session.

The success of the luncheon following the Annual General Meeting in March, 1940, justified the similar arrangement which has been made on this occasion.

## Membership.

The inevitable slowing down in the recruitment of new members which occurred during the past year of hostilities, and a death rate increased by losses through enemy action, have together effected a temporary interruption of the steady increase of membership which has been a feature of our Annual Reports for many years past. The changes in the Membership Roll, detailed in the accompanying table and chart, have resulted in a net decrease of 56 in the total membership.

In the present abnormal circumstances the Council must rely largely upon the personal efforts of members to induce suitably qualified candidates to seek election in numbers sufficient to offset the losses which must be anticipated during the War. Members are urged to realize the importance of their making every effort to recruit new members in order to assure The Institute's position on the return of normal conditions. A vigorous and growing membership will then ensure the full pursuit of The Institute's aims and the resumption of its many pre-war activities.

## Deaths.

The losses by death, which include a regrettably large number of war casualties, are recorded in the obituary notices at the end of this Report. The sympathy of the Council and Members has been extended to the relatives of the deceased. The Institute has suffered an irreparable loss by the

Grade.	1st Jan., 1940.	Transfers		Elected.	Died.	Resigned.	Lapsed.	Total 31st Dec., 1940.
		From	To					
Past Presidents ...	16							15
Hon. Members ...	2							2
Members ...	3,177		9	59	45	55	46	3,099
Companions ...	56				1	5		50
Associate Members ...	416	1	2	4	6	3	11	401
Associates ...	432	10	9	48	3	3	6	467
Graduates ...			88					88
Students ...	87	97	41	20			5	46
Probationer Students	38	41		4			1	
Totals ...	4,224	149	149	135	56	66	69	4,168

These statistics incorporate the following changes as a result of the amendments to the By-Laws passed at the Extraordinary General Meeting held on the 16th July, 1940, viz. :—

- The item "Graduates" appears for the first time in the table. On the new By-Laws becoming operative the existing Student membership was automatically transferred en bloc to the new grade of Graduate, with the exception of five Students, who, being under 20 years of age and not having completed their apprenticeship, were not yet eligible for such transfer.
- The item "Probationer Students" is included in the table for the first time. Under the new By-Laws Probationer Students, previously a probationary class not included in the Membership Roll and therefore not taken account of in past statistics, were transferred to the grade of Student. There being no longer provision in the By-Laws for the grade of Probationer Studentship, this item will not appear in next year's statistics.



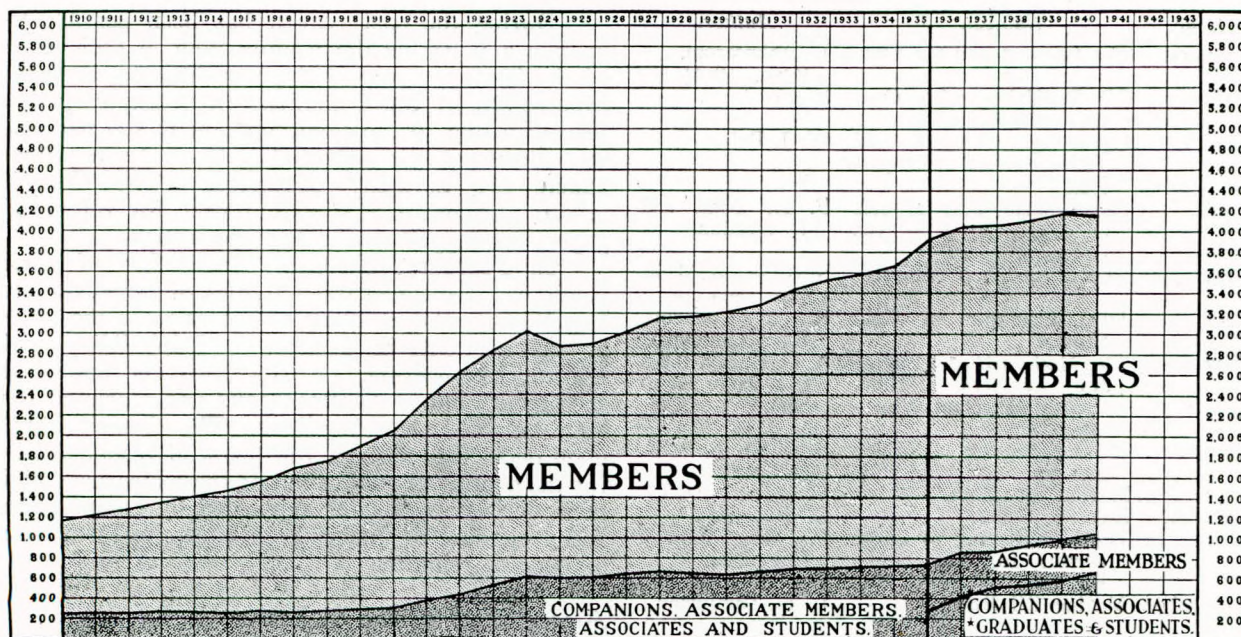


Chart of Membership.  
(\*Graduates included for the first time).

death of Mr. John Henry Silley, O.B.E. (Past President and Member) to whom a tribute was paid in the January, 1941, issue of the *TRANSACTIONS*. Mr. Silley made the fullest use of the high position he had attained by his remarkable enterprise to be of service to The Institute and to his fellow marine engineers. The Guild of Benevolence, which was founded and financed by his efforts, is one of many living monuments to his generosity. Mr. Silley died assured of the lasting esteem and affection of the members of his profession, and of a foremost place in the annals of The Institute. Among others who have passed away Mr. James Brown, C.B.E. (Vice-President for Greenock) and Mr. William George Winterburn (Honorary Vice-President) will be long remembered by their many friends and colleagues amongst The Institute membership. Another notable death during the past year was that of Mr. J. W. M. Sothern, whose name and accomplishments are familiar to most marine engineers.

#### Council.

Commander (E.) A. W. Richardson, R.N., who was elected Vice-Chairman of Council for the 1940/41 Session, reported at the May Council meeting that he had been called up for naval service and tendered his resignation as Vice-Chairman and Member of Council. In accepting Commander Richardson's resignation from the office of Vice-Chairman the Council extended to him a unanimous request that he retain his Membership of the Council for the remainder of his period of office, and Commander Richardson agreed to do so.

Mr. T. A. Crompton was elected Vice-Chairman

of Council in succession to Commander Richardson.

At the October meeting of the Emergency Committee the resignation of Mr. H. R. Tyrrell, B.Sc., as Associate Member of Council was accepted with regret on his impending departure for India. Mr. J. H. Graves was appointed to fill the casual vacancy for the remainder of Mr. Tyrrell's term of office.

#### Vice-Presidents.

*Japan*.—A casual vacancy having occurred for the Vice-Presidency in Japan by the return of Mr. H. D. Buchanan to this country, the Council appointed Mr. A. R. Riddell (Kobe) as his successor. This appointment is subject to confirmation at this meeting.

*Greenock*.—To fill the vacancy caused by the recent death of Mr. James Brown, the Council have nominated Mr. Murdoch McAffer for election at this meeting.

The remaining retiring Vice-Presidents were nominated for re-election in the postal ballot.

#### Representatives on Outside Bodies.

No new appointments of Institute representatives have been made during the year.

#### Papers.

As a substitute for papers which normally would have been read and discussed at The Institute during the year, the following have been obtained and published in the *TRANSACTIONS*, in some cases with discussion by correspondence:—



<i>Issue.</i>	<i>Subject.</i>	<i>Author.</i>
January.	The Chemist and the Ship.	J. Holmstrom, B.Sc., Ph.D.
February.	Oil Purifying with Continuous Lubrication.	E. Forsberg.
March.	Operating Results of Turbo-electric Propulsion.	W. J. Belsey.
April.	Experiments with Models of Cargo-Carrying Type Coasters.	F. H. Todd and J. Weedon.
May.	The Powering of Ships.	S. A. Smith, M.Sc. (Member).
June.	Heat Insulation of Cold Stores.	R. A. Collacott, B.Sc. (Student).
July.	The Modern Diesel Engine for Coasters, Fishing Craft and Inland Waterway Ships.	A. C. Hardy, B.Sc. (Associate Member).
August.	Marine Steam Turbine Design.	S. A. Smith, M.Sc. (Member).
September.	Marine Insurance.	V. Dover, F.C.I.I.
October.	Steering Gears.	G. Buchanan
November.	The Manufacture of Large Drums for Water-tube Boilers.	P. W. McGuire (Member).
December.	Marine Oil Burning.	J. T. Tomlinson.

Although the papers have not been read, the Special Committee of Adjudicators has considered them in the customary manner for the award of The Institute Medals, and on their recommendation the Council have unanimously awarded:—

*The Denny Gold Medal* to Mr. S. A. Smith, M.Sc., for his paper entitled "Marine Steam Turbine Design".

*The Institute Silver Medal* to Professor E. Forsberg for his paper entitled "Oil Purifying with Continuous Lubrication", and

*The Junior Silver Medal and Premium* to Mr. R. A. Collacott, B.Sc., for his essay entitled "Heat Insulation of Cold Stores".

## Transactions.

In the early part of the year paper rationing made it necessary for the Committee to consider steps to ensure that fullest use was made of the restricted space available in the TRANSACTIONS. By a reduction in size of the type (i.e. from 10-point to 8-point) and by an increase in the column width, it has been found possible to include in the 16 pages now allotted to the Abstracts Section practically as much material as was included in the 24 pages previously allocated to this section. Several other smaller economies of space and the use of the wider column have avoided any noticeable change in the remainder of the TRANSACTIONS. The size of the TRANSACTIONS will of course continue to depend upon the current rationing restrictions, but the Council desire to assure Members that the regular issue of the TRANSACTIONS in the fullest form possible will continue to receive their most careful attention as being of prime importance in the activities of The Institute under present conditions.

During the past year it has been possible to include a paper as the leading item in each issue of the TRANSACTIONS, but great difficulty is being experienced by the Committee in maintaining this feature owing to the preoccupation in the national war effort of the potential authors from whom papers are normally obtainable. The Council accordingly make a special appeal for offers of papers or suggestions in this connection.

In February, 1940, the Institution of Civil Engineers suspended the activities of the Abstracts Panel and withdrew their co-operation in the issue of the abstracts in Section 3, Shipbuilding and Marine Engineering, i.e. the abstracts published each month in our TRANSACTIONS and reprinted for issue separately to subscribers. The Council thereupon decided to assume full financial responsibility for the continued publication of these abstracts, and their decision was later supported by co-operation and a measure of financial aid from the Institution of Naval Architects.

## Amendments to the By-Laws.

The amendments to the By-Laws (consisting of new regulations governing the admission of Students and Graduates) consequent upon The Institute's co-operation in the Common Preliminary Examination scheme of the Engineering Joint Examination Board, which were passed at the Extraordinary General Meeting held on July 16th, 1940, have been allowed by His Majesty's Privy Council under Order of Council dated 2nd October, 1940. Full details of the new regulations, which are now in operation, were given on page 194 of the October TRANSACTIONS.

## Associate Membership Examination.

Two candidates entered for the Examination in all subjects, and one from Colombo for Part 1 only. Of the first-mentioned, J. R. E. Clark (Belfast College of Technology) passed in all subjects; the Colombo candidate, B. E. L. Deckker, was successful in Part 1.

## Studentship and Probationer Studentship Examinations.

Twenty-six candidates entered for the Studentship Examination; the following eleven were successful and have been elected as Students:—

E. Henshall, J. Lowson, J. M. Pratt (Rutherford Technical College); J. B. Bremner, E. Grenfell, C. A. Rees, A. E. Richards, E. W. Youldon (Falmouth Technical School); R. Bickenson (H.M.S. "Repulse"); S. Hutchinson, B. Hildrew (Sunderland Technical College).

The following gained the Council's prizes for attaining highest marks in the various subjects:—

R. D. Hewitt (Dover): English and General Knowledge.  
A. E. Richards (Falmouth): Electrotechnology.  
B. Hildrew (Sunderland): Mathematics,



Applied Mechanics, Machine Drawing and Heat Engines.

B. Hildrew also gained the prize for the highest aggregate marks.

The following gained distinction (85 per cent. or more marks) in the various subjects:—

Electrotechnology: A. E. Richards (Falmouth).

Mathematics: B. Hildrew (Sunderland).

Applied Mechanics: A. E. Richards (Falmouth), B. Hildrew (Sunderland).

Heat Engines: A. E. Richards (Falmouth), B. Hildrew, S. Hutchinson (Sunderland).

R. D. Hewitt and R. J. H. Stewart (Dover) qualified for election as Probationer Students.

The Studentship and Probationer Studentship Examinations are now superseded by the Common Preliminary Examination of the Engineering Joint Examination Board.

#### Lloyd's Register Scholarship.

Thirteen candidates entered for the 1940 Scholarship, which was awarded to B. Hildrew of Sunderland Technical College, an apprentice of the North Eastern Marine Engineering Co., Ltd. He is continuing his studies at the Sunderland Technical College.

J. Sloan, who won the previous year's Scholarship, passed the Matriculation Examination last July in French, Mathematics, Mechanical Drawing and Mechanics and in English in the September Examination. In view of the war and of the fact that he is employed in the drawing office of Messrs. Harland & Wolff, Ltd., Lloyd's Register Committee have agreed to the postponement of his scholarship course of studies for the time being.

R. Magill, who won the Scholarship in 1938, is continuing his studies at Queens University, Belfast.

J. A. Smith, the winner of the 1937 Scholarship, has gained the degree of B.Sc.(Eng.) Hons., London, and has returned to his employment with Messrs. Vickers-Armstrongs, Barrow. (Further report pending).

#### Institute Prizes for Students of Technical Colleges in Marine Centres.

The Institute's annual prizes for Students of Heat Engines at technical colleges and schools in marine centres have been awarded as follows:—

Falmouth Technical School: A. Richards.

Municipal Technical College, Hull: B. Taylor.

University College, Southampton: M. J. Booty.

The Polytechnic, Regent Street: D. S. Jenkinson.

Cardiff Technical College: A. C. Gronhaug.

West Ham Municipal College: R. V. Mathews.

Swansea Technical College: C. V. Irons.

Technical College, Sunderland: F. Corradine.

Dundee Technical College: A. A. Campbell.

Plymouth and Devonport Technical College: S. G. Saunter.

Portsmouth Municipal College: R. P. Newman.

The Marine School of South Shields: J. Hammill.

The Royal Technical College, Glasgow: J. S. Brownlie.

Robert Gordon's Technical College, Aberdeen: R. I. Cocker.

College of Technology, Belfast: W. Lismore.

L.C.C. School of Engineering and Navigation, Poplar: N. W. Henney.

Greenock Technical School: J. P. Creighton.

Birkenhead Technical College: J. C. Allan.

City of Liverpool Technical College: G. J. McLellan.

Constantine Technical College, Middlesbrough: H. S. Evans.

Rutherford Technical College, Newcastle-on-Tyne: W. Temple.

West Hartlepool Technical College: W. White.

The Woolwich Polytechnic: J. D. Annear.

#### H.M.S. "Worcester".

Arising from a suggestion by Mr. John Weir, the Council have decided to award a special prize annually to the cadet in H.M.S. "Worcester" who attains the highest general proficiency in marine engineering.

#### Extra First Class Engineer's Certificate Examination—Institute Award.

On the recommendation of the Chief Examiner of Engineers, Ministry of Shipping, The Institute Medal has been awarded to Lieut. (E.) J. F. Tucker, R.N., who is now an Associate Member of The Institute.

#### National Certificates with Special Reference to Marine Engineering.

During the year 33 Ordinary Certificates and 53 Higher Certificates with special reference to Marine Engineering have been endorsed by our President as follows:—

##### ORDINARY CERTIFICATES.

Sunderland Technical College ...	12
Cowes Evening Institute and Engineering School ...	1
The Heriot-Watt College, Edinburgh ...	9
Kirkcaldy Technical School ...	3
Lauder Technical School, Dunfermline ...	3
Fife Mining School, Cowdenbeath ...	5

##### HIGHER CERTIFICATES.

Sunderland Technical College ...	3
Birkenhead Technical School ...	5
Cowes Evening Institute and Engineering School ...	7
Barrow-in-Furness Technical College	18
Dagenham, South East Essex Technical College and School of Art ...	4
Erith Technical College ...	6
West Hartlepool Technical College...	10



### Examinations Board and Education Group.

The activities of the Examinations Board and of the Education Group during the past year, apart from The Institute examinations to which reference is made elsewhere in this Report, have been confined to the work of a joint sub-committee appointed to advise the Council on the changes in the By-laws and regulations of The Institute necessitated by the adoption of the Common Preliminary Examination.

### Junior Section.

No meetings of the Junior Section were held during the past year. The special interests of junior members have been served by the inclusion in the TRANSACTIONS of a section devoted to subjects of particular value to the young engineer. It is proposed to continue this section and in course of time to include therein series of articles which should prove of considerable value to the junior marine engineer. Reference is made hereunder to the publication of these articles in book form.

### Publication of Books

To meet an evidently widespread desire the Council decided to publish in book form the series of articles which have appeared in the Junior Section of the TRANSACTIONS under the title "Electricity Applied to Marine Engineering", by W. Laws, M.Sc. The rapid sale of this book since its issue in the Autumn of last year indicates that the success of this venture is assured. The book is priced at 5s. 6d. plus 4d. postage.

The stock of the first edition of "THE RUNNING AND MAINTENANCE OF MARINE MACHINERY" Handbook having approached exhaustion, the Council approved the publication of a second, revised and enlarged edition. This new edition is now on sale at 7s. 6d. plus 7d. postage per copy.

The Council desire to record their special thanks to Mr. W. Laws, the author of "Electricity Applied to Marine Engineering", and to Messrs. W. Dowling, S. A. Smith, H. S. Humphreys, C. Wallace Saunders, G. Ormiston, J. D. Farmer, J. R. Beveridge, and G. Buchanan, the authors of the various sections of the new edition of "THE RUNNING AND MAINTENANCE OF MARINE MACHINERY" Handbook for their loyal and willing co-operation which has made the issue of these valuable publications possible in spite of prevailing difficulties.

It is the Council's intention similarly to publish in book form the series of articles on "Naval Architecture and Ship Construction" now appearing in the Junior Section of the TRANSACTIONS, for which the Council are greatly indebted to the author, Mr. R. S. Hogg. It is hoped to follow this series with others on subjects of special interest to junior members and suitable for subsequent publication in book form.

### Library.

Members are reminded that a new edition of the Library Catalogue was published in 1939 and

is available to members at 1s. 2d. per copy post free.

There was a general reduction of about 40 per cent. in the output of new books in 1940, and an almost corresponding reduction in the number of new books on marine engineering, shipbuilding and allied subjects. As hitherto, every effort has been made to ensure that copies are available in the Library of all new books of particular interest to members. The Council again desire to tender their special thanks to the numerous members and others who have rendered invaluable assistance by reviewing these books.

Subject to day-to-day exigencies the Library is open for personal access from 10 a.m. to 4 p.m. daily (except Saturdays, 10 a.m. to 1 p.m.). The Secretary will be glad to issue books on loan through the post to members on application being made in writing to High Wycombe. Overseas members are reminded of the service available on request for the selection and purchase of books to meet special requirements.

### Essay Competitions.

On account of adjudicating difficulties associated with current conditions, the Council have suspended until further notice the annual competitions for the various awards for essays.

### Akroyd Stuart Award Competition.

Members are reminded that the closing date for the receipt of entries for the Akroyd Stuart Award Competition for the period 1939/41 is 30th April, 1941.

### Premises.

The Institute premises have been vacated throughout the past year, the staff work having been carried on from the emergency office accommodation at High Wycombe.

On two occasions since the large-scale air raids began in September the building has suffered damage from bomb blast. This has been temporarily repaired, and as far as possible the premises have been kept in their normal good condition by the Caretaker.

### Staff.

J. Willis, assistant to the Caretaker, was called up for military service in July. He elected to serve in the Merchant Navy and is now in the employ of the Prince Line. As in the case of other members of the staff called up for national service, Willis' post will remain open for his return.

R. Cane, junior clerk, is still with his unit, the Royal Army Pay Corps.

The Council have appointed Miss N. Jordan and Miss F. H. Marshall as temporary clerical assistants.

### Guild of Benevolence.

Further reference must here be made to the death of Mr. John H. Silley, to whose initiative and active personal interest the foundation and financing



of the Guild are attributable. In the years to come, as in the past, marine engineers and their dependants who suffer misfortune will have reason to remember with gratitude Mr. Silley's leading part in the founding of the Guild.

The report on the past year's work of the Guild will be presented at the Annual General Meeting to be held on the 25th April, 1941.

During the period covered by the Report the funds of the Guild have been increased by a legacy of £100 from the late Mr. F. W. Bridges and a bequest of £25, by the late Mr. W. W. Buckton (Member). A still unsatisfactory aspect of the Guild's affairs is that the additions to the Membership Roll in the past year have hardly more than offset normal losses. The Council and the General Committee of the Guild view this trend with anxiety and desire to remind Members of The Institute of the effort which must be made to place the Guild's finances and numerical strength in a condition to meet the increasing demands on its funds which must be expected to occur during and after the present hostilities, of which the Merchant Navy is experiencing a relatively formidable proportion.

#### Overseas Membership—New York.

A luncheon meeting of the New York members was held at India House, New York City, on 17th October, 1940. Mr. J. Lewis Luckenbach (Vice-President) presided, and twelve other members were present.

Mr. Luckenbach's report adds: "There was wholehearted acclaim as to the manner, through the trying conditions which we know exist, in which The Institute has continued issuing publications and papers.

A discussion of the troubles of to-day followed, and the members present unanimously offered their services and support in any way in which they might be used to The Institute and the British Commonwealth for such value as they might be, and further extend most hearty congratulations to those abroad for the untiring effort which they are showing in working to preserve liberty, so dear to us all".

The Council's appreciative acknowledgments have been conveyed to Mr. Luckenbach and his fellow-members.

#### National Service—Central Register.

The operation of the Central Register has, so far, scarcely affected marine engineers. Any additions which may have been made to the professionally qualified staffs of the naval and mercantile ship-building, ship repairing and marine engineering industries have been effected through channels ordinarily existing within those industries.

The Council wish to record their special thanks to Mr. H. J. Vose (Vice-President) for valuable services voluntarily rendered by him to the Ministry of Labour during the past year in connection with

the classification of the Marine Engineering section of the Central Register.

#### Publicity.

The circumstances which have necessitated the temporary suspension of the activities of the Engineering Public Relations Committee (see Representatives' Reports) have also prevented the Council's Publicity Committee from functioning during the past year.

As in the last war—as, it would seem, at all times, whether in peace or war—the amount of publicity given to deeds of heroism by the engineering personnel of Merchant Ships is almost nil.

Unfortunately, at the present time the need for publicity on behalf of sea-going engineers was never more sharply evident to those so engaged or to the relatively few ashore who, in the course of their professional duties, are able to reconstruct in imagination many of the ordeals by enemy action experienced in the engine-rooms of the Merchant Fleet.

An uninformed layman, reading the typical press description of any of these actions, might almost infer that a ship's engines ran without human aid or attention, so rarely does one find the engineering personnel mentioned. Yet there are ships which would never have survived some of these enemy actions but for feats of sustained heroism and endurance performed by the chief engineer and his staff, possibly unknown to their fellow officers and men, to whom fall the honours when such are being awarded.

The problem of ensuring that information on these occurrences reaches the Ministry of Shipping and the public is having the attention of the Emergency Committee of the Council, and is the subject of recent correspondence with the Minister of Shipping. The removal of such a cause for dissatisfaction among marine engineers as this persistent lack of recognition would be an event long overdue.

#### Reports of Representatives on the various Outside Bodies.

*The Engineering Joint Council.* (Representatives: Mr. R. Rainie, M.C.; Co-opted, The President).

Following the appointment by the Government of a Scientific Advisory Committee to co-ordinate scientific research and development for the purpose of strengthening the country's war effort, at the instance of the Institution of Electrical Engineers a meeting of the Joint Council was convened to consider what steps might be taken to obtain the fuller assistance of the engineering industry in the war effort which would be possible by better co-ordination within the industry and with scientists and Government departments. As a result of the Council's deliberations a letter has been sent to the Prime Minister, signed by the Presidents of all the Constituent Institutions, urging that the Government should appoint, in parallel with the Scientific Advisory Committee, an Engineering Advisory



Committee with some such terms of reference as the following:—

- (1) To advise the Government on engineering problems.
- (2) To advise Government Departments on the selection of organisations or of individuals for particular lines of engineering development.
- (3) To bring to the notice of the Government promising new engineering developments which may be of importance to the war effort.
- (4) To advise the Government on methods of initiating and speeding up the solution of new engineering problems arising from the war and on arrangements for rapid production of plant and apparatus.
- (5) To advise the Government on methods of obtaining and training personnel for technical duties in the Services.
- (6) To appoint, with the approval of the Government, sub-committees to deal with specific branches of engineering and panels to study specific problems.
- (7) To act in co-operation with the Scientific Advisory Committee.

*The Engineering Joint Council, Committee on Co-operation between Members resident overseas.* (Representative: Mr. J. McLaren).  
Nothing to report.

*The Engineering Joint Examination Board.* (Representatives: Messrs. F. H. Reid, B.Sc., Wh.Ex. and R. F. Thompson, B.Sc.).

Two meetings of the Board were held during 1940, i.e., on the 1st February and 31st July. The scheme for the Common Preliminary Examination was completed and approved and the Regulations and Standing Orders have now been published in booklet form, giving full particulars of the scheme. The first examination is to be held in April, 1941. Applications to sit for the examination must be made through one of the Constituent Institutions.

*Lloyd's Register of Shipping, Technical Committee.* (Representative: Mr. Sterry B. Freeman, C.B.E., M.Eng.).

No meeting of this Committee has been held during the past year.

*The Merchant Shipping Advisory Committee.* (Representative: Mr. J. B. Harvey).

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

*Corrosion Research Committee of the British Non-Ferrous Metals Research Association.* (Representative: Mr. J. M. Dewar).

During the year part of the Association's work and staff, including the research work on the corrosion of condenser tubes which is of particular interest to marine engineers, has been transferred to the Cooper Technical Bureau at Berkhamsted,

where excellent laboratory facilities have been obtained. A considerable proportion of the time of the Association's staff engaged on this work has been taken up in dealing with enquiries relating to service behaviour of condenser tubes, but the experimental work is continuing.

The behaviour of new alloys, in particular copper-nickel-iron alloys, in sea water, including their resistance to impingement attack and to attack under deposits is being investigated.

The influence of biological factors on the corrosion behaviour in service of condenser tube materials has been emphasized by the examination of several cases of failure. A paper, "The Inhibition of Sulphate Reducing Bacteria by Dyestuffs", by T. H. Rogers, D.I.C., was published in the *Journal of the Society of Chemical Industry*, February, 1940. This shows that the development of these organisms can be inhibited by certain dyestuffs, and the corrosion consequent on the release of hydrogen sulphide by these bacteria is thereby prevented. Mr. Rogers, the Association's investigator, also gave a short account of the influence of bacteria on the corrosion of non-ferrous metals based on experience in condenser tube corrosion research to the Society of Chemical Industry in March, 1940. This stresses the action of more complex sulphur compounds which are produced by a biological action and act as corrosion accelerators. These compounds arise from the decomposition of sea-weed and other organic matter by bacteria. Recent work has been concerned with the comparative resistance of various non-ferrous metals and alloys to the action of sea water contaminated by these sulphur compounds, and it has been shown that for each alloy there is a critical concentration of such compounds which produces the maximum attack. When this critical concentration is exceeded, a protective film is formed over the whole surface of the alloy and stifles attack completely.

An investigation has recently been started on the intercrystalline failure of brasses containing the Beta constituent. These materials, commonly known as high tensile brasses or manganese bronze, can vary considerably in composition and properties and are occasionally subject to intercrystalline attack by certain media including sea water. Considerable progress has been made in determining the influence of composition upon the tendency to this type of attack. An attempt has been made by the collection of information from manufacturers to correlate the composition and properties of the high strength brasses and to form a basis for a more precise specification. It is hoped that the outcome of this work will be to standardize improved high tensile brasses for marine and other engineering purposes.

Investigations on the welding of non-ferrous metals have included the determination of the effect of purity of aluminium on the susceptibility of welds to corrosion by sea water. It is shown that impurities tend to segregate to grain boundaries at or near



the weld metal and that these grain boundaries are more susceptible to attack.

Further work is in progress on the welding of aluminium alloys containing magnesium which are particularly suitable for service in marine conditions owing to their superior corrosion resistance.

Other researches of general engineering interest include those on the casting of non-ferrous metals and the factors affecting the soundness of bronze castings. A simple and practical method of removing the gas from bronze, gunmetal and phosphor bronze has been devised, which should result in considerable improvement in foundry technique and in the mechanical properties of the cast material.

*Heat Engine Trials Standing Committee.* (Representatives: Messrs. J. Carnaghan and G. J. Wells).

Nothing further to report.

*Marine Oil Engine Trials Committee.* (Representatives: Messrs. Sterry B. Freeman, C.B.E., M.Eng., and H. S. Humphreys).

No meeting of this Committee has been held during the past year.

*L.C.C. School of Engineering and Navigation.* (Representative: Mr. S. N. Kent).

The Junior Technical School is continuing to give full time tuition to over 100 boys at Bridgewater, and the number of students is even greater than the number evacuated with the school at the outbreak of war.

The Marine Engineering and Navigation Departments have been transferred to the City Literary Institute, Stukeley Street, Drury Lane, W.C.2. Although this change of address and war conditions caused a temporary reduction in the number of students attending, the number now is nearly back to normal, and students are receiving full time tuition in all courses with the exception of Extra First Class Engineer and Extra Master, the examinations for these certificates having been suspended during the war.

*Association of Special Libraries and Information Bureaux.* (Representative: The Secretary).

The new series of ASLIB "War-Time Guides to British Sources of Specialised Information" was launched by the issue of the Guide on Fuel and Allied Interests (excluding Electricity) at the end of June. Copies are obtainable through the Institute at 2s. each, plus postage 2½d.

The Association took an active part in obtaining the withdrawal of the purchase tax on books.

The publication of the quarterly ASLIB Book List of recommended Scientific and Technical Books has been continued despite war-time difficulties, as has been the work of the Association in general.

*British Society for International Bibliography.* (Representative: The Secretary).

The Society's activities have been maintained

throughout the past year, and have included the appointment of a Committee for the Co-ordination of British Abstracting Services.

An important development of the work of the Technical Committee on Documentation with which the B.S.I.B. is actively associated (see also under British Standards Institution) has been the formation of a Sub-Committee charged with the publication of the English edition of the Universal Decimal Classification.

*Royal Naval Reserve.* (Representative: Mr. J. B. Harvey).

No meetings have been held during the past year.

*Marine Fuel Committee of the Coal Utilisation Council.* (Representatives: Mr. E. W. Green, O.B.E., Eng. Rear-Admiral W. Scott-Hill, and Eng. Rear-Admiral W. M. Whayman, C.B., C.B.E.).

Nothing to report.

*World Power Conference, British National Committee.* (Representative: Mr. E. W. Green, O.B.E.).

Nothing to report.

*The British Corporation Register of Shipping and Aircraft, Committee of Management and Technical Committee.* (Representative: Mr. W. F. Brown, B.Sc., Wh.Ex.).

Various problems arising from the present abnormal conditions in shipbuilding and its allied industries have been considered, but details of these cannot be published in war-time. It may be said, however, that the Society is taking its full share in the war effort and is maintaining the reputation for attention to the needs of the times which it has won in the past fifty years.

The year 1940 is noteworthy in the history of the British Corporation for two reasons—the Jubilee of the Society and the retirement of the Chief Surveyor, Mr. J. Foster King, C.B.E., after fifty years' service. Mr. King occupied a unique position amongst naval architects and his work on matters affecting safety of life at sea has been of very great benefit to the whole community. The Committee have recorded the debt which they owe to Mr. King and their belief that the traditions of the Society will be worthily upheld by the new Chief Surveyor, Mr. J. L. Adam, and Chief Engineer Surveyor, Mr. G. M. Sellar.

*The Institution of Electrical Engineers—Ship Electrical Equipment Regulations Committee.* (Representatives: Messrs. N. H. Swancoat and S. A. Smith, M.Sc.).

The work of this Committee is in abeyance owing to existing conditions.

*The Institute of Welding.* (Representative: Mr. T. R. Thomas, B.Sc.).

Nothing to report.



*The Parliamentary and Scientific Committee.*  
(Representatives: Messrs. H. S. Humphreys and R. Rainie, M.C.).

The Parliamentary Science Committee, reformed as the Parliamentary and Scientific Committee has been active during the past year. "Science in Parliament", which is a summary of scientific and technical matters dealt with in Parliament, has been published periodically during the year, and copies are available in The Institute's library for members interested.

At the annual general meeting of the Committee, Professor A. V. Hill, M.P., delivered an important address on "Science, National and International, and the Basis of Co-operation". At the same meeting it was decided to invite the constituent bodies to put forward proposals for activity by the Committee for 1941, and on the proposal of Professor Holman it was agreed that the Committee should do what it could to support the campaign for the internationalisation of scientific terms.

*The British Electrical and Allied Industries Research Association: Joint Committee: Steels for High Temperatures.* (Representative: S. F. Dorey, D.Sc., Wh.Ex.).

The research on steels for use at high temperatures carried out (by Section J: Steam Power Plant Sub-Committee E: Steels for High Temperatures) during the period 1st October, 1939, to 30th September, 1940, was as follows:—

**CARBON STEELS:** Further investigations for abnormal creep properties have been made on basic open hearth steels at 450° C. after various heat treatments, and tests have been carried out on the comparative creep properties at 450° C. of acid open hearth steels, which differed only by the addition of aluminium to the ingot, after various heat treatments and in various conditions. Investigations have also been made on certain basic open hearth steels at 550° C. with a stress of two tons per sq. in. before and after a period of heating representing somewhat conditions in practice.

A report has been issued to contributors on the properties of carbon steels as a basis for design for high temperature service, giving an account of the influence of stress, temperature and time on the behaviour of carbon steels of about 0.15 per cent. to 0.50 per cent. carbon content and providing data for design purposes. The report should be of assistance to engineers in appreciating the factors involved in estimating the useful strength of the steels at higher temperatures extending to about 1,000° F. (550° C.).

**SUPERHEATER MATERIALS:** Further progress has been made with the investigation of the creep resistance of superheater tube, header and steam pipe materials (carbon and molybdenum steels), to afford a basis for the estimation of design stresses. Further long-time tests are necessary to determine the trend of the curves.

**MOLYBDENUM AND COMPLEX MOLYBDENUM STEELS:** Investigations have been continued on the creep and impact properties, composition, heat treatment, mode of fracture and microstructure of molybdenum-vanadium steels containing varying amounts of these elements.

Investigations are being continued with a view to finding steels of high creep strength which are also relatively low in cost, capable of fabrication and either free from or less subject to intercrystalline cracking. A report has also been issued on the creep properties of a molybdenum cast steel, with the object of providing data for the purposes of design for high temperature service.

*Joint Committee on Materials and Their Testing of Technical Institutions and Societies in Great Britain.* (Representative: Mr. W. D. Heck, B.Sc.).

Arrangements have been made to hold a joint meeting with the Society of Glass Technology and another with The Institution of Electrical Engineers and other institutions with a view to discussing the subject of "Plastics".

*Engineering Public Relations Committee.* (Representatives: Messrs. R. Rainie, M.C., and A. C. Hardy, B.Sc.).

The annual meeting of this Committee was held on the 23rd April, 1940, when it was unanimously resolved to suspend for the period of the war Rule 13, viz., "The Main Committee may meet from time to time but not less than three times in each twelve months counting from the 10th April each year". The Committee will meet if necessary to deal with any urgent business submitted by any of the member institutions.

*The Institution of Civil Engineers—Advisory Panel on Engineering Abstracts.* (Representative: Mr. A. C. Hardy, B.Sc.).  
Nothing to report.

*Institution of Civil Engineers: Conference on Engineering Education and Training.* (Representative: Mr. T. A. Bennett, B.Sc.).

No meeting of the General Committee has been held during the year, the conference which was to have been held on the 6th, 7th and 8th February, 1940, having been postponed until after the war.

*University College, Southampton: Advisory Committee. Department of Marine Engineering.* (Representative: Eng. Com. W. A. Graham, O.B.E., R.N., ret.).

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

*British Standards Institution.*

*Petroleum Industry Section: Technical Committee PT/2, Fuel Oils, and Sub-Committee PT/2/1, Diesel Fuel Oils.* (Representative: Mr. J. L. Chaloner).

The specifications relating to this Section were issued in 1937 and have not yet come up for revision.



*Technical Committee ME/17, Gears.* (Representative: Mr. A. E. Crighton).

One meeting of the Committee was held during the past year. Draft specification for Machine Cut Gears (B.S. 436-1940) was given further consideration in regard to points raised by the Mechanical Industry Committee, which resulted in the Specification being approved for publication.

*Screw Threads.* (Representative: Eng. Rear-Admiral W. M. Whayman, C.B., C.B.E.).  
Nothing to report.

*Manila Rope.* (Representative: Mr. T. R. Thomas, B.Sc.).

B.S. 431 for Manila Ropes was issued during 1940. An important feature of the revision is the modification made to the requirements in the specification governing the type of fibre used. Owing to present conditions it has been regarded as essential to conserve the supplies of manila fibre. After consultation with the Ministry of Shipping, the Chamber of Shipping and the Hemp Rope Manufacturers' Association, it has been made a condition of the licences to process raw hemp issued by the Hemp Controller of the Ministry of Supply, that all ropes falling within B.S. 431 shall not (unless required by or for a Government Department or for use as lifeboat falls, gangway falls, topping lifts and fishing gear or for export) be made from pure manila fibre, but shall contain 25 per cent. of sisal in Grade 1 and 33 1/3 per cent. in Grades 2 and 3.

*Component Parts of Engine Indicators.* (Representative: Mr. J. Calderwood, M.Sc.).

No meeting of this Committee has been held during the past year.

*Engineering Symbols and Abbreviations.* (Representative: Mr. J. Calderwood, M.Sc.).

No meeting of this Committee has been held during the past year.

*Standardisation of Letter Symbols.* (Representative: Mr. J. Calderwood, M.Sc.).

No meeting of this Committee has been held during the past year.

*Technical Committee on Keys and Keyways.* (Representative: Mr. G. T. Marriner)

No work has been carried out by this Committee during the past year.

*Marking of Valves, Flanges and Fittings.* (Representative: Mr. G. T. Marriner).

The draft specification for the marking of valves, flanges and fittings for use in the petroleum industry was circulated for comment to the interested trade and technical organisations in January, 1939. The comments received, whilst in general favourable, included a number which would have required the attention of the Committee before the draft could be issued as a British Standard. After discussion with the Chairman, it was felt that the present time was inopportune to issue a specifica-

tion which might require manufacturers in these days of production difficulties to add to their work and to increase even to a small extent their costs of production. The work has therefore been held in abeyance until the cessation of hostilities.

*Air Receivers.* (Representatives: Messrs. J. Carnaghan and R. S. Kennedy).

A draft specification for air receivers under nine inches in diameter has been issued for technical comment.

A draft specification for pressure paint containers is in course of preparation.

The draft specification for valves, gauges and other fittings for use on compressed air installations has been approved for submission to the Mechanical Industry Committee.

*Mechanical Industry Committee.* (Representatives: Messrs. J. Carnaghan and R. S. Kennedy).

The following specifications and revisions of specifications were approved for publication:—

Dial gauges for linear measurements.

Engineers' parallels.

Screw threads of Whitworth form (revision).

Dimensions of instrument jewels.

Direct-reading hardness tests (Rockwell principle).

Machine cut gears (revision).

Manila ropes for general purposes (revision).

Railway rolling stock materials, Parts 1 and 2 (revision).

Solid rolled steel railway wheels and disc wheel centres (revision).

*Spot Welding Machines.* (Representative: Mr. R. S. Kennedy).

Nothing to report.

*Protective Lenses for Welding Operators.* (Representative: Mr. R. S. Kennedy).

Nothing to report.

*Sub-Committee on Gas Welding of Steel Structures.* (Representative: Mr. R. S. Kennedy).  
Nothing to report.

*Sub-Committee on Electrodes for Shipbuilding Purposes.* (Representative: Mr. E. F. Spanner, R.C.N.C., ret.).  
Nothing to report.

*Coal Burning Appliances, Nomenclature and Definitions.* (Representative: Mr. E. W. Green, O.B.E.).  
Nothing to report.

*Sub-Committee on Steam Generators and Boilers.* (Representative: Mr. E. W. Green, O.B.E.).  
Nothing to report.

*Iron and Steel Industry Committee.* (Representatives: Messrs. J. Turnbull and T. R. Thomas, B.Sc.).

A meeting of this Committee was held in April, 1940, when British Standard No. 592-1940, Carbon



Steel Castings for Ships and for Marine Engine and General Engineering Purposes, which has now been published, was approved. Consideration was given to the correlation of test results of British Standard and Continental test pieces.

*Technical Committee on Land Boilers.* (Representative: Mr. J. Carnaghan).

As previously reported, specifications have been published for Lancashire and Cornish boilers; multi-tubular horizontal boilers; vertical cross-tube boilers; vertical multi-tubular boilers; cast-iron central heating and hot-water supply boilers; welded steel boilers for central heating; welded steel boilers for hot-water central heating and hot water supply; loco-type multi-tubular boilers; calorifiers; valves, gauges and similar fittings for land boiler installations, and ferrous pipes and piping installations for land boilers.

A revision of the specification for ferrous pipes and piping installations for land boilers, also of the specification for valves, gauges and similar fittings for land boilers, has been approved for submission to the Industry Committee.

A draft specification for non-ferrous pipes and piping installations for land boilers has been circulated for technical comment and is nearing completion.

The draft specification for water-tube boilers (including forged and fusion welded boiler drums, and forgings) has been circulated for technical comment and is nearing completion.

Draft specifications are in course of preparation for fusion welded steel and for fusion copper pressure vessels.

*Technical Committee on Ships' Materials.* (Representative: Mr. J. Carnaghan).

Specifications for structural steel for ship-building, structural steel for pressure parts of marine boilers, and carbon steel forgings for marine purposes (ship and engine forgings) have been prepared.

A specification for carbon steel castings for ships' and marine engine and general engineering purposes has been approved for publication.

*Sub-Committee on Marine Flanges.* (Representative): Mr. J. Carnaghan).

Nothing further to report.

*Standardisation of Pump Tests.* (Representative: Mr. R. M. Gillies).

No meetings of this Committee have taken place during the past year.

*Technical Committee on Fans.* (Representatives: Messrs. T. A. Bennett, B.Sc. and J. Dunlop).

A draft revision of B.S. 367-1932 (Performance of Ceiling-type Electric Fans), which is to be the "British Standard Specification for Ceiling-type Electric Fans and Speed Regulators for use therewith", has been circulated for consideration.

*Technical Committee on Steel Castings for Use at High Temperatures.* (Representative: Mr. T. H. Burnham, B.Sc.).

No further progress has been made during 1940 on the recommendation for a standard for steel castings for use at high temperatures.

*Technical Committee on Calibration of Carburettor Jets.* (Representative: Mr. A. F. Evans).

The specification for the calibration of carburettor jets for petrol engines issued in 1937 has not yet been revised. At the last meeting of the Committee held in May, 1939, there was a general opinion that the existing specification should be extended to cover the calibration of jets having capacities up to 10,000 ml. per minute, but owing to the difficulty of arranging meetings at the present time except for urgent work, the matter has not yet been proceeded with.

*Technical Committee on Documentation.* (Representative: The Secretary).

A general review of the field to be explored has been made by the Committee, and particulars of any existing foreign National Standards on Documentation have been collated. The photographic reproduction of documents on micro-film and on paper has been included in the agenda.

A Sub-Committee has been appointed to carry out the publication of the English edition of the Universal Decimal Classification, the completion of which will be an important step forward in the indexing and classification of scientific and technical literature.

*Machine Tool Tests and Alignments.* (Representative: Mr. G. Thompson, M.Eng.).

No meeting of this Committee has been held during the past year.

*Technical Committee on Hand Hammers.* (Representatives: Messrs. J. Carnaghan and R. S. Kennedy).

The preparation of a draft specification for matts, picks and beater picks was commenced but has been suspended.

*Ships' Side Scuttles and Frames.* (Representative: Mr. F. M. Burgis).

The draft British Standard for Ships' Side Scuttles has been reviewed in conjunction with comments received following the issue during August, 1939, of the completed draft which was circulated to all interested bodies for comment. The chief modification to the draft concerned those sidelights for positions below the bulkhead deck. For this type, although two fastenings were specified in the draft for both glassholder and deadlight, only three in all were provided and shown in the diagram, as one fastening was common to both glassholder and deadlight. General objection was made to the use of one fastening for both glassholder and deadlight and it was contended that two separate fastenings for each should be provided. After discussion it



was agreed that the suggested modification should be made to the draft and arrangements were made for the diagram relating thereto to be altered accordingly. The completed specification is now in course of preparation.

*Electric Cables for Use on Board Ship.* (Representatives: Messrs. N. H. Swancoat and P. H. Dallison).

No meetings of this Committee have been held during the past year but a number of circulars, approved by Government departments, have been issued.

*Technical Committee ME/5. Coupling Guards for Machinery.* (Representative: Mr. T. A. Crompton).

At the last meeting of the Committee a number of amendments were adopted to the draft specification and a revised draft was prepared and circulated to the whole of the Committee for approval and subsequent circulation to interested organisations for comment. A number of comments were received from the Technical Committee, some of which were of a particularly adverse character, and it was deemed necessary to revise the draft further before it could be considered in a stage suitable for general circulation. At this time the British Standards Institution found it necessary to review its programme of work with a view to concentrating its efforts on matters of special national importance.

As a result it was decided to leave the completion of this particular specification in abeyance until the termination of hostilities.

*Technical Committee ME/12, Chains and Fittings, and Sub-Committee ME/12/6, Anchor Chains.* (Representative: Captain B. Warwick).

No meetings of these Committees have been held during the past year but a certain amount of work has been done by correspondence. With regard to B.S. 529-1934, Steel Eyebolts with Collars, the Committee were notified that arising out of correspondence with one of the manufacturers, who had stated that on the larger sizes of eyebolts the machinist found it necessary, in order to produce a satisfactory piece of work, to put in a centre at the top of the eye (to which the users took exception as this is a source of weakness in the finished eyebolt in that the cross section area of eye is reduced) Sub-Committee ME/12/3 (Eyebolts) have modified Clause 5 of B.S. 529 permitting of the incorporation of a boss to facilitate machining when desired by the manufacturer. This has been agreed to, the intention being that after machining the shank the boss should be removed to give a fair surface.

F. W. YOULDON,  
*Chairman of Council.*

B. C. CURLING,  
*Secretary.*

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## Obituary.

WILLIAM FENTRESS ANDERSON (Associate 9221) died as a result of enemy action on the 19th March, 1941. Born at Newcastle-on-Tyne in 1911, Mr. Anderson was educated at Rockcliffe Council School, Whitley Bay and Rutherford Technical College, Newcastle-on-Tyne. After serving his apprenticeship with The Wallsend Slipway and Engineering Co., Ltd., he joined The British Tanker Co. as a junior engineer. He then served for some time as third engineer with The New Zealand Shipping Co. and subsequently with Messrs. Furness, Withy & Co. At the time of his death Mr. Anderson, who held a first-class certificate and motor endorsement, was serving as second engineer with the Larrinaga Steamship Co. Mr. Anderson was studious and an engineer of considerable promise. As a youth he was an enthusiastic supporter of Rugby football and was in the team which won the Northumberland Cup in 1928/29 for youths not over 18 years of age. He was also a good swimmer and had a keen interest in fishing.

ROBERT MINFORD BALLS (Member 8018) died as a result of enemy action on the 22nd June, 1940. Mr. Balls was the youngest son of Matthew Ellison Balls, a marine superintendent well known in Tyne-side shipping circles, and was born in 1906 at North Shields. His early education was obtained at the Tynemouth (Private) School and subsequently he went to the Royal Grammar School at Newcastle-on-Tyne. From 1923 until 1928 he served his apprenticeship with Messrs. Swan, Hunter & Wigham Richardson, Ltd., and during this period he attended a degree course at Armstrong College, Newcastle-on-Tyne. From 1928 to 1935 he was at sea in the service of Messrs. Cairns, Noble & Co., of Newcastle-on-Tyne. On obtaining his Extra-First Class Board of Trade Certificate he was appointed an engineer surveyor by the British Corporation Register of Shipping and Aircraft. He was first stationed at Glasgow and subsequently moved to Middlesbrough, where he was at the time of his death. Mr. Balls, whose wife survives him,



was an Associate Member of the North-East Coast Institution of Engineers and Shipbuilders.

CYRIL ASPLAN BELDAM (Companion 1919) died in London on the 7th September, 1940, aged 70 years. After leaving Cambridge in 1890 with an M.A. degree, Mr. Beldam, with his late brother, joined their father Mr. Asplan Beldam in partnership in the Beldam Packing & Rubber Co. Mr. Asplan Beldam was the first President of The Institute and Mr. Cyril continued on the death of his father the family's interest and association with The Institute's work. Following the death of Mr. Asplan Beldam the business was formed into a limited company, with Mr. Cyril A. Beldam and his late brother as directors. The world-wide connections of the firm brought him many friends both in this country and abroad, who will mourn the loss of a capable business man and a charming personality.

JOHN TURNBULL BELL (Member 8383) died as a result of enemy action on the 6th October, 1941. Born at Gosforth, Northumberland in 1886, Mr. Turnbull was educated at St. Paul's Church School, Newcastle-on-Tyne, and from 1901-07 served his apprenticeship with Messrs. H. Watson & Sons, of Walkergate-on-Tyne. He then joined the Prince Line as a junior engineer and in 1917 was serving as chief engineer of this Company's "Georgian Prince" when this ship was sold to The British Tanker Co. All the officers transferred to The British Tanker Co. with the ship, which was renamed "British General". It was while serving on The British Tanker Co.'s new vessel of the same name that his death occurred as a result of enemy action. Mr. Bell was a devoutly religious man and intensely patriotic. His three sons were all in the Territorial Army before the outbreak of the present war and his only daughter is in the W.R.N.S. In addition to the loss of her husband, Mrs. Bell has had to bear the loss of her youngest son, who was killed in France in the Spring of last year. Popular and greatly respected both by his employers and his subordinates, Mr. Bell was awarded the certificate of the Royal Humane Society for risking his life in rescuing one of his staff overcome by gas fumes. His death is widely regretted.

W. J. BENDALL (Member 1424) died at Swansea on the 9th December, 1940, in his 83rd year. Mr. Bendall served his apprenticeship with The Great Western Railway Co. and subsequently spent about nine years at sea, during which period he obtained his First-Class Board of Trade Certificate. In 1899 he became general manager of The Prince of Wales Dry Dock Co. (Swansea) Ltd., this concern being formed in that year. From then until his retirement in 1924 he retained the general managership of the Company. He was then appointed a director of the Company and acted in this capacity until his

death. Mr. Bendall became very well-known in marine engineering and shipbuilding circles, particularly in the South Wales area, where he was a notable and very popular character.

JAMES DOUGLAS BOYLE (Member 2306) died at Greenock on the 26th June, 1939. Born at Forfar in 1890 he was educated at Forfar Academy and served his apprenticeship with Messrs. Craiks, Ltd., in that town and subsequently at the Works of Messrs. Rankin & Blackmore of Greenock. He was then employed at Scott's Shipbuilding & Engineering Co., Ltd. at Greenock until, having won a Lloyd's Register Scholarship, he entered Glasgow University. In 1914, after two years at the University, he entered the Royal Navy, being demobilised at the end of the war. Having continued his studies during his war service he obtained a Board of Trade Extra-Chief Engineer's Certificate and for a short period was employed in the drawing office of Scott's Shipbuilding & Engineering Co., Ltd. He was then appointed to the Glasgow Office of Lloyd's Register of Shipping, some fifteen years later being transferred to this Society's Greenock Office, where he became senior engineer surveyor two months before his death. Mr. Boyle, who is survived by his wife, was elected a Graduate of The Institute as long ago as 1909, was transferred to Associate Membership in 1917 and to full Membership in 1920. He took a keen interest in the affairs of The Institute.

C. M. BRAY, ENG. LT., R.N., RET. (Member 2475) died on 12th January, 1941, at Hastings. Born at Islington in 1871, Lt. Bray was educated at St. Olaves and Whitgift College. His apprenticeship was served at the works of Messrs. S. Z. de Ferranti, and later he was employed by Messrs. Compton's of Chelmsford, Messrs. Beck & Co., Ltd., and Messrs. Ransom & Sons. In 1895 he entered the Royal Navy and in 1904 was promoted to commissioned rank. On the outbreak of war in 1914 he was serving with the China Fleet, and as commissioned engineer in H.M.S. "Kennet" took part in the engagement with the German destroyer "S.90". He was then engaged on patrol off Borneo (the "Emden" Patrol) until January, 1915, when he was transferred to the Mediterranean Station and was employed in patrolling the passage to the Dardenelles. In April of that year his ship, still H.M.S. "Kennet", was attached to the Smyrna Patrol, and during this period of his service he took part in the capture of a Turkish destroyer and was involved in small actions on several occasions. He continued to serve in the Mediterranean until January, 1917, when he was appointed engineer officer in H.M.S. "Milne" for service in home waters. Following an action off Zebbrugge in August, 1917, he entered the Royal Naval Hospital where he remained for six months. He was then for a time employed at Chatham on clerical work



and subsequently at Falmouth in charge of repairs and outfitting of yachts, trawlers, etc. In 1919 he was placed on the retired list on account of disabilities incurred during his service and from which he suffered until the time of his death. Lt. Bray is survived by his wife.

ALBERT SAMUEL GEORGE BRIFFETT (Associate 8946) lost his life as a result of enemy action on the 27th December, 1940. Born in 1912, Mr. Briffett served his apprenticeship with Messrs. C. H. Bailey Graham & Co., Ltd. On its completion in 1933 he entered the employ of the Royal Mail Line and served in many classes of steam and motor cargo and passenger vessels. He was still in this Company's employ when, as a result of enemy action, he and two other engineer officers lost their lives.

JAMES BROWN, C.B.E. (Vice-President and Member 2010) died 13th January, 1941. (See portrait and obituary in January, 1941, *TRANSACTIONS*, facing page 242).

ROBERT HILL BUSH (Associate Member 5749) died as a result of enemy action on the 15th October, 1940. Born at Tilbury, Essex, on the 20th July, 1902, Mr. Bush was educated at Palmer's College, Grays, Essex. On the completion in 1923 of his apprenticeship with Messrs. R. & H. Green & Silley Weir, Ltd., he joined the Commonwealth & Dominion Line as 4th engineer. In 1925, having obtained his Second-Class Board of Trade Certificate, he joined the Orient Line and served in this Company's s.s. "Otranto", "Osterley", and "Orvieto". He left this Line in 1929 to obtain his First-Class Certificate and on obtaining this he joined the m.v. "Western Prince" in a junior capacity with a view to obtaining a motor endorsement. On securing this he resumed his sea career and in 1933 he joined The British Tanker Co. as 3rd engineer. He was serving as 2nd engineer in his last vessel when he and several others of the crew were killed as a result of enemy action.

WILLIAM HENRY CASWELL (Associate Member 5353) died as a result of enemy action on the 26th July, 1940. Born at Swinton, Lancs. in 1895, Mr. Caswell was educated at Christ Church School and Victoria Science and Art School, Southport. His apprenticeship was served with Messrs. Adair & Co. of Liverpool. Having joined the Territorials, he was called up in August, 1914, and served as a corporal and subsequently as a sergeant in the 1/7th King's Liverpool Regiment. He was twice wounded and eventually obtained a commission in the King's Shropshire Light Infantry; at the conclusion of hostilities he held the rank of acting-captain. On demobilization he continued his studies at Liverpool University, and in 1923 he entered the service of the Elder Dempster Lines Ltd. Mr. Caswell, who is survived by his wife and a son, was drowned when his ship was torpedoed.

JAMES HAROLD GEORGE CHAPPELL (Member 6460), was presumed lost in the sinking of H.M.S. "Jervis Bay" in the historic action with an enemy raider in the Atlantic. Mr. Chappell was born in 1895 and educated at Bletchley, Bucks. His apprenticeship was served in the Locomotive Department of The London Midland & Scottish Railway Co., Bletchley. In 1916 he entered the service of Messrs. Houlder Bros. and served in transports throughout the last war. In 1921 he joined Messrs. Shaw, Savill & Albion, Ltd., as 2nd engineer, and he became successively chief engineer in the s.s. "Mataroa" and in the s.s. "Matakama". At the outbreak of the present war he was commissioned to H.M.S. "Jervis Bay" as engineer commander, a position which he still held at the time this ship was involved in an heroic action with the enemy. Mr. Chappell leaves a widow and two children.

CHARLES K. CLEATOR (Member 2276) died at Surbiton, Surrey, on the 4th November, 1940. Mr. Cleator was born at Millom, Cumberland, in 1866 and educated at Barrow-in-Furness. His apprenticeship was served at the Barrow Shipbuilding Co.'s yard at Barrow-in-Furness and in 1887 he joined the Royal Navy as an E.R.A., serving for some time in H.M. Indian troopship "Seramis". In 1890 he purchased his discharge and joined the Shaw, Savill & Albion Co. as 3rd engineer of the "Matatura". In 1892, having obtained his First-Class Board of Trade Certificate, he was appointed 2nd engineer of the s.s. "Rangatira", later being transferred to the s.s. "Actea". In 1899 he was appointed chief engineer of the s.s. "Tokomaru". Eye trouble compelled him to relinquish this post, but later he resumed service with the Company as chief engineer of the "Kumara". He then joined the s.s. "Arawa" which was then, in 1907, being completed at North Shields. He remained chief engineer of this vessel until 1912, when he left owing to ill health. In May, 1913, his health having improved, he rejoined the ship, but was compelled to leave again in September of the same year. After a period of occasional service ashore and afloat for the Shaw, Savill & Albion Co. he entered the service of another firm doing Admiralty work. In July, 1916, he met with an accident on board the s.s. "Humbrook" at Harve which necessitated a series of amputations and eventually the loss of his leg. For many years before his death he was seldom free from acute pain, an affliction which he bore with great courage and fortitude. Mr. Cleator is survived by his wife.

JAMES ERNEST COLE (Member 5885) died on the 12th September, 1940, at Wembley, Middlesex. Mr. Cole served his apprenticeship from 1901/7 at the works of Messrs. Melville & Henderson, of Kirkcaldy. He then went to sea and for many years was in the service of Messrs. Houlder Bros., Ltd. Some time after the last war he became manager of Messrs. James Girdler & Co., of Paddington.



ARTHUR ROWLAND DARBYSHIRE (Member 7568) presumed to have lost his life as a result of enemy action on the 24th December, 1940. Born at Levenshulme in 1905, Mr. Darbyshire, while attending the elementary school, secured a scholarship for Openshaw Technical College, where he remained until he commenced his apprenticeship at The Manchester Dry Docks, Ltd. On the completion of his apprenticeship in 1926 he entered the service of Messrs. Manchester Liners, Ltd., with whom he remained until 1929. In that year he joined The British Tanker Co. and was promoted to the rank of chief engineer by this Company shortly before his death. Mr. Darbyshire, who was a musician of some skill, leaves a widow and two infant daughters.

JOHN DAVIES (Member 8352) died at Greenwich Hospital on the 25th May, 1940, after a painful illness, borne with great fortitude. Mr. Davies was a very well known and highly esteemed official of The Cunard-White Star Line. Born in 1887, he joined The Cunard Steamship Co. 37 years ago, serving his apprenticeship at the Company's engine works at Liverpool. He was then for some considerable time in the drawing office in connection with repairs to vessels in commission and new construction. During the last war he was first engaged on Admiralty work in connection with alterations to vessels for war service, and then rendered valuable service as assistant works manager at the Cunard National Shell Works, which were started at a critical war period due to a shortage of shells. When the Cunard Co. started their post-war building programme, Mr. Davies was appointed inspector on new construction, and in 1925 he was appointed assistant superintendent engineer of the Cunard Line (London Services) which included the supervising of repairs, etc. to Port Line vessels at various ports. At the time of his death he held the position of assistant superintendent engineer, Cunard-White Star Ltd. (London). Mr. Davies will be regretfully missed by a large circle of friends and business associates in Liverpool, London, Southampton and other ports.

ERNEST EDMONDSON (Member 6701) died as the result of enemy action on the 21st November, 1940. Born at Hull in 1898 Mr. Edmondson was educated at Hull Grammar School and subsequently served his apprenticeship at the Northern Engineering Co. of Hull. In 1918 he became 4th engineer of the s.s. "Novington" and two years later was appointed 3rd engineer of the s.s. "Lowmoor". In 1921 he became 2nd engineer of the "Pencisely" and by 1924 was serving as chief engineer of the "Essex Abbey". After serving for several years as chief engineer in a number of steam and motor vessels, he joined the firm of Sir R. Ropner & Co. and served as chief engineer in the first motor ship

built by this Company. As the result of enemy action against the motor ship he was serving in at the time of his death, Mr. Edmondson received wounds and exposure which caused his death. He was buried at Baloor Churchyard, Fanad, Co. Donegal, on the 28th November, 1940. He is survived by his wife.

WILLIAM FORREST (Member 9018) died on 25th August, 1940, when his ship was sunk as a result of enemy action. Mr. Forrest was born at South Shields in 1899, the sixth son of Mr. Thomas Forrest, marine surveyor, of that town. He was educated locally and commenced his apprenticeship in 1914 with Messrs. Brigham & Cowan, Ltd., of South Shields. In 1918 he joined the Merchant Navy and on his first voyage his vessel was in a convoy which was attacked in the Irish Sea, four of the ships being sunk. He remained at sea until 1925, serving in the vessels of several companies. During this period he obtained his Extra-First Class Board of Trade Certificate with motor endorsement. From 1925 to 1929 he served ashore with Messrs. Swan, Hunter & Wigham Richardson, Ltd. In 1929 he entered the service of The United Molasses Co. as chief engineer, a position he still held at the time of his death.

KENNETH FRASER (Companion 5034) died suddenly at his home, Tregullow, Oakwood, Leeds, on the 17th February, 1941. Mr. Fraser, who was vice-chairman and managing director of the Yorkshire Copper Works, Ltd., of Leeds, was born at Stockton-on-Tees in 1874 and received his education at the Quaker School in that town. On leaving school he began his training for a commercial career with the Stockton Malleable Iron Co. Ltd., which, at a later date, became part of the South Durham Iron and Steel Co., Ltd. Some years later, at the invitation of Mr. Neville Chamberlain, the late Prime Minister, he went to Birmingham to take part in the management of Elliott's Metal Co. at Selly Oak, Birmingham. After spending a period in South Wales he took up his appointment in 1907 with the Yorkshire Copper Works, Ltd. He travelled widely and knew intimately both North and South America and the Continent of Europe. Apart from his local interests, Mr. Fraser found time to take part in national affairs, and he was vice-president of the Federation of British Industries, and chairman of the Leeds and District Branch of the Federation. He was a Fellow of the Royal Society of Arts, a Freeman of the City of London, and an Associate of the Institution of Naval Architects. During the present war period he has been in constant touch with Ministerial and Service advisers, and he was chairman of the Leeds War Weapons Campaign. He gave freely of his best to all these efforts, and would take no rest. During recent months he showed signs of exhaustion and collapsed at his home on the day preceding his



decease. His death at the comparatively early age of 67 will be regretted deeply by his many friends, for it is recognised that his illness was directly caused by the prolonged strain to which he submitted himself on behalf of the nation's war effort, both in connection with his business and the public work in which he was so interested.

JACK C. GILLING (Member 6041) died on the 6th November, 1940. Born in 1885, Mr. Gilling served his apprenticeship from 1900-04 at the works of Messrs. Edward Hayes, of Stony Stratford. He then went to sea and eventually became a chief engineer with the Blue Star Line, a position which he held for many years prior to his death.

ROBERT WHITE GOODALL (Member 9102) killed as a result of enemy action in February, 1941. Born in 1905 at Glasgow, Mr. Goodall was educated at the Hyndland Higher Grade School and subsequently at Glasgow Technical College. After serving his apprenticeship from 1921/26 with Messrs. Rowan & Co., Ltd., of Glasgow, he entered the service of The City Line as a junior engineer. From 1932/35, during which period he obtained his First-Class Board of Trade Certificate, he was employed by the Lyle Shipping Co. of Glasgow. In the latter year he accepted an appointment as assistant engineer with the Anglo-Iranian Oil Co. at Abadan, with whom he remained until May, 1940, when he resigned to resume his sea service with the Lyle Shipping Co. and thus take a more active part in the war. On his second voyage for the Company he was appointed chief engineer, and while the ship was nearing port for repairs an attack was made by enemy aircraft which resulted in his death. Mr. Goodall is survived by his wife.

JAMES HAMILTON (Member 8201) killed at Glasgow in March, 1941, as the result of the destruction of his home by enemy action. Born at Lauriston, near Falkirk, in 1880, Mr. Hamilton was educated at Glasgow and subsequently served his apprenticeship with Messrs. Dunsmuir & Jackson, of Govan. On its completion in 1901 he commenced his sea career, and in 1904 he entered the service of the Union Castle Line. He left this Company in 1906 to become engineer on the yacht "Maund" belonging to the well-known American, J. Gould. In 1908 he joined the Monarch Line with whom he remained until 1924, when he was transferred with his ship, "Scottish Monarch", to Messrs. Thomas Law & Co. (the ship being renamed "Cowdenlaw"), in whose service he remained until 1931. In that year, owing to his wife's failing health, Mr. Hamilton left the sea and accepted an appointment as consulting engineer with Messrs. J. & J. Neil (Temple) Ltd., Glasgow, and he remained associated with this concern until his death. Mr. Hamilton served at sea throughout the last war and was chief engineer of the "British

Monarch", when she was sunk by enemy action in the Mediterranean in 1917. Mr. Hamilton was held in very high esteem by his colleagues and was greatly admired and respected by his friends and associates. His untimely passing is deeply regretted. There are two sons, both on active service, the elder with the Navy and the other with the Royal Air Force.

GEORGE WILLIAM HUDSON, ENG. REAR-ADMIRAL, C.B. (Member 1338) died at St. Mary's Hospital, Portsmouth, on the 30th January, 1941, a week before his 80th birthday. After receiving his education privately, Admiral Hudson entered the Royal Navy and by 1899 he had attained the rank of staff engineer, R.N. He served throughout the last war and retired in 1919 with the rank of engineer rear-admiral, his services being recognised by the award of a C.B. in the same year. Living in retirement at Southsea, Admiral Hudson received injuries from which he never recovered when his home was destroyed by enemy action in the summer of 1940.

WILLIAM HUNTER (Member 3751) died at Glasgow on 6th February, 1940. Mr. Hunter was born at Alloa in 1882 but in early life his parents moved to Glasgow where he was educated at the Bellahouston Academy. His apprenticeship was served with The London & Glasgow Shipbuilding & Engineering Co., Ltd., and he first went to sea as a junior engineer in one of the MacLay and McIntyre Line's ships. Having gained his First-Class Board of Trade Certificate he left this Company in 1908 to join the Glen Line in whose service he remained until 1919. During the last war he was chief engineer of the m.v. "Glen Amoy". In 1919 he was appointed assistant engineer manager at the Govan Yard of Messrs. Harland & Wolff, Ltd., and in 1927 he became manager of their Outside Engine Department, a post which he still held at the time of his death.

WILLIAM HENRY INSON (Member 3424) died as a result of enemy action in June, 1940. Born in 1887 Mr. Inson served his apprenticeship with The Barry Graving Dock Co., Ltd., subsequently entering upon a sea career. After six years sea service he had attained the position of chief engineer and served in this capacity during the last war. After the war he was appointed outside representative for Messrs. Ferguson & Timpson, Ltd., and in 1926 he established himself as a consulting engineer in Cardiff. He then resumed his sea career as chief engineer with Messrs. Andrew, Weir & Co., Ltd., but in 1929 he accepted an appointment as marine salesman with the Texas Oil Co., Ltd., London. In 1934 he became marine manager of The Anglo-Scottish Petroleum Co. and later accepted an appointment as assistant engineer with Messrs. Atlas Metals & Alloys, Ltd. Shortly after



the outbreak of the present war Mr. Inson, who leaves a widow and family, resumed a seagoing appointment, and at the time of his death he was serving as chief engineer of H.M. Commissioned Tug "Coringa" with the rank of Temp'y Lieut. (E.), R.N.R.

JAMES KIRK (Member 7800) died as a result of enemy action in December, 1940, aged 39 years. Mr. Kirk was a native of Glasgow and received his education at North Kelvinside Public School. His apprenticeship was served with Messrs. D. W. Henderson & Co. In 1925 he joined the New Zealand Shipping Co. and after obtaining his Second-Class Certificate he entered the service of The Anglo-Saxon Petroleum Co., being stationed with their Eastern Fleet. When war broke out his ship (on which he was 2nd engineer) was transferred to the Western Fleet and he made many voyages before the event occurred which cost him his life. A kindly, unassuming man, Mr. Kirk was highly regarded by his Company as a competent engineer.

CHARLES RUSSELL LANG (Member 1889) died at Glasgow on the 3rd December, 1940. Mr. Lang was educated at Anderson's College, Glasgow and the Royal College of Science, London. He was a Whitworth Scholar. His apprenticeship was served with the family firm of Messrs. John Lang & Sons, machine tool makers, of Johnstone. In 1887 he joined Messrs. G. & J. Weir, Ltd., Cathcart, Glasgow, as works manager, subsequently becoming a director and joint managing director. In his association with this famous firm Mr. Lang had for many strenuous and active years taken a leading and responsible part in carrying out successful developments in the firm's products, organisation and departmental arrangements. His wide practical knowledge and his respect for the tradition of satisfying the customer made him of the utmost value to the firm in building up its reputation and success. Few men worked harder during the stressful years of the 1914-1918 war, and his unceasing efforts at that time were recognised by the award of a C.B.E. in 1918. Mr. Lang, who is survived by his wife, a son and two daughters, contributed a number of papers to the Transactions of the Institution of Engineers and Shipbuilders in Scotland.

CLAUDE C. LAPSLEY (Member 4124) died at his residence at Genoa, Italy, on 14th April, 1940. Born at Liverpool in 1853, Mr. Lapsley was educated at a private academy in Glasgow. His education was interrupted, however, when at the age of twelve he ran away to sea. Upon his return his father apprenticed him with the then eminent firm of shipbuilders and engineers, Messrs. J. & G. Thomson, of Glasgow. During his apprenticeship he attended the city's evening technical classes. On the completion of his apprenticeship he was employed at the

Finnieston Engine Works of Messrs. J. & G. Thomson for some time, gaining experience which led to the commencement of his sea service. Later, having obtained his Board of Trade certificates, he represented the Company as guarantee engineer on the County and City Line steamers built by them. In 1880 he joined Messrs. Flinn, Main & Montgomery for service in The Mississippi & Dominion Line Steamship Co., in whose employ he remained for twenty-three years. He rose to the position of senior chief engineer and during the latter part of this period he represented the Company as supervisor of new tonnage then building at Messrs. Harland & Wolff Ltd.'s yard at Belfast. After the completion of the last Dominion Line steamer (the "Colombus") this Line's passenger steamers were taken over and managed by The White Star Line. He then served the White Star Line as chief engineer of the renamed liner "Republic". His ability was soon appreciated and resulted in his promotion by successive transfers to the "Celtic" (1905), "Majestic" (No. 1), "Laurentic" (No. 1), "Cedric", "Baltic" and "Justicia" (1917). He was in the "Baltic" when this vessel, carrying General Pershing of the United States Expeditionary Force and his staff, was unsuccessfully attacked by the enemy. His most thrilling adventure, however, was the homeward voyage of the "Justicia" in July, 1918, when, after a twenty-one hours engagement with an enemy submarine off the northern coast of Ireland, the "Justicia" was severely damaged in the machinery spaces and sank. A month later Mr. Lapsley was again afloat, this time in the "Regina". In 1920 he was appointed general superintendent of the Genoa-New York service and held this responsible position until his retirement in 1923 on the closing down of this service. At the conclusion of the last war he was awarded, for meritorious service, the O.B.E. and D.S.C. He held a commission of senior engineer in the Royal Naval Reserve dating from 1896, and on the transportation of Canadian and United States troops he was granted the rank of engineer lieutenant commander. On retirement in 1923 he became engineer commander. Mr. Lapsley was a freemason, being a life member of the Lodge Thistle, No. 87. During his 17 years in retirement he resided for climatical reasons in Genoa, paying frequent visits to his own country. He married Mary A. Donaldson of Arbroath who predeceased him in 1924, and is survived by one daughter and two sons. There was no better known or more successful chief engineer on the North Atlantic route. It is estimated that he made approximately seven hundred crossings. Throughout his career he had the full confidence and esteem of his employers and, though a strict disciplinarian, the highest respect of all subordinate to him.

ALBERT JAMES LEGG (Member 8069) died at Belfast in September, 1940. Mr. Legg was born in 1899 and after serving his apprenticeship he



joined Messrs. Andrew Weir & Co. He eventually became chief engineer with this Company and while serving in this capacity on the m.v. "Lossiebank" he became ill about a year before his death and was compelled to come ashore. Mr. Legg, who leaves a widow, never recovered from this illness.

JAMES D. LINKLATER (Associate 9081) died on the 6th June, 1940. Born at Wanstead in 1916, Mr. Linklater was educated at Loughton School and subsequently at Bournemouth. From 1932 to 1937 he served his apprenticeship with Messrs. R. & H. Green & Silley Weir, Ltd., and on its completion joined the Cunard Line as a junior engineer. As the result of enemy action against his ship, the "Carinthia", Mr. Linklater, who was a young engineer of promise, regrettably lost his life.

RALPH BOWSHER LYDDON (Member 1561) died at his home, Thames Ditton Island, on the 6th February, 1941, and was cremated at South London Crematorium, Streatham, on the 11th February, 1941. As long ago as 1901 Mr. Lyddon was managing director of Messrs. Cameron, Hastie & Co., Ltd., of Swansea and Birmingham, and is believed to have been in retirement for the past 15 years.

JAMES MACFARQUHAR (Member 3061) died at Birkenhead on the 15th February, 1940. After serving his apprenticeship with The Inverness Foundry Co. and Messrs. Henry Bisset & Co., Mr. MacFarquhar commenced his career as a seagoing engineer in 1901 when he joined the City Line Ltd.'s "City of Vienna" as 5th engineer. He then served in different steamers belonging to that Company in capacities up to 2nd engineer, and in November, 1910, was promoted to chief engineer of the s.s. "Netherby Hall" belonging to the Hall Line, Ltd., of Liverpool. He was continuously employed by this concern until April, 1937, when he was relieved from the s.s. "City of Agra" to stand by four new steamers being constructed by Messrs. Cammell, Laird & Co., of Birkenhead. On the completion of the last of these vessels in December, 1938, viz., the s.s. "City of Lincoln" managed by Ellerman & Bucknall S.S. Co., Ltd., of London, he sailed in that steamer as chief engineer. In January, 1940, he was again brought ashore to supervise the construction of machinery for a new steamer. He had been home for less than a month when he had a sudden seizure resulting in his death. It may be mentioned that at the commencement of the last war he was serving as chief engineer of the s.s. "City of Winchester", which was the first vessel to be lost by enemy action. He was subsequently appointed chief engineer of the "City of Florence", which was also sunk by the enemy. For some years Mr. MacFarquhar was chief engineer of vessels carrying frozen cargoes from Australia and New Zealand. He was keenly interested in the subject of marine

refrigerated transport, and his Company became aware of the invariably successful outturn of cargoes which had been under his care.

NEIL N. MACPHERSON (Member 5706) died on the 19th November, 1939. Mr. MacPherson was born at Johnstone in 1896 and was educated at the Johnstone Higher Grade School. His parents' circumstances made it impossible for him to attend a University, from which his school career made it evident he would have derived great benefit, and at the age of 16 years he commenced his apprenticeship at the Works of Messrs. John McDowall & Sons of Johnstone. On its completion he entered the service of Messrs. Ellerman & Bucknall S.S. Co., with whom he remained until the time of his death.

THOMAS ANDERSON MCLELLAN (Member 5022) died at Westbury-on-Trim on the 14th May, 1940. Mr. McLellan was born at Greenock in 1902 and educated at Highgate School, London, and subsequently at Cardiff Technical College. After serving his apprenticeship with Messrs. John Rogers & Co., Ltd., of Cardiff, Mr. McLellan entered the service of The Eagle Oil & Shipping Co. as a junior engineer. In August, 1926, he accepted an appointment as assistant manager of Messrs. J. Jefferies & Sons, Ltd., ship repairers of Avonmouth. In April, 1936, he was appointed a director and works manager of this Company. Mr. McLellan, who leaves a widow and two daughters, sought recreation in motoring and flying, and obtained a pilot's certificate at the Bristol Aero Club.

HAROLD MAJOR (Member 8667) died suddenly while following his employment on the 25th July, 1940. Mr. Major was born at Liverpool in 1894 and educated at Oake's Institute in that city. His apprenticeship was served with Messrs. E. H. Williamson & Co. and Messrs. David Rollo & Son. In 1914 he joined the Royal Engineers and served in Egypt and France until 1919. He then entered the service of Messrs. Lamport & Holt as a junior engineer. Subsequently he was in the service of Messrs. Hoover, Ltd., followed by a short period of employment as inspector for the Company of Veteran Motorists. In 1937 he was appointed by Messrs. Richard Klinger, Ltd., as a technical representative, and was in this Company's employ at the time of his death. Mr. Major, who leaves a widow and young daughter, became well known and popular in the Liverpool district.

GEORGE MILLIKEN (Member 3156) died suddenly at Bedford on the 20th April, 1940, in his 59th year. A native of Glasgow, Mr. Milliken was educated at Stirling High School and served his apprenticeship at the Govan Works of The Fairfield Shipbuilding & Engineering Co. In 1904 he entered the service of the Red Star Line and in 1908



he became this Company's assistant superintendent engineer at Antwerp. In 1914 he was appointed assistant superintendent engineer to the White Star Line and in the following year he took up a similar appointment with the Atlantic Transport Co. of London. In 1919 he accepted an appointment as superintendent engineer of the Red Star Line at Antwerp, a position which he held until 1936. Mr. Milliken was highly esteemed by his employers and was presented with the medal and certificate "La decoration industrielle de première classe" by the Belgian Government in April, 1936. He was also very popular with the Company's engineers, for whom he did a great deal to improve their position and status by obtaining many privileges for them both in conditions of work and social standing on the ships.

IGNACIO DE MUTIOZABEL (Member 3638) died at Bilbao, Spain, in November, 1938. Mr. Mutiozabel served his apprenticeship with Messrs. Smalley, Rice & Evans of Liverpool and with the Artilleri del Nervion of Bilbao. He was then for some 16 years at sea when he became a ship and engineer surveyor to Lloyd's Register of Shipping. He was then appointed superintendent engineer to Messrs. Compania Maritima del Nervion of Bilbao, with whom he remained until his death.

WILLIAM ALEXANDER NASMYTH (Member 4889) died at Portobello on the 28th September, 1940. Born at Donibristle, Fife, in 1879, Mr. Nasmyth was educated at George Watson's College and subsequently served his apprenticeship with Messrs. Dunsmuir & Jackson, Ltd., Govan. For the next three years he was in the employ of Messrs. Salvesen & Co. as a seagoing engineer, and then he joined the Ellerman & Bucknall Line, becoming chief engineer with this Company. In 1914 he joined the Royal Navy as an engineer lieutenant, was mentioned in dispatches, and secured his discharge in 1919. After a short period with The Ailsa Shipbuilding Co. Mr. Nasmyth was appointed assistant to captain superintendent for Ireland, Admiralty, and later he joined the staff of the engineer manager of Rosyth Dockyard. About 15 years ago he was appointed Scottish representative of Messrs. Consol Products, Ltd. He was highly successful in this post and held it until the time of his death. Mr. Nasmyth leaves a widow.

E. W. L. NICOL (Member 3523) died 22nd April, 1940. Born at Arbroath in 1878 Mr. Nicol was trained as a marine engineer and for a number of years he was at sea. He held a First-Class Board of Trade Certificate. In 1901 he went to the Greenwich Power Station of the London County Council and later was assistant station engineer to the Yorkshire Power Company for two years. In 1913, when the London Coke Committee was formed, he was appointed their engineer and fuel expert, which position he held until 1932. The London and Counties Coke Association was then formed with

Mr. Nicol as technical adviser, which position he held until his death. During these 27 years Mr. Nicol was a pioneer in the cause of gas coke and achieved much in the development not only in the utilization of the fuel itself, but also of coke-burning appliances for industrial and domestic uses. Notable among industrial appliances is the patent "Sandwich" system of fuel blending for the combustion of coke breeze and coal slack on a chain-grate stoker. The Sandwich system was introduced at the Deptford West Power Station in 1918, where it is still in use. The London Coke Committee adopted a steam jet draught system introduced by Mr. Nicol for application to steam-raising boilers. It proved to be a valuable asset in improving combustion conditions and later was improved and developed. In the domestic field Mr. Nicol, through the London Coke Committee, did much work in the development of the open coke grate and the independent hot-water supply boiler with the flat top and open fire front. The Neo-Coke coke grate, patented in 1920, and the Neo-Coke boiler patented in 1933 are evidence of his inventive ability. Mr. Nicol was an Associate Member of the Institution of Electrical Engineers, an Associate of the Institution of Civil Engineers, a Fellow of the Royal Society of Arts, a Fellow of the Institute of Fuel, and a Member of the National Liberal Club. During the last war his services were placed at the disposal of the Controller of Coal Mines, for whom much important work was undertaken. Mr. Nicol was a keen advocate of smoke abatement and for several years served on the Council of the National Smoke Abatement Society. He was the author of the book "Coke and Its Uses" which was published in 1923, and he frequently lectured to students sitting for their Smoke Inspector's certificates at the Royal Sanitary Institute. He will be remembered by all who knew him as a fuel expert always ready to give help and assistance to those who approached him. His work brought him in constant contact with leading engineers, consultants and others who sought his aid, but nevertheless he always found time to help the young people struggling at the foot of the ladder. Mr. Nicol, whose wife survives him, was a keen gardener and enjoyed fishing in Scottish waters as a recreation.

JAMES OLIVER (Member 5281) died on the 30th December, 1940, when his ship was involved in a collision. Born at Falkirk in 1892, Mr. Oliver was taken to Armadale at an early age and educated in that town. His apprenticeship was served with The Armadale Iron Co. (now known as The Armadale Atlas Steel Foundry), and for some time after its completion he was employed at the shipyard of Messrs. John Brown & Co. In 1914 he joined the Merchant Navy as a junior engineer of The Ellerman Hall Line, with which concern he eventually became a chief engineer. At the time of his death he was still in their employ in this capacity.



AUBREY SPENCER JAMES OVERY (Associate 6650) lost his life as a result of enemy action when his ship was sunk in August, 1940. Born in 1910 at Leytonstone, Mr. Overy was educated there and subsequently at Leyton Technical College, where he had a highly successful career. Subsequently he served his apprenticeship with Messrs. R. & H. Green & Silley, Weir, Ltd., where his progress and exemplary conduct attracted the attention of the management. In 1931 he was elected a Graduate of The Institute and in the following year entered the service of The New Zealand Shipping Co., in whose employ he still was at the time of his death. An engineer of zeal and promise, Mr. Overy's death is keenly regretted by his employers and his friends.

REGINALD FRANK POTTER (Member 6476) presumed dead as a result of enemy action on the 5th December, 1939. Born at Southampton in 1885 Mr. Potter was educated privately. He served his apprenticeship at the engineering repair works, Southampton, of Royal Mail Lines, Ltd., and on its completion was employed for six months at the engineering works of Messrs. Workman, Clark & Co., Ltd., Belfast. In September, 1907, he was appointed sixth engineer of the Royal Mail Lines, Ltd.'s vessel "Amazon", in which Company's service he remained until the time of his death. By 1914 he had obtained his First-Class Board of Trade Certificate and later obtained the motor endorsement. He served on all classes of steam and motor cargo and passenger liners, and for many years held the position of 2nd engineer. In 1937 he was appointed chief engineer, in which capacity he was transferred to the "Navasota" a year later. Mr. Potter is presumed to have lost his life when this vessel was torpedoed on the 5th December, 1939. He was a keen sportsman, taking a particular interest in boxing and football. He was married twice and is survived by his second wife. His son by his first wife is now serving in the Tank Corps and is an engineer by occupation.

HERBERT S. REECE (Member 2850) died at Colombo on the 14th August, 1940. Born at Goldcliffe, near Newport, Mon., in 1879, Mr. Reece was educated first locally and subsequently at Long Ashton, Bristol. After serving his apprenticeship with Messrs. Richards & Hopkins, Britannia Iron Works, Newport, he went to sea and eventually became a chief engineer. He later accepted an appointment as secretary of the Marine Engineers' Association at Calcutta, a position which he vacated when he became proprietor of Messrs. G. F. Playfair & Co., engineers and contractors, of Calcutta, an occupation in which he was still engaged at the time of his death. Mr. Reece was a keen motorist and motored thousands of miles "up country" in India, and in December, 1929, won the Second Annual Endurance Trials held in India, for which he was awarded the Wakefield Silver Cup. He was also a

Freemason and had been Grand Master at Calcutta. In 1940 he was married for the second time, at Salisbury Cathedral, in South Africa, but became ill on the voyage home to Calcutta and died at Colombo, being buried at the English Cemetery there.

ALEXANDER R. REID (Member 2814) of Singapore, died during 1940. Mr. Reid served his apprenticeship with Messrs. Hall, Russell & Co., Ltd., and subsequently spent many years at sea, mostly, it is believed, in Far Eastern waters.

CHARLES G. GORDON RICHARDSON (Member 3429) died at Ruislip, Middlesex, on the 6th July, 1940. Mr. Richardson was born at Forest Hill, London, S.E., in March, 1883, and was educated at St. Dunstan's College, Catford. After serving his apprenticeship at the Thames Iron Works he joined the Aberdeen Steamship Co. as a junior engineer, later spending a number of years in the service of The New Zealand Shipping Co. In 1914 he was appointed an engineer lieutenant, R.N.R., in which capacity he served until 1920. In 1921 he joined the Beldam Packing & Rubber Co., in whose service he remained until the time of his death. In 1936 he was appointed works manager by this Company.

DOUGLAS ROBB (Member 7964) died as a result of enemy action in July, 1940. Born in 1901, Mr. Robb served his apprenticeship with Messrs. J. Hawley & Co. of Liverpool and prior to going to sea was for some time with Messrs. Lever Bros. and Messrs. Cammell, Laird & Co., Ltd., of Birkenhead. In 1928 he entered the service of Messrs. Alfred Holt & Co., Ltd., in whose employ he was still engaged at the time of his death.

ALEXANDER L. ROBERTSON (Member 5718) died suddenly at Glasgow on the 1st April, 1940. Born and educated at Aberdeen, Mr. Robertson's apprenticeship was served at the works of Messrs. Hall, Russell & Co., Ltd. He then sailed as a junior engineer with the Blue Funnel Line and spent several years in Singapore and the Dutch East Indies, serving eventually as chief engineer with various British and Dutch shipping companies. He severed his connection with the sea for two years to act as chief engineer of a linen mill in County Down, Ireland, but later spent six months in the cattle trade between the River Plate and Cape Province. Finally quitting the sea he was employed for some time by the Vacuum Oil Co. He then entered the service of The Menno Greascup Co., Ltd., in the early period of the last war and became a director of the Company. His wide experience of marine matters and his great conscientiousness made his services to the Company invaluable. He attended personally to all the Company's business in the Clyde area, where he was very well known as an active business man until the day of his death.



ARTHUR JAMES SAMBELL (Associate Member 6131) died while on active service on the 21st June, 1940. Born at Exeter in 1898, Mr. Sambell was educated at Queen Elizabeth's School, Crediton, Devon. In 1914 he entered the Royal Navy as an apprentice artificer and subsequently served in several of H.M. Ships in various parts of the world. At the time of his death he held the rank of Commissioned Engineer, R.N. Mr. Sambell had a keen interest in his work and all naval matters, he was a lover of nature and music, and was a pianist of exceptional ability.

JOHN H. SILLEY, O.B.E. (Past President and Member 1437), died 24th January, 1941. (See portrait and obituary in January, 1941 TRANSACTIONS, facing page 223).

ARTHUR C. SMITH (Member 2897) died in London on the 30th June, 1940. A native of Sunderland, Mr. Smith served his apprenticeship with Messrs. John Dickinson & Sons, Sunderland, from 1898 to 1903. He then entered the merchant service and very quickly obtained his Board of Trade certificates. In 1910 he was appointed engineer at Essex Road, London, public baths and subsequently at the Stoke Newington Destructor. In October, 1915, he resigned his post to join the Navy in which he served as Chief E.R.A. until 1919. In April of that year he began his long association with the Shoreditch Borough Council, being appointed assistant and then chief superintendent and engineer of the public baths department. He still held the latter post at the time of his death at the age of 58 years. Highly esteemed by his employers and in his profession, Mr. Smith was a founder member of the National Association of Baths Superintendents. He is survived by his wife.

JOHN WILLIAM MAJOR SOTHERN (Member 3572) died in a nursing home at Glasgow on the 4th December, 1940. Mr. Sothorn was born at Newcastle-on-Tyne in 1869 and educated in that city. He then moved to Glasgow where he served an apprenticeship as engineer and draughtsman at the works of Messrs. D. & W. Henderson & Co., Ltd. This was followed by a period of sea service and on the death of his father he took over the management of the college (founded by his father) which has since become so widely known. Mr. Sothorn's name became a household word in marine engineering circles, as he has been personally responsible for nearly half a century for coaching thousands of engineers for the Board of Trade examinations. As a teacher and author on this important side of engineering he was unrivalled, his numerous works on marine engineering subjects becoming standard reference books. As an example of the tremendous scope of his literary efforts on engineering subjects, it may be mentioned that the

fourteenth edition of his well-known "Verbal Notes and Sketches for Marine Engineer Officers" is in two volumes and the index to it alone occupies 86 pages, whereas the original volume of "Verbal Notes" embraced only 72 pages in its entirety. His book "The Marine Steam Turbine" must have run it close in professional favour before literature on that subject became as voluminous as it is to-day. Diesel engines, indicator diagrams, oil-fuel burning and associated aspects of engine-room practice are other subjects which Mr. Sothorn dealt with successfully in his books. Mr. Sothorn was a member of The Institution of Engineers and Shipbuilders in Scotland, a member of the Association of Teachers of Marine Engineering, and an honorary member of the Marine Engineers' Association. His death will occasion regret in all parts of the world where ships of the British Mercantile Marine operate.

DAVID ALEXANDER STEWART (Associate 8245) presumed dead on the disappearance of his ship during January, 1941. Of Scottish birth, Mr. Stewart, who was born in 1899, served his apprenticeship with Messrs. John G. Kincaid & Co., of Greenock, and subsequently he embarked upon a sea career. About 1927 he joined the Shaw Savill & Albion Co. and by 1936 was serving as second engineer in this Company's m.v. "Karama". At the time of his death he was serving as chief engineer of one of the Shaw Savill & Albion Co.'s vessels. Mr. Stewart was in the Sea Scouts at the outbreak of the last war, and was serving in the Navy before hostilities ceased. On one occasion during the present war he received a presentation from the other officers and crew for his action in speeding up the engines to such an extent that the ship was able to evade an enemy submarine. Of particularly charming personality, Mr. Stewart was very popular among his associates and in his home town of Rothesay.

G. D. S. WHITE (Member 2002) died at his home at Upminster on the 28th February, 1940. Mr. White served his apprenticeship with Messrs. Douglas & Grant, of Kirkcaldy, and commenced his sea career as long ago as 1895. For some time he was in the employ of Royal Mail Lines, Ltd., and is believed to have spent most of his active life at sea.

WILLIAM ALBERT WHITE (Member 3250) died at Newcastle-on-Tyne on 9th June, 1940. Mr. White, who was chairman and managing director of Messrs. White's Marine Engineering Co., Ltd., Hebburn-on-Tyne, was born at Sunderland in 1879. He received his education at the Maritime School, South Shields, and served an apprenticeship in the engineering works of Messrs. Middle Docks and Engineering Company, Ltd., South Shields. He then went to sea for several years, and subsequently proceeded to New York on behalf of Messrs. C. A.



Parsons & Co. to supervise the construction of the first marine Parsons turbine built in the United States. In 1910 he established the Washington Engine Works, New York, but during the war of 1914-18 disposed of his business interests in the United States and returned to his native country. Soon afterwards he was appointed a member of the executive committee of the Petroleum Board under Sir John Cadman and, later, was made consulting engineer to Messrs. British Mexican Petroleum Co. It was at this period of his career that Mr. White became interested in the burning of oil under boilers. He was the originator of the oil-burning system which bears his name and in connection with which the firm of Messrs. White Patent Oil-Burning Co., Ltd. was founded in October, 1920. Mr. White was also the originator of a coal pulveriser and an oil separator, but he will be best remembered for his patent combined steam engine. Briefly, this consists of a high-speed, high-pressure balanced reciprocating engine, exhausting into a low-pressure turbine, both engine and turbine being geared to the propeller shaft. In order to demonstrate the efficiency of these engines, Mr. White installed one in a steamer of 8,000 tons deadweight, the s.s. "Boswell", which he purchased in 1934 for the purpose, renaming her "Adderstone". As a result of the satisfactory performance of this vessel, especially from the point of view of fuel economy, a number of subsequent orders were received for steamers of various types. Mr. White became a member of the North-East Coast Institution of Engineers and Shipbuilders in 1920, a member of the Institution of Naval Architects in 1927, and a member of the Institution of Mechanical Engineers in 1934. He was also a Fellow of the Institute of Petroleum, a member of the Society of Naval Architects and Marine Engineers, New York, and a Fellow of the Royal Society of Arts.

**WILLIAM GEORGE WINTERBURN** (Honorary Vice-President and Member 157), died 8th August, 1940. (See obituary in December, 1940 *TRANSACTIONS*, page 216).

**WALTER C. WOLFE** (Member 5435) died in hospital in Montreal on the 7th March, 1940. Mr. Wolfe was born at Southsea in 1882 and was educated at the Liverpool Institute. After serving his apprenticeship with Messrs. John H. Wilson & Co., Ltd., of Liverpool, he joined the Allan Line in 1904 as 8th engineer in the s.s. "Tunisian". Subsequently he served in the s.s. "Victorian", returning in 1910 to the s.s. "Tunisian" as 3rd engineer. In 1914 he became senior 2nd engineer in the s.s.

"Calgarian". During the last war he was commissioned as engineer lieutenant-commander and served in the "Calgarian", which was engaged in convoy work in the Atlantic, and subsequently in the s.s. "Alsatian", which was flagship of the 10th Cruiser Squadron maintaining patrol between Iceland and the Shetlands. He left the "Calgarian" at the end of the voyage before she was torpedoed. On his release from naval service in 1919, Mr. Wolfe remained on the "Alsatian", which was renamed the s.s. "Empress of France". He was appointed assistant chief engineer of this ship in April, 1922. In September of the same year he received further promotion, coming ashore as superintendent engineer of the Canadian Pacific Steamships, Ltd., with headquarters at Montreal and Saint John, N.B., a post which he filled until his death. Mr. Wolfe, whose wife survives him, was a keen fisherman, bridge and billiards player, and a member of the A.F. and A.M.

**JOHN YOUNG** (Member 1606) died during 1940. Mr. Young served his apprenticeship with Messrs. J. & T. Young, of Ayr, and Messrs. Lees & Anderson, of Glasgow. As long ago as 1902 he became a Member of The Institute, at which time he had been at sea for 10 years and was serving as chief engineer.

**ARCHIBALD SCOTT YOUNGER** (Member 1326) died on the 23rd July, 1940, at his home in Glasgow. Mr. Younger, lately a director of Messrs. A. R. Brown, McFarlane & Co., Ltd., naval architects, marine engineers and merchants of Glasgow, was born in 1865 and served his apprenticeship with The Wallsend Slipway & Engineering Co., Ltd., of Newcastle-on-Tyne. As engineering director of Messrs. Brown, McFarlane & Co., Ltd., he was connected with shipbuilders on the Clyde and all over the country. He was a B.Sc. of Glasgow University, a member of The Institution of Naval Architects and a founder member of the Society of Consulting Marine Engineers and Ship Surveyors. In 1905 he set up in business as a consultant and supervised the construction of several vessels for the Nippon Yusen Kaisha when that Company's ships were built in this country. Mr. Younger was also Honorary Consul of Japan at Glasgow. He was appointed to that position in 1913 and held it until he retired from business some years ago. Five years ago the Emperor of Japan recognised his services to Japan in the city by conferring upon him the Insignia of the Third Class of the Order of the Sacred Treasure.



8, NEW COURT,  
LINCOLN'S INN,  
LONDON, W.C.2.

To the Members,

THE INSTITUTE OF MARINE ENGINEERS,  
85/88, THE MINORIES, E.C.3.

GENTLEMEN,

We have to report that we have examined and checked the Accounts of your Institute for the year ended 31st December, 1940, and we set out below our observations.

(1) The Revenue Account shows a Surplus of £1,123 8s. 5d. as compared with £515 13s. 2d. last year, an increase of £607 15s. 3d.

(2) The Gross Revenue for the year was £8,787 7s. 5d., an increase of £716 12s. 10d., made up as follows:—

	Decrease.	Increase.
	£ s. d.	£ s. d.
Subscriptions ... ..	—	976 11 5
Entrance Fees ... ..	147 5 0	
Advertisements ... ..	134 1 6	
Interest ... ..	—	39 7 10
Contributions towards Expenses for use of Hall and Library ... ..	54 15 0	
Sundry Sales ... ..		36 15 1
	£336 1 6	1,052 14 4
Deduct Decreases ... ..	...	336 1 6
Increase as above ... ..	...	£716 12 10

The large increase in Subscriptions is due to the raising of Members' Subscriptions from £1 11s. 6d. to £2 2s., which came into force on 1st January, 1940. The fall in Advertisement revenue is offset by the decrease of £407 1s. 6d. in the production costs of the TRANSACTIONS.

(3) Expenditure charged to Revenue Account amounted to £7,663 19s., an increase of £108 17s. 7d., made up as follows:—

	Decrease.	Increase.
	£ s. d.	£ s. d.
General Expenses ... ..		368 1 7
Rent, Rates, etc. ... ..		95 19 6
House Account ... ..	126 17 7	
Repairs ... ..		198 5 9
Insurance ... ..	31 8 7	
Transactions ... ..	407 1 6	
Transactions (Bound Volumes) ... ..		71 2 0
Junior Section ... ..	12 2 0	
Library and Reading Room Account ... ..	50 6 9	
Depreciation ... ..	2 9 1	
Heat Engines Prizes ... ..	—	1 16 0
Silver Medal ... ..	—	1 10 0
Extra First Class Certifi- cate Medal ... ..	—	2 8 3
	£630 5 6	739 3 1
Deduct Decreases ... ..	...	630 5 6
Increase as above ... ..	...	£108 17 7

The increase in General Expenses is largely on account of Salaries, while the further addition to Rent, Rates, etc., is due to the premises at High Wycombe, in respect of which a full year's rental is charged as against about three months in 1939. The heavy expenditure on repairs was necessitated by damage caused to the Institute premises by bomb blast.

(4) The difference between the increase of £716 12s. 10d. in Revenue and the increase of £108 17s. 7d. in Expenditure accounts for the increase of £607 15s. 3d. in Surplus Revenue.

(5) *The Running and Maintenance of Marine Machinery Handbook Account.*

In accordance with the Council Minute of 3rd July, 1933, £37 17s. 11d. has been paid to the Guild of Benevolence. Further Sales, less Expenses, during the year amounted to £28 18s. 8d.

(6) *Investments.*

The Market Value at 31st December, 1940, of the Institute's free Investments standing in the books at £15,918 15s. 8d. was £16,097. During the year £1,000 3 per cent. National Defence Loan 1954/58 was purchased at a cost of £998 17s.

(7) We have verified the Investments and Bank Balances and have inspected the Insurance Policies and Title Deeds, and we have obtained all the information and explanations we have required. In our opinion the Balance Sheet of your Institute has been properly drawn up so as to exhibit a true and correct view of the Institute's affairs according to the information and explanations given to us and as shown by the books of the Institute.

Yours faithfully,

WEST & DRAKE,

Chartered Accountants.

26th February, 1941.

The Honorary Treasurer then read the foregoing Auditors' Report and his own report on the financial affairs of The Institute as follows:—

"The report of our Chartered Accountants which I have just read, as I think you will agree, shows our finances to be in a very satisfactory state. There is not a great deal that I can add, except to elucidate some of the items in the accounts for the benefit of Members.

On the debit side of the Revenue Account it will be noticed that the main increases under General Expenses are for postages and telegrams, which are increased from £209 15s. 8d. last year to £249 6s., and the telephone account increased from £64 6s. 11d. to £117 17s. 5d. These increases are due to the considerable extra expenses involved in communication with Members and to our being evacuated to High Wycombe.

The increase in Staff salaries from £1,671 5s. 1d. to £1,883 9s. 8d. is automatic and also covers additional clerical assistance required to cope with the work.

The contributions made to Institutions for research cover the following:—

	£	s.	d.
Parliamentary and Scientific Committee	10	10	0
William Froude Tank Research Fund	21	0	0
British Electrical and Allied Industries Research Association ... ..	25	0	0
Joint Committee on Materials and their Testing ... ..	10	0	0
British Non-ferrous Metals Research Association ... ..	25	0	0

The amount of £280 10s. 5d. for Sundries is made up of a number of items, such as our Repre-



TABLE A.

	31st Dec., 1931.	31st Dec., 1932.	31st Dec., 1933.	31st Dec., 1934.	31st Dec., 1935.	31st Dec., 1936.	31st Dec., 1937.	31st Dec., 1938.	31st Dec., 1939.	31st Dec., 1940.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Receipts from Subscriptions	4,051 10 1	4,225 12 3	4,330 7 7	4,597 8 4	4,761 1 4	5,258 15 6	5,312 8 8	5,318 8 11	5,380 4 10	6,356 16 3
Entrance Fees...	468 12 0	393 0 0	373 17 6	418 12 9	491 3 3	371 15 0	328 13 0	333 15 0	328 15 0	181 10 0
Advertisements ...	1,236 18 6	1,085 5 6	1,024 18 6	1,067 6 0	1,015 1 0	1,118 8 6	1,329 3 6	1,570 14 6	1,569 6 6	1,435 5 0
Total Income ...	6,487 5 1	6,409 9 10	6,428 11 9	6,738 6 1	6,921 18 4	7,489 13 6	7,722 18 8	8,005 8 11	8,070 14 7	8,787 7 5
General Ex. A/c.	1,878 1 11	1,957 3 7	2,181 10 7	2,126 5 7	2,387 2 0	2,962 2 7	2,683 17 6	3,025 7 4	2,948 8 0	3,315 0 1
Rent, Rates and Taxes	659 18 3	647 19 9	477 15 8	470 4 6	484 10 3	519 2 1	536 2 1	542 18 2	565 17 1	661 16 7
House A/c. ...	440 11 3	468 7 8	489 15 2	473 11 6	553 2 2	549 19 5	572 14 9	587 3 9	607 10 3	480 12 8
Repairs and Redecorations	434 4 3	260 7 0	10 12 7	530 13 7	107 19 0	16 15 1	452 9 9	53 0 9	4 12 8	204 7 11
Transactions ...	2,459 6 6	2,292 15 7	2,320 0 9	2,223 11 3	2,334 14 6	2,480 6 9	2,470 15 0	2,911 1 0	3,159 0 3	2,751 18 9
Sundry Creditors	944 19 3	385 7 8	387 11 7	467 7 8	1,363 7 8	526 5 0	448 6 3	536 17 11	567 17 2	759 6 2
Capital A/c. ...	24,088 9 11	24,581 11 0	25,962 3 4	26,652 15 0	27,304 3 7	28,010 9 11	28,999 16 6	29,635 3 8	30,178 10 4	31,344 13 11
Balance on Revenue A/c.	296 2 6	493 1 1	745 0 7	690 11 8	651 8 7	706 6 4	741 4 11	635 7 2	515 13 2	1,193 17 1

BENEVOLENT FUND.

GUILD OF BENEVOLENCE.

	31st Dec., 1931.	31st Dec., 1932.	31st Dec., 1933.	*31st Dec. 1934.	31st Dec., 1935.	31st Dec., 1936.	31st Dec., 1937.	31st Dec., 1938.	31st Dec., 1939.	31st Dec., 1940.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Revenue :—										
Interest on Investments	94 8 8	83 0 0	85 9 4	108 14 8	339 17 2	360 2 0	378 12 4	391 9 10	396 14 10	407 13 4
Ground Rents					180 18 5	352 3 1	352 3 0	352 2 10	352 2 10	352 2 10
Members Subscriptions					163 12 3	160 4 8	196 7 1	248 4 1	245 7 3	249 19 3
Donations... ..	28 16 6	46 6 0	71 8 9	102 9 2	140 16 4	106 2 9	191 2 2	93 11 8	225 18 9	214 0 11
Total Receipts ...	145 3 10	150 0 11	176 8 8	228 1 0	825 4 2	978 12 6	1,118 4 7	1,085 8 5	1,220 3 8	1,223 16 4
" " (without donations)	116 7 4	103 14 11	104 19 11	136 12 4	684 7 10	872 9 9	927 2 5	1,021 8 4	994 4 11	1,009 15 5
Expenditure ...	125 1 0	165 6 4	120 7 0	104 15 1	539 19 7	864 19 1	944 4 5	1,115 0 0	1,187 18 5	994 13 10
Investments ...	2,544 17 11	2,543 7 11	2,645 17 8	8,052 19 5	17,318 14 4	19,701 5 4	20,019 15 9	20,171 11 9	20,315 17 9	20,259 8 0
Income Tax recoverable	21 18 8	20 14 11	19 10 7	16 17 2	27 7 3	40 16 4	52 8 6	49 7 1	60 4 2	106 2 3
Cash and Deposit A/c. ...	21 13 11	7 18 6	9 11 2	6,459 6 7	1,923 9 3	44 8 3	10 10 0	178 5 0	283 8 2	809 1 3

\* Includes Benevolent Fund to Aug. 2nd and Guild of Benevolence from Aug. 2nd to Dec. 31st.







On the credit side, subscriptions have come in remarkably well; in fact I think I may say that there are no more Members behind with their subscriptions this year than there have been on the average for several years past, and this in spite of the fact that the increase in the subscription rate from one and a half to two guineas came into operation for the first time in January of last year. Members are evidently not inclined to let us have their subscriptions in advance so freely, as this item is only £392 0s. 6d. compared with £556 9s. 1d. in the previous year and on the basis of the lower subscription.

The reduction in Entrance Fees is perhaps the most serious item in our Revenue Account, having come down from £328 15s. the previous year to £181 10s. In existing circumstances perhaps we should not expect so large an annual influx of new members as we get in times of peace. The Council would, however, like to see a larger number of new members and every member can help in this direction by inducing men who have the necessary qualifications to apply for membership, particularly those who are seagoing marine engineers.

The income from advertisements in our TRANSACTIONS is slightly reduced from £1,569 6s. 6d. to £1,435 5s. This is, however, well maintained and we must express our thanks to those advertisers who are continuing to advertise in our TRANSACTIONS.

The income from our investments shows an increase of £39 7s. 10d., due partly to the fact that this year we have a full year's interest credited on the Bank of England Stock and also on £500 in our Post Office Savings Bank Account.

The net result is the transference of £1,123 8s. 5d. from the balance on our Revenue Account to the Balance Sheet.

You will notice that various Awards are shown on our Balance Sheet in a somewhat different manner from that given in previous Balance Sheets. At my suggestion our Chartered Accountants have shown the exact capital amount received by the Institute in respect of each Award, the accumulated income and current interest being shown separately. The capital amounts obviously have to be preserved as they are a direct charge on our Capital Account, and it is only the accumulated interest and current interest which is available from year to year for Awards. Anything additional would have to be met out of our General Account.

This is the first year's Accounts in which the Social Events Accounts have been clear on the 31st December, due to our Conversazione and Annual Dinner in the past having come so closely together and the accounts overlapping. It will be observed that there is an amount of £227 13s. 9d. standing in the Balance Sheet to the credit of this account, out of which I hope the Council will, at their next meeting, be prepared again to vote a contribution to the funds of the Guild of Benevolence.

Under the heading of Cash at Bank and in Hand you will notice £520 16s. 8d. on our Post Office Savings Bank Account. This covers the investment of £500, the balance of £20 16s. 8d. being interest, which also shows on the credit side of the Revenue Account.

During the past year we have purchased £1,000 3 per cent. National Defence Loan at a net cost of £998 17s.

The surrender value of our City Premises Redemption Policies is now becoming a valuable asset and, as will be noted, is £87 in excess of last year. This item, the surrender value, is not included as part of our Capital but will go on increasing at a considerably greater rate than the rate of depreciation on the value of our premises, which stands in the Balance Sheet at a figure, as heretofore, of £14,650 0s. 5d.

We shall, of course, be faced during the coming year with a considerable item to cover War Risk Insurance on our premises under the present War Risk Damage Bill, amounting to 2s. in the pound on our net assessment.

The Guild of Benevolence Accounts, which have not yet been presented, are naturally of interest to you owing to the fact that your Council are trustees for these funds. The accounts show a total income of £1,223 16s. 4d., only £3 14s. 8d. in excess of last year. Due, however, to the fact that relief allowance rates for non-members of the Institute have been reduced, the disbursements in relief are somewhat lower and stand at £948 2s. 9d., as compared with £1,129 8s., leaving a balance to be carried forward of £229 2s. 6d. from the Revenue Account.

May I again make an appeal for more of our members to join the Guild of Benevolence in the near future. We are bound to experience very heavy demands in the future and a large increase in membership would very materially help the benevolent work of the Guild. At the present time approximately 10 per cent. only of our members are members of the Guild of Benevolence.

**Mr. A. F. C. Timpson, M.B.E.** (Member), proposing the adoption of the Report and Accounts, said: "The first item in the Report, intimating that Sir Percy Bates has accepted nomination for a third year of office as President, will give unanimous satisfaction. In my remarks at the last Annual Meeting I expressed the hope that Sir Percy would be our 'Peace President'. I now re-echo this sentiment with somewhat greater hope and less wishful thinking.

The Council have been wise in their appointment of the Emergency Committee to exercise the powers of the Council, and that their selection has been good is borne out by the excellent Report now before the meeting. We owe a debt of gratitude to these gentlemen for carrying on and making important decisions in these difficult times without having



available the advice and collaboration of their colleagues.

It is unfortunate that during the year we have been unable to meet and discuss papers as we did in normal times, but a number of very interesting papers have been published in the *TRANSACTIONS* and it is hoped to maintain the high standard to which members have become accustomed.

It will also be observed that the Council are now publishing a number of books. 'The Running and Maintenance of Marine Machinery' has proved extremely valuable and popular, and the new edition just published is very much amplified and brought up to date. A further volume, 'Electricity Applied to Marine Engineering', by Mr. W. Laws, is already proving very successful, and the book on naval architecture and ship construction which will be published in due course should meet a long felt need.

It is regrettable that the Council have decided to suspend the various essay competitions. The decision is not surprising, however, as even in normal times these competitions are not too well supported.

It is disappointing to note the decline in membership during the year under review, but in the circumstances we appear to be holding our own very well. Many of the members lost have died as a result of enemy action, and our tribute must be paid to their devoted service.

It is also regrettable to note that the membership of the Guild of Benevolence is not increasing as it should. Members should realize the valuable work which the Guild has done, is doing, and will have to do amongst members of the marine engineering profession. It would be a fitting tribute to the memory of our former President, the late Mr. John Silley, to place his great work on an even more solid and enduring foundation, and I hope members will bear this in mind.

The Report gives full details of the activities of the various representatives on outside bodies; we owe a debt of gratitude to these gentlemen for the work which they undertake on behalf of The Institute.

Turning to the Accounts, it is pleasing to note that the Revenue Account shows a surplus of £1,123 8s. 5d. in spite of heavy expenditure involved in running emergency premises. I hope that the caution of the auditors is exemplified in the second paragraph, where they state that the decrease in advertisement revenue (£134 1s. 6d.) is offset by the decrease of £407 1s. 6d. in the production costs of the *TRANSACTIONS*. The one figure appears very effectively to offset the other.

With regard to the heavy expenditure on repairs due to damage caused to The Institute premises by bomb blast, it is gratifying to hear from our Honorary Treasurer that this will presumably be recoverable in due course.

It is also gratifying to note that the market

value of our investments stands at a somewhat higher figure than that shown in the accounts. Turning to the Balance Sheet, it will be observed that no account whatever is taken of the City premises redemption policies, which at present have a surrender value of £2,376, yet the statement shows that our finances are in a very sound condition.

Altogether, you will agree that the affairs of The Institute are in a very healthy state. I have pleasure, therefore, in moving the adoption of the Annual Report and Accounts and in calling upon Mr. E. F. Spanner to second this motion".

**Mr. E. F. Spanner, R.C.N.C. retd.** (Member) formally seconded the adoption of the Report and Accounts, and on the motion being put to the meeting by the President it was carried unanimously.

**The President** then presented the following awards:—

Denny Gold Medal—S. A. Smith, M.Sc. (Member).

Institute Silver Medal—Professor E. Forsberg.

Junior Silver Medal and Premium—R. A. Collacott, B.Sc. (a Student at the time of competing for the award, now an Associate).

Extra-First Class Engineer's Medal—Lieut. (E.) J. F. Tucker, R.N. (Associate Member).

Mr. Smith was present in person and was warmly applauded on receiving his award and the President's congratulations. The award to Professor Forsberg, resident in Sweden, was handed to his representative, Mr. H. Mackegg. It was announced that as Mr. Collacott and Lieut. Tucker were on active service their awards would be forwarded to them.

**Mr. F. W. Youldon** (Chairman of Council), in moving a vote of thanks to the President, said: "It gives me great pleasure to deal with the next item on the agenda, which is the vote of thanks to our President. At our Annual General Meeting last year the wish was expressed that the present conflict would be over and that Sir Percy would be our 'Peace President'. Unfortunately, that wish has not materialised, but as Sir Percy has consented to be nominated and has been elected for the ensuing year, I am sure that he carries that wish forward for his further year of office.

We are very grateful for his services in the past year, particularly as such services have been given while he has been—as he still is—rendering valuable services to our country in other directions. We have missed that close personal contact which normally occurs between our President and the Council, but the fact that we could call upon Sir Percy's vast knowledge of shipping matters when necessary has been a great source of satisfaction to the Council, and we look forward to closer contact during the coming year. I therefore propose that a



hearty vote of thanks be accorded to our President, and I call upon Mr. Crompton to second the motion".

**Mr. T. A. Crompton** (Vice-Chairman of Council), seconding the motion, said: "Since our Institute was founded—now over 50 years ago—we have numbered amongst our Presidents many famous men. It is necessary and important that we have the right man at the head of our affairs, a man with a personality which commands universal respect, a man of integrity and one with a full knowledge of shipping and all that shipping means to this country. In Sir Percy Bates you will all agree that we have such a man and as evidence of his high qualities we are to-day electing him for a third term of office.

Sir Percy, as you all know, has during the whole of his business career been connected with the shipping industry, and in addition to his many other interests has for a number of years occupied the position of Chairman of the Cunard-White Star Line. He has also in this war, as in the struggle of 1914-18, placed his services at the disposal of a very grateful country. To marine engineers Sir Percy will be best known and remembered for the part he played in visualising the possibility of such ships as the 'Queen Mary' and 'Queen Elizabeth', for his confidence in our naval architects and shipbuilders to design and build vessels of such outstanding proportions, and last but not least for his confidence that the marine engineers of this country could not only design but build and maintain in service the colossal amount of machinery necessary for the equipment and propulsion of such vessels.

At our Annual Meeting last year Sir Percy referred to the Royal Naval Reserve, in which he holds the rank of Captain and to the fact that relatively few Merchant Navy engineer officers, compared with the number of deck officers, joined that body in times of peace, with the result that some little difficulties had arisen when arranging temporary commissions in what are now H.M. ships. That difficulty could, as Sir Percy mentioned, have been overcome if marine engineers as a body had interested themselves in the Royal Naval Reserve to a greater extent in peace time. Nevertheless, marine engineers in this war, as always, have been in the forefront wherever they are serving, though mostly unseen and almost always unrewarded for the many heroic deeds they have to their credit. I take this opportunity to urge that, when peace returns, marine engineers in general and members of The Institute in particular should interest themselves to a far greater extent in the Royal Naval Reserve and wherever possible to join it. By doing so, they will not only serve their country, but the closer collaboration with their contemporaries in the Royal Navy will tend to bridge that difference which exists between them and the commissioned ranks of the senior Service. Engineer officers of the Royal Navy could also with advantage to them-

selves serve short periods with ships of the Merchant Navy. I venture to think, Sir Percy, that as a captain in the R.N.R. and as a very prominent ship-owner, you are doing all you can to assist in that much desired closer personal touch between H.M. two sister Services being achieved, and I hope that this will be a point which The Institute will also stress in future deliberations.

I have taken up much of your time, Sir Percy and gentlemen, but we are all naturally keenly interested in matters connected with the sea. Gentlemen, I have great pleasure in seconding the motion that a very hearty vote of thanks be accorded to our President".

The vote of thanks was enthusiastically accorded to an accompaniment of loud and prolonged applause.

**The President**, responding, thanked the meeting for the warm acceptance of the motion and expressed the assurance that, though his work for The Institute during the past year had been greatly hampered by the war, the interests of The Institute and the rights of the marine engineering profession had been constantly in his mind.

At the Advisory Council of the Ministry of Shipping he had on more than one occasion drawn attention to the necessity of according more adequate recognition to many members of the marine engineering profession, and had expressed his regret that such recognition had not been given. He would repeat his efforts at the next meeting of the Council.

He felt sure that Mr. Crompton's wish that there should be closer co-operation between the Royal and Merchant Navies and his desire to see marine engineers take a much closer interest in the Royal Naval Reserve in times of peace were points which would receive general approval, and he (Sir Percy) would spare no effort to ensure their attainment.

He appreciated Mr. Crompton's remarks on the big ships and the part he had played in enabling their construction to take place. In justification of his confidence in the marine engineers and shipbuilders of this country, he would say that he had heard nothing whatever about the machinery of these ships since they had left this country. One could imagine no better compliment to the constructors and to the engineers operating the machinery.

**The President** next announced the report of the Scrutineers, the result of the voting being as follows:—

*President*:—Sir Percy E. Bates, Bt., G.B.E.

*Vice-Presidents*:—

London: W. D. Heck, B.Sc., G. J. Isaac, H. J. Vose, Eng. Rear-Admiral W. M. Whayman, C.B., C.B.E., W. T. Williams, O.B.E., B.Sc., Wh.Ex.

Liverpool: S. B. Freeman, C.B.E., M.Eng.



Hull : J. H. Mackirdy.  
Newcastle : Summers Hunter.  
Glasgow : J. Harbottle.  
Leith : John Houston.  
Merchant Navy : R. Windrim.  
Rotterdam : W. Wilton.  
British Columbia : J. Brydon.  
Bombay : H. P. Southwell.  
Wellington : D. K. Blair.  
New York : J. L. Luckenbach.  
Shanghai : G. Pickering.

\*Kobe : A. R. Riddell.

\*Greenock : M. McAffer.

\*Confirmation of appointments to casual vacancies.

*Honorary Treasurer:* Alfred Robertson, C.C.

*Members of Council:* A. F. C. Timpson,  
M.B.E., J. Calderwood, M.Sc., W. L.  
Watson, A. B. Smith and R. F. Thompson,  
B.Sc.

*Associate Member of Council:* E. V. Hartley.

**Mr. H. Mackegg** (Member) proposed a vote of thanks to the Scrutineers (Messrs. A. E. Whiteside and G. B. Plows) and to the Honorary Auditors (Messrs. W. D. Heck and H. J. Vose) and their re-appointment for 1941. This proposal was carried with applause.

**Mr. R. H. Gummer** (Member) said that when he was asked to move the vote of thanks to the Council and Officers of The Institute he was embarrassed by the fact that while he was familiar enough with the results of their work on behalf of The Institute, he was not acquainted with them personally. He could, however, say that it was very gratifying indeed to members that in spite of the difficulties experienced in the past year, The Institute had come through them so successfully.

Whilst many of the Officers of The Institute had only been on call, a small number had carried the whole of the responsibility during the latter part of the year. For this reason he desired to divide the vote of thanks into two parts. First, he would formally propose that the warm thanks of the members be accorded to all Officers for their work during the past year. Secondly, as the work of the Special Committee exercising the powers of the Council appeared to call for particular recognition, he would propose that this recognition take the form of a vellum bearing the following inscription to be presented to each member of the Special Committee :—

“The members of The Institute of Marine Engineers at their Annual Meeting held in London on March 14th, 1941, moved and adopted unanimously a resolution placing on record their warm appreciation of the excellent work carried out by the Chairman of the Council, Mr. F. W. Youldon, the Vice-Chairman, Mr. T. A. Crompton, the Honorary Treasurer, Mr. Alfred Robertson, C.C., and

the Secretary, Mr. B. C. Curling. It was desired that a permanent record of their zeal and interest should be secured, particularly as they supervised and maintained the property, records, investments and other possessions of The Institute in conditions of the greatest difficulty.

In fulfilment of their obligations as an Emergency Council they carried on amidst the disruption occasioned by the sustained enemy attack during the great Battle of London with that devotion to duty which is a marked characteristic of the marine engineering profession”.

**The President** put Mr. Gummer's motion to the meeting and it was carried unanimously.

**Mr. F. W. Youldon** (Chairman of Council), responding to the vote of thanks to the Council and Officers, said that when it became apparent during the past year that ordinary Council meetings were hardly practicable, he put forward the suggestion of an Emergency Committee to exercise the powers of the Council with some trepidation. The suggestion was, however, approved and the Emergency Committee was formed and comprised Mr. Crompton, Mr. Robertson, the Secretary and himself. Meetings had been carried on with difficulty, and on at least one occasion a meeting was held in an underground shelter during an air raid. Nevertheless, he regretted that Mr. Gummer felt it necessary to specify any special recognition of the Committee, the members of which assumed that whatever the circumstances they must carry on, as indeed had everyone else. Further, the Committee had relied a great deal on the permanent staff, who had as usual given the excellent service to which the Council were accustomed. The Committee had also had considerable help from the Conveners of the various Committees.

On behalf of the Emergency Committee he would therefore say that the recognition suggested by Mr. Gummer was entirely unsolicited and unexpected. While the Committee greatly appreciated the compliment, it must be remembered that it was creating a precedent which would probably have to be repeated next year and conceivably for an even longer period. Accordingly, although the resolution had been passed, might he request that it be not put into effect. The Committee felt amply repaid by the reception given to Mr. Gummer's proposal.

In conclusion, he would again pay tribute to the staff, particularly to the Secretary, who was worthily supported by his assistants.

**The President** suggested, in view of Mr. Youldon's remarks, that Mr. Gummer's resolution be left in the Minutes for execution after the war. This suggestion was unanimously approved.

The proceedings then terminated.



# THE INSTITUTE OF MARINE ENGINEERS GUILD OF BENEVOLENCE.

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*Trustees:* THE INSTITUTE OF MARINE ENGINEERS (INCORPORATED BY ROYAL CHARTER).

## **General Committee, 1940:**

*Chairman:* J. CARNAGHAN.

### *Committee:*

*Vice-Presidents*—†A. E. CRIGHTON, ‡R. S. KENNEDY, †S. N. KENT.

*Members of Council*—†T. A. CROMPTON, †H. S. HUMPHREYS, ‡A. F. C. TIMPSON, M.B.E.,  
\*F. W. YOULDON.

*Members of the Guild*—†F. A. HUNTER, †G. SPECK, \*CAPTAIN B. WARWICK.

\* Retire in 1941. † Retire in 1942. ‡ Retire in 1943.

## **Executive Committee, 1940:**

*Chairman:* J. CARNAGHAN.

### *Committee:*

*Vice-President*—S. N. KENT.

*Members of Council*—T. A. CROMPTON, H. S. HUMPHREYS.

*Members of the Guild*—F. A. HUNTER, G. SPECK, A. F. C. TIMPSON, M.B.E., CAPTAIN B. WARWICK.

### *Members of Committees—ex officio:*

*Honorary Treasurer:* ALFRED ROBERTSON, C.C.

*Secretary:* B. C. CURLING.

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*Honorary Medical Officer:* W. J. GALT, M.A., M.B., B.Ch., Ibex House, The Minories, E.C.3.

*Honorary Solicitor:* W. E. ARCHER, 101, Leadenhall Street, E.C.3.

*Honorary Auditors:* W. D. HECK, B.Sc. and H. J. VOSE.

*Auditors:* WEST & DRAKE, 8, New Court, Lincoln's Inn, W.C.2.

*Bankers:* BARCLAY'S BANK, LIMITED.



# THE INSTITUTE OF MARINE ENGINEERS

## GUILD OF BENEVOLENCE.

### MINUTES OF PROCEEDINGS AT THE SEVENTH ANNUAL GENERAL MEETING,

Friday, April 25th, 1941.

Chairman : Mr. JAMES CARNAGHAN.

The Seventh Annual General Meeting of The Institute of Marine Engineers Guild of Benevolence was held in the Library of The Institute, at 2.30 p.m. on Friday, 25th April, 1941. Mr. James Carnaghan, Chairman of the General and Executive Committees, was in the Chair. There were also present fifteen members and officers.

**The Chairman**, in his opening remarks, said :

This is our second Annual General Meeting held under unnatural circumstances, and it is a relief to find so many members present. I assure you that the Committee thank you for your presence, thus making it possible to carry on the business of the Guild in accordance with the prescribed Rules.

Since our previous meeting we have lost some of our members through death and war casualties. The Guild has suffered an irreparable loss by the death of Mr. John Henry Silley, O.B.E., Past President and Member of The Institute of Marine Engineers and the principal founder of the Guild of Benevolence. As you are aware, it was through his initiative and great effort that the finances of the Guild were placed on a substantial basis.

Among others who have passed away are Mr. James Brown, C.B.E., Vice-President of The Institute, in whom the Guild has lost a staunch friend, and Mr. F. W. Bridges, who, although not a member of the Guild, was a valued friend of many members of The Institute, and you will find his name in the list of Donors to the Guild.

We have again to render sincere thanks to The Institute of Marine Engineers for substantial contributions to the Guild's revenue from the Social Events Account and from the "Running and Maintenance of Machinery" Account.

Last year the Scale of Grants was revised as a result of representations made to the Committee to the effect that the previous scale offered but little inducement to Members of The Institute to become Members of the Guild. The Committee regret that so far this inducement has had no appreciable effect. Although Members of The Institute may consider

that they or their dependants will never be reduced to circumstances requiring assistance from the Guild, it may be mentioned that the Committee recently has assisted dependants of engineers, lost by enemy action, to tide over money difficulties during the period between the date of loss of the vessel and that on which relief was granted by the Ministry of Shipping.

The Committee are pleased that during the past financial year they have been able to grant relief to all necessitous cases which have come within the province of the Rules of the Guild, and in addition to provide for a sum to be placed to the Capital Account.

I will now call upon the Secretary to read the Annual Report.

**The Secretary** then read the Annual Report as follows :

#### SEVENTH ANNUAL REPORT OF THE GENERAL COMMITTEE.

In presenting the following record of the past year's work the Committee recognize that the number of deaths of seagoing engineers by enemy action is unfortunately such as to necessitate the most careful conservation of the Guild funds against a possible increase in the calls for relief. Further, the situation necessitates a constant appeal for new members from among those members of The Institute who have not yet responded to the Council's repeated invitations.

The Committee tender their sincere thanks to the Members and Donors named in the following pages, who have so generously supported the Guild during the past year, and to the Liverpool Marine Engineers and Naval Architects' Guild, the Marine Engineers' Association Benevolent Fund and the Royal Alfred Aged Merchant Seamen's Institution for having shared in grants of relief to several applicants.



## Meetings of the Committees.

Since the date of the preceding Report the General and Executive Committees have held two joint meetings and four meetings of the Executive Committee. At five of these meetings applications for relief were considered.

Since September, owing to the difficulty of holding meetings in the City during air raids, the business of the Executive Committee has been delegated to the Chairman. The Committee are greatly indebted to Mr. Carnaghan for his valuable services throughout this period in dealing with the fresh applications for relief and those for the renewal of previous grants.

## Applications for Relief.

A summary of the cases dealt with between 1st January and 31st December, 1940, is given on pages 7 and 8.

Relief granted to these applicants involved an expenditure of £947 3s. 6d. In 32 of these cases the relief has been continued from the preceding year.

## Membership.

One Life Member and 13 Subscribing Members have been enrolled during the year.

Allowing for loss by death and resignation, the net result of these changes shows a total membership at the date of this report of 94 Life Members and 345 Subscribing Members.

129 of the Subscribing Members have covenanted to continue their subscriptions for seven years; this enables the Guild to claim repayment of Income Tax on these subscriptions. It is hoped that all Subscribing Members in this country will follow this course, as it will produce a very appreciable addition to the income available for distribution as relief. Particulars of the scheme and forms for enrolment will be supplied on request to Members who have not yet covenanted.

## Qualifications for Relief.

The Rule stating the principles upon which relief is granted is as follows:—

“The persons who shall be subjects for relief shall (but without prejudice to the power of the Executive Committee to decide what persons are proper subjects for relief, whether actually covered or not by the descriptions hereinafter mentioned) include the following:—

Members of The Institute of Marine Engineers, their wives, widows and/or children.

Members of the Guild, their wives, widows and/or children.

Engineers who possess Board of Trade Certificates of Competency, their wives, widows and/or children.

Officers and employees of the Guild, their wives, widows and/or children.

Where the claims are equal, preference shall be given to those applicants who are or have been Members of the Guild.

J. CARNAGHAN,

*Chairman of the General Committee.*

B. C. CURLING,

*Secretary.*

**The Honorary Treasurer** presented the Annual Financial Report and read the official Auditors' Report thereon as follows:—

*We have audited the Balance Sheet of The Institute of Marine Engineers Guild of Benevolence, dated 31st December, 1940, \*above set forth, and have received all the information and explanations we have required. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Guild's affairs according to the best of our information and the explanations given to us and as shown by the books of the Guild.*

(Sd.) WEST & DRAKE,

*Chartered Accountants.*

8, New Court,

*Lincoln's Inn, W.C.2.*

27th February, 1941.

Continuing Mr. Robertson said: There is not a great deal that I can remark upon in connection with our Balance Sheet and Revenue Account for the year ending 31st December, 1940, as most of the items remain the same.

One very noticeable feature is the increase in the market value of our investments since the 31st December, 1939. At that date they stood at £9,616 15s., but a year later, at 31st December, 1940, they stand at £10,244 1s. This increase is due to the appreciation in the value of our gilt edge securities, offset somewhat by a depreciation in the London Midland & Scottish Railway 4 per cent. Preference Stock. This Stock depreciated during the year from about £60 to £50 whereas the New South Wales 4 per cent. Stock went up from 95½ per cent. to 100 per cent. 3½ per cent. War Loan and 3½ per cent. Conversion Loan appreciated from 93½ per cent. and 94 per cent. to 104 per cent., approximately 10 per cent. increase.

The market value given of £10,244 1s. is after allowing for the loss on the redemption of the £603 4½ per cent. Conversion Loan 1940/44 which appeared in last year's Balance Sheet.

Under Capital Account, Liabilities, the item of £102 14s. 6d. is made up of £100 received from

\* See page xlii.



# THE INSTITUTE OF MARINE ENGINEERS GUILD OF BENEVOLENCE.

Balance Sheet, 31st December, 1940.

	LIABILITIES.	£	s.	d.	£	s.	d.
Capital Account							
Balance at 31st December, 1939 ...		20,423	6	3			
Donations ... ..		102	14	6			
Life Membership Subscriptions ...		22	1	6			
		20,548	2	3			
Less Loss on Redemption of 4½% Conversion Loan 1940/44 ... ..		59	4	3			
					20,488	18	0
Revenue Account							
Balance at 31st December, 1939 ...		366	5	3			
Add Excess of Income over Expenditure for the year ... ..		229	2	6			
		565	7	9			
Subscriptions received in advance ... ..		7	7	0			
Creditors ... ..		6	16	6			
					579	11	3

£21,068 9 3

	ASSETS.	£	s.	d.	£	s.	d.
Investments							
As valued 2nd August, 1934:—							
£1,937 London Midland & Scottish Railway 4% Preference Stock...		1,515	14	0			
£500 New South Wales 4% Stock 1942/62 ... ..		505	12	6			
£250 3½% War Loan ... ..		259	16	3			
At Cost:—							
£7,600 3½% Conversion Loan 1961 ...		8,106	15	10			
£600 3% Conversion Loan 1948/53 ...		605	14	6			
					10,993	13	1

(Market value 31st December, 1940, £10,244 1s.).

Freehold Ground Rents, at cost							
Ryde ... .. (£70 0 0 per annum)		1,725	12	0			
Croydon ... (£103 0 0 " " )		2,767	10	8			
West Ham ... (£117 0 0 " " )		2,960	1	3			
Wimbledon ... (£6 2 6 " " )		161	0	0			
Bowes Park... (£6 0 0 " " )		155	16	2			
Thornton Heath (£25 10 0 " " )		664	15	6			
Ilford... (£31 15 0 " " )		830	19	4			
		£359	7	6			
					9,265	14	11

Cash at Bank							
Post Office Savings Bank ... ..		229	10	0			
					20,488	18	0

Ground Rents due and accrued, less Commission for Collection ... ..		95	16	11			
Income Tax Recoverable ... ..		106	2	3			
Relief Paid in Advance ... ..		21	5	9			
Cash at Bank ... ..		355	10	4			
Cash in Hand ... ..		0	16	0			
					579	11	3

£21,068 9 3

Dr.

## REVENUE ACCOUNT for the year ended 31st December, 1940.

	£	s.	d.
To Relief ... ..	948	2	9
„ Printing and Stationery ... ..	12	18	4
„ Postage... ..	27	14	3
„ Audit Fee ... ..	5	5	0
„ Miscellaneous Expenses ... ..	0	13	6
„ Balance, excess of Income over Expenditure, carried to Balance Sheet ... ..	229	2	6

£1,223 16 4

Cr.

	£	s.	d.	£	s.	d.
By Investment Income ... ..				407	13	4
„ Ground Rents, less Commission for Collection ... ..				352	2	10
„ Members' Subscriptions ... ..				249	19	3
„ Donations						
Proceeds of Sales of "Running and Maintenance of Marine Machinery" Handbook for the year ended 31st December, 1939 ... ..				38	17	11
Social Events Account ... ..				100	0	0
Sundries ... ..				75	3	0
				214	0	11

£1,223 16 4



## BENEVOLENT FUND.

## GUILD OF BENEVOLENCE.

	31st Dec., 1931.	31st Dec., 1932.	31st Dec., 1933.	*31st Dec., 1934.	31st Dec., 1935.	31st Dec., 1936.	31st Dec., 1937.	31st Dec., 1938.	31st Dec., 1939.	31st Dec., 1940.		
Revenue :—	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Interest on Investments	94	8	8									
Ground Rents				108	14	8						
Members Subscriptions												
Donations...	28	16	6	102	9	2						
Total Receipts ...	145	3	10	228	1	0						
" (without donations)	116	7	4	136	12	4						
Expenditure ...	125	1	0	104	15	1						
Investments ...	2,544	17	11	8,052	19	5						
Income Tax recoverable	21	18	8	16	17	2						
Cash and Deposit A/c. ...	21	13	11	7	18	6						
					</							

\* Includes Benevolent Fund to Aug. 2nd and Guild of Benevolence from Aug. 2nd to Dec. 31st.

the legacy left by the late Mr. F. W. Bridges and £2 14s. 6d. balance in our favour on the sale of 4½ per cent. Conversion Loan and the purchase of the £600 3 per cent. Conversion Loan.

I am glad to be able to report that all the ground rents are coming in satisfactorily and no notice has been received by any of the lessees for disclaimer under the War Damage Bill. If we should receive any disclaimers on this account we, as ground landlords, would have to submit our claim for compensation under Form V.O.W.1. for reinstatement of the properties after the War, in which case although we might temporarily lose the benefit of the ground rents we should, after re-building, be in receipt of the rack rents which would far offset any loss on ground rent during the War period and increase our income after rebuilding.

Referring to the Revenue Account, this is only £3 12s. 8d. in excess of that shown on last year's accounts. The items shown as "Sundries" under "Donations received" of £75 3s. includes a legacy of £25 left by the late Mr. W. W. Buckton and a donation of £33 from the Cunard White Star Line, the balance being made up of small items varying from 7s. 6d. to £5.

As you will note, the amount spent on relief this year is less, being reduced from £1,129 8s. the previous year to £948 2s. 9d. for the year under review. This has been almost entirely due to the revision of the scale of relief in favour of Members of The Institute and Members of the Guild of Benevolence.

Some little time back we had the opportunity of purchasing what are known as two Chief Rents, bringing in a total of £70 per annum, which I was able to negotiate on the basis of 23½ years' purchase for a figure of £1,645. The usual deposit of 10 per cent. was paid to our Solicitor, and I have just been informed by him that completion is to take place next week. To provide the monies for this we shall utilize the cash lying in Post Office Savings Bank account, as well as £300 which we propose to transfer from balance on Revenue Account of £565 7s. 9d., and sell a portion of the 3 per cent. or 3½ per cent. Conversion Loan, whichever is more favourable. This will show an increased income of about £15 per annum on this amount of capital over what we are receiving at the present time, which is equivalent to a capital contribution of about £450 to £500. These Chief Rents are payable by the Rochdale Corporation and are looked upon as gilt edge securities.

**Mr. A. H. Mather**, proposing the adoption of the Report and Accounts, desired to say in the first place how much they appreciated the Chairman's reference to those deceased members who had helped the Guild so much at the time of its formation.

The Reports had given a complete picture of the year's work. When they thought of the condi-



tions under which the administration of the Fund had had to be carried out during the past 18 months of war, it was a striking feature that the Guild had been able to disburse such a substantial amount of relief. He referred also with satisfaction to the continued growth of the Guild's assets and the increase of disbursements in relief throughout the period covered by the 10 years table.

Referring to the latest investment in ground rents, he had been doubtful about the policy of these investments at the outset, but he now agreed that it was a far-sighted policy, and they could see that even under war conditions the possibilities were quite satisfactory.

He repeated the warning mentioned in the Report that they were likely to receive increased calls on the Guild due to war casualties, and he agreed that every effort should be made to increase the numbers of subscribing and other members of the Guild. He had been a subscribing member since the formation of the Guild; now, by way of support to the Committee's appeal, and in the hope that others might follow his example, he had decided to become a life member.

He had much pleasure in formally proposing the adoption of the Report and Accounts.

**Mr. W. McLaren** suggested that the form of covenant should be sent out with the Transactions to all members of The Institute who had either not yet joined the Guild or covenanted for the payment of their Guild subscriptions.

He supported Mr. Mather's remarks, and had much pleasure in seconding his proposal that the Report and Accounts be adopted.

The proposal was carried unanimously.

**Mr. T. A. Crompton** referred to the fact that both in connection with The Institute and with the Guild, Mr. Carnaghan had many years of devoted effort to his credit. His work as Chairman of the Guild Committees was greatly appreciated by everyone. He (Mr. Carnaghan) had practically conducted the affairs of the Guild since last September. In his, the speaker's, opinion, it was not possible to have a better Chairman than Mr. Carnaghan, and he had great pleasure in proposing his re-election in that capacity.

The proposal was carried with acclamation, and Mr. Carnaghan, in thanking Mr. Crompton and the Members for their appreciation and confidence, said that he would gladly continue to do his best in the interests of the Guild.

**The Chairman** next submitted the Committee's nominations as follows for election to the vacancies on the General Committee occurring by rotation:—

*Members of the General Committee:—*

*Vice-President:* Mr. S. N. Kent (re-election).

*Members of Council:* Mr. F. W. Youldon (re-

election); Mr. A. F. C. Timpson (transfer from Member of the Guild).

*Members of the Guild:* Captain B. Warwick (re-election); Mr. H. S. Humphreys (transfer from Member of Council).

*Honorary Auditors:—*

Messrs. W. D. Heck and H. J. Vose (re-election).

*Honorary Solicitor:—*

Mr. W. E. Archer (re-election).

*Honorary Medical Officer:—*

Dr. W. J. Galt, M.A., M.B., B.Ch. (re-election).

The foregoing nominees were unanimously elected.

**Mr. S. N. Kent** suggested the desirability of obtaining publication of the Report and Accounts in the technical press.

**The Honorary Treasurer** thought that against any increase of membership or donations which might result from such press publicity, there might be a large influx of fresh applications for relief, with which the Guild would be unable to cope. It was among the membership of The Institute that publicity was most needed, and the Report and Accounts, with a full report of the meeting, would be issued with the Transactions.

**Mr. Kent** explained that the motive of his suggestion was not so much to obtain new members but to make more widely known the existence of the Guild and the good work it was doing for marine engineers and their dependants.

After further discussion, Mr. Kent's suggestion was referred to the Executive Committee for consideration.

On the proposal of **Mr. W. L. Watson**, seconded by **Mr. A. H. Mather**, a hearty vote of thanks was unanimously accorded to the General and Executive Committees for their good work during the past year in dealing with the many deserving cases and thereby relieving many homes from anxiety.

**The Chairman**, in reply, said: I desire to say how much the Committee appreciate the assistance of the Honorary Treasurer, Mr. Alfred Robertson, C.C. and his unflagging interest in the welfare of the Guild, especially in regard to the financial side of its affairs. The Committee's thanks are also due to the Secretary, Mr. B. C. Curling, and one of his Assistants, Miss Ormiston, whose work for the Guild has been carried out so efficiently in spite of certain unfavourable circumstances.

My personal thanks are due to the Members of the General and Executive Committees for their collaboration during the months in which it was not convenient to hold Committee meetings, and especially to Mr. T. A. Crompton who has ably assisted me in my somewhat lonesome duty of dealing with the Guild's affairs during this period.

The meeting terminated at 3.15 p.m.



# LIST OF DONORS TO THE INSTITUTE OF MARINE ENGINEERS GUILD OF BENEVOLENCE. (since the publication of the preceding Report).

	£	s.	d.	£	s.	d.		£	s.	d.
The Institute of Marine Engineers—							A. E. C. Gregg	12	2	
Social Events Account ... ..	100	0	0				F. T. Sinclair...	10	6	
Profit on "Running and Main-							J. Snell...	13	9	
tenance of Marine Machinery"							W. A. Tait	15	6	
Handbook ... ..	38	17	11				J. K. Thomas...	8	0	
				138	17	11	H. McLean	16	0	
S. G. Colinese...					8	0	F. R. C. Cookson	10	6	
Anonymous				3	0	0	W. A. Harrington	10	6	
T. W. Longmuir				1	1	0	E. J. Booty	10	6	
Cunard White Star, Ltd.				33	0	0	Anonymous	10	6	
W. W. Buckton (Legacy)				25	0	0	S. G. Christensen	1	1	0
A. W. Clark					10	6	Anonymous	8	0	
C. Prentice				1	1	0	W. A. Harrington	10	6	
E. Youldon					10	0	A. E. Roux	6	10	
F. W. Bridges (Legacy)				100	0	0	A. G. Step	1	6	4
Anonymous				5	0	0	W. Mellor	1	1	0
							H. Barr...	5	0	

## LIST OF MEMBERS AT DATE OF PUBLICATION OF THIS REPORT.

### Life Members.

Adie, P. I.	Davis, Gordon	Lamb, John	Riddell, A. R.
Alexander, Claud	Dougan, A. S.	Marriner, W. W. B.Sc.	Ritchie, F. G.
Andrews, George	Drossi, H. H. R.	Marshall, J. S. Clayton	Rowcliffe, C. R.
Arthurson, M.		Martin, C. E.	Rutherford, H.
Bailey, W. H.	Easthope, R. J.	Mellor, W.	Silley, B. L.
Berlie, R. S.	Evans, Frank S.	Moore, C. K.	Silley, G. F.
Blair, D. E.	Everard, A. M.	Moseley, O. H. C. K.	Silley, H. A. J.
Blevin, W. N.	Foley, Sir E. Julian, C.B.	MacKay, A. M.	Smeaton, Robt.
Blight, James	Froggatt, L.	McKenzie, John J.	Stephenson, B.
Bramah, David, C.B.E.	Gillies, R. M.	McLaren, John	Swancoat, N. H.
Brettell, W. G.	Goldup, D. R.	McLaughlin, Wm.	Tait, W. H.
Bruce, W. J. Willett,	Gordon, S. G.	McLellan, T.	Taylor, G.
O.B.E., R.D., M.Eng.,	Grant, W. C.	Nelson, C. B.	Thompson, W. B.
Eng. Capt. R.N.R.(ret.)	Green, R. H.	Nicol, J.	Thomson, E. A.
Buchanan, H. D.	Greenfield, Eric	Ormiston, George	Turnbull, R. R.
	Gummer, R. H.	Owen, G. H. L.	Vincent, R.
Carswell, D. B.	Hamley, F. J.	Parker, A. H.	Warwick, B., Captain
Cayzer, Sir August B. T.,	Hardy, J.	Paxman, E. P., M.A.	Watson, Edgar
Bart.	Hoare, H. J.	Peacock, James	White, W. F.
Christie, J. G.	Holly, R. J. W.	Pickering, G.	Whiteford, A. L.
Clarke, R. T.	Hood, R.	Plows, G. B.	Whiteside, A. E.
Coates, W.	Houlder, M. C.	Porn, M.	Wight, H. D.
Collins, W. H.	Hulbert, W.	Preece, Sir G., Eng. Vice-	Williams, C. A. N.
Conoley, C. W.	Hunter, Summers, Jun'r.	Admiral, K.C.B.	Williamson, J. C. G.
Corry, R.	Johnson, John	Richmond, Sir J. R., K.B.E.	Wilson, P. W.
Cram, P. J.	Kennedy, R. S.		Youldon, F. W.
Crichton, A. E.	Kent, S. N.		
Crompton, T. A.			
Crookston, D. D.			

### Subscribing Members.

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Costigan, R.  
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English, R. H.  
Evans, Dewi G.  
Ewing, Peter

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M.Eng.

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Jobling, A., F.R.A.S.  
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Johnston, R.  
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Jones, H. G.  
Jones, S.  
Jones, W. C.

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Kennedy, A. C.  
Kennedy, Robt. E.  
Kennedy, R. L.  
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Mitchell, J. M., Eng.  
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Murray, R. G.  
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Mackenzie, J.  
Mackinlay, J. H.  
Mackirdy, J. H.  
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Macniven, H.  
MacPhee, A.  
McAlpine, A.  
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McKenzie, W. C.  
McLaren, W.  
McNiven, J. L.

Naylor, A. E.  
Newrick, F. A.  
Nicholls, C. E.  
Nicholson, H. J., Eng.  
Lt. Com., R.N. (ret.)  
Nickels, S. S.

O'Riordan, G. F., B.Sc.

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Palmer, R. P.  
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Parry, E. U.  
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Preston, J. J.  
Pugh, F. H.

Rae, W. S.  
Rainie, R., M.C.  
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Rea, P. K.  
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Redman, J. H.  
Richardson, A. W.  
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Ritchie, Charles,  
Lieut., R.N.R.  
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Roberts, E. A.  
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Robertson, A. C.C.  
Robinson, E.  
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Robinson, J. G.  
Robinson, M.  
Robson, A.  
Rogers, J. J.  
Rourke, W.  
Roxburgh, W. I.  
Russell, Henry  
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Ryland, E. T.

Scanes, J. J.  
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Scobie, J. K.  
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Scott, George  
Scott, H. B.  
Scott, H.  
Scott-Hill, W., Eng.  
Rear-Admiral  
Scullard, G. T. B.  
Seaton, W. T.  
Shaw, David  
Shingler, S. A.  
Simmonds, M.  
Sims, P. J. S.  
Sirclair, F. T.  
Smith, F. W.  
Smith, S. A., M.Sc.  
Snoswell, B.  
Spanner, E. F.  
Speck, George  
Speechly, C. C.  
Stanbridge, C. H.  
Step, A. G.  
Stephens, E. R.  
Steven, W. L.  
Stevens, E. A.  
Steward, N. F.  
Strachan, R. R.  
Straughan, J. W. S.  
Suddes, T. E.  
Swanson, J. M.

Taylor, A.  
Taylor, H. L.  
Telfer, T., B.Sc.  
Thomas, J.  
Thompson, F.



Thompson, G.  
Thompson, N. E.  
Thomson, John  
Timpson, A. F. C., M.B.E.  
Timpson, F. W.  
Traill, A. P., Wh.Sc.  
Tweedy, W. N.

Unthank, G. R.

Varian, A. H.  
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Vose, W. A.

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Wallis, R. Pendennis, M.Sc.  
Walsh, F. C.  
Wareham, R. A.  
Warwick, F.  
Watson, A. G. S.  
Watson, G. O.  
Watson, G. Ridley, B.Sc.  
Watson, James  
Watt, Alex.  
Way, C. T.

Westall, W. F.  
Wetherall, R. H.  
Whayman, W. M., Eng.  
Rear-Admiral, C.B.,  
C.B.E.  
Wheadon, H. J.  
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Whitelock, J. K.  
Whyte, W.  
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Williams, C.  
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Wilson, A. J.  
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Wilson, R.  
Wilson, R. T.  
Wilson, T. S.  
Winch, H. H.  
Windrim, K.  
Winton, John  
Wright, R. M.  
Wylie, W. H.  
Younge, E. C.  
Youngs, R. C.  
Zulver, C.

## PARTICULARS OF CASES ASSISTED BY THE INSTITUTE OF MARINE ENGINEERS GUILD OF BENEVOLENCE.

from the 1st January to the 31st December, 1940.

Case No.	Age.	Particulars	Amount of Relief Granted.	Case No.	Age.	Particulars	Amount of Relief Granted.
1	87	Member of The Institute; married; has Old Age Pension ...	£59 0s. 0d.	51	61	Widow of former Member of The Institute; has grandchild dependent; has Old Age Pension ...	£29 15s. 0d.
3	73	Member of The Institute; wife is a chronic invalid; has Old Age Pension ...	£69 17s. 6d.	53	63	Widow; average income £1 per week; has Old Age Pension ...	£26 10s. 0d.
4	72	Now deceased ...	£8 0s. 0d.	58	63	Widow; has no dependants; has Old Age and Supplementary Pension ...	£13 10s. 0d.
5	80	Member of The Institute; widower; has small pension of £31 per annum; is in ill-health; has Old Age Pension ...	£39 10s. 0d.	60	65	Former Member of The Institute; has income of 15/- per week; has no dependants ...	£15 0s. 0d.
6 & 7	57 & 59	Daughters of Marine Engineer; have joint income of 26/6d. per week; both unmarried ...	£56 15s. 0d.	67	72	Married; has semi-invalid wife dependent; income of 20/- per week ...	£21 0s. 0d.
8	60	Widow; has one daughter in sanatorium; son and daughter employed away from home; has income of 25/- per week ...	£37 0s. 0d.	69	51	Widow; has father dependent; assists son who is a junior Civil Servant in London ...	£33 0s. 0d.
19	84	Widow; no dependants; has Old Age and Supplementary Pension ...	£33 0s. 0d.	72	61	Widow; has Widow's Pension and income of £6 5s. 0d. per quarter ...	£26 18s. 0d.
26	68	Widow; has income of £2 10s. 0d. from son and daughter who are kept out of this amount ...	£17 0s. 0d.	74	60	Widow; has no dependants; does occasional housework when health permits ...	£32 0s. 0d.
27	73	Has wife dependent; has income of 23/- per week ...	£13 7s. 0d.	77	49	Widow; has no dependants; has Widow's Pension ...	£36 5s. 0d.
28	81	Now deceased...	£7 10s. 0d.	79	75	Widow; has no dependants; has Widow's Pension ...	£26 10s. 0d.
34	71	Unmarried; has no dependants; has Old Age Pension and income of £20 from annuity ...	£29 5s. 0d.	80	61	Sister of deceased Member of The Institute; has blind brother whose income is 30/- per week ...	£19 0s. 0d.
41	68	Has sister wholly dependent; both unmarried; unemployed owing to age ...	£19 10s. 0d.	85	67	Widow; has no dependants; has income of 27s. 6d. per week ...	£26 10s. 0d.
44	70	Married; has income of 25/- per week; attending hospital for treatment ...	£6 10s. 0d.	91	55	Widow; has no dependants; has Widow's Pension ...	£33 0s. 0d.
47	60	Widow; has income of 6/- per week; has son in army (married) and daughter domestic science teacher ...	£20 0s. 0d.	96	65	Widow of former Member of The Institute; has no dependants ...	£18 4s. 0d.
48	44	Widow; has one son, aged 7, has widow's pension for self and child ...	£35 0s. 0d.	97	69	Widow; husband formerly received assistance from the Guild; has no dependants ...	£38 5s. 0d.



<i>Case No.</i>	<i>Age.</i>	<i>Particulars.</i>	<i>Relief Granted.</i>	<i>Case No.</i>	<i>Age.</i>	<i>Particulars.</i>	<i>Relief Granted.</i>
98	73	Widow; has no dependants; has income of 25/- per week ... ..	£13 10s. 0d.	106	48	Widow of former Member of The Institute; has one son, aged ten, dependant; has average income of 14s. 6d. per week ... ..	£20 15s. 0d
101	74	Married; has income of 10/- per week; is paralyzed ... ..	£35 0s. 0d.	107	54	Widow; has no dependants; has Widow's Pension and income of 14s. 6d. per week ... ..	£3 13s. 0d.
103	42	Widow; has three children dependent; one son is first year apprentice engineer; has small capital ... ..	£18 10s. 0d.				
104	75	Has Old Age, Supplementary and Royal Seamen's Pension; has no dependants...	£1 14s. 0d.				
105	69	Widower; has no dependants; has intermittent employment with the L.C.C.; has Old Age Pension ...	£7 10s. 0d.				
							<hr/> £947 3s. 6d. <hr/>

### General Committee, 1941:

*Chairman:* J. CARNAGHAN.

#### *Committee:*

*Vice-Presidents*—†A. E. CRIGHTON, ‡R. S. KENNEDY, †S. N. KENT.

*Member of Council*—†T. A. CROMPTON, \*A. F. C. TIMPSON, M.B.E., \*F. W. YOULDON.

*Members of the Guild*—\*H. S. HUMPHREYS, †F. A. HUNTER, †G. SPECK, \*CAPTAIN B. WARWICK.

† Retire in 1942.      ‡ Retire in 1943.      \* Retire in 1944.

### Executive Committee, 1941:

*Chairman:* J. CARNAGHAN.

#### *Committee:*

*Vice-President*—S. N. KENT.

*Members of Council*—T. A. CROMPTON, A. F. C. TIMPSON.

*Members of the Guild*—H. S. HUMPHREYS, F. A. HUNTER, G. SPECK, CAPTAIN B. WARWICK.

#### *Members of Committees—ex officio:*

*Honorary Treasurer:* ALFRED ROBERTSON, C.C.

*Secretary:* B. C. CURLING.



# Institute Luncheon.

The Annual General Meeting at the Connaught Rooms, Great Queen Street, London, W.C.2, on Friday, March 14th, 1941, was followed by a Luncheon in the Grand Hall. The continuing war conditions having made The Institute's normal social functions and meetings impracticable, this single opportunity for a members' re-union during the year was particularly appreciated, 315 members and guests assembling for the occasion.

The President (Sir Percy Bates, Bt., G.B.E.) was in the Chair, supported by a number of eminent guests including The Rt. Hon. The Lord Mayor (Sir George Henry Wilkinson), the Rt. Hon. R. H. Cross, P.C., M.P. (Minister of Shipping), Vice-Admiral A. Muselier (Free French Naval Forces), Admiral Sir Charles J. C. Little, K.C.B. (Second Sea Lord), Sir George Broadbridge, Bt., K.C.V.O., M.P., Sir Alexander Ramsay, O.B.E., Sir E. Julian Foley, C.B. (Past-President), Eng. Vice-Admiral Sir George Preece, K.C.B. (Engineer-in-Chief of the Fleet), Alderman F. S. Alexander (Sheriff), Horace Boot, Esq. (Sheriff), Sir Stephen Pigott, J.P., D.Sc. (Past-President), Sir Westcott S. Abell, K.B.E. (Past-President), and Sir Amos L. Ayre (Director of Merchant Shipbuilding and Repairs). Also present as guests of The Institute were Captain D. S. Tennant and representatives of the Merchant Navies of enemy-occupied countries, including Messrs. K. Kristensen (Norway), M. F. Bosschaerts (Belgium), Capt. W. Bendtsen (Denmark), Capt. M. Leszczynski (Poland), and Hr. J. Mentink (Holland).

After the Loyal Toasts had been proposed by the President and duly honoured, **Sir Julian Foley, C.B.** (Past-President) submitted the toast of "The Lord Mayor and the Corporation of London". He said that the Lord Mayor and officers of the City had been examples to the world of public spirit and civic efficiency and of benevolence. Those who had the privilege of knowing them personally liked, admired and respected them. The Institute of Marine Engineers had special cause for gratitude to the Lord Mayor and the Sheriffs. They had given direct help and encouragement, and on occasions hospitality, in support of The Institute's work. He recalled to mind particularly the International Conference of 1938. In the normal year, the Lord Mayor and the officers had enough to do. In a year of war they had much more than enough. "They are the leaders of a city which is in the battle line".

For many centuries, London had been the crux of the British Empire. To-day it was even more so, and the civic leaders of London saw, as we did, the beauty of the city marred by the actions of the enemy. They saw the suffering and loss caused to individuals, but the only effect upon them was to

move them to greater efforts to make the future and the physical character of the city better and to assist those who suffered from the enemy's attacks in every way possible. They did not confine their benevolence to the city of London. They gave to others their generous help.

**The Lord Mayor** (Sir George Wilkinson), replying to the toast, said that people had been very kind in their references to the damage that the City had sustained, especially the Guildhall. "We are looking forward and we are going to build as soon as we can a better and grander London than ever before". (Cheers).

Referring to the world-wide contributions received for the Lord Mayor's Air Raid Distress Fund, he recounted how a man in Palestine had sent a contribution of £50 which was part of the money which would have been expended on his son's wedding celebration. He said that he could not celebrate the event unless he subscribed to the Fund for rebuilding after enemy destruction. Sir George said that other donations included £318 subscribed by the officers and men of the "Queen Mary" and received from Liverpool through Cunard White Star, Ltd. The collection had been inaugurated by an able seaman. There had also been received £1,900 from the Mediterranean Fleet and other donations from the Free French Fleet and the new battleship "King George V". There was loud applause when Sir George also said that the chief officer of a certain Norwegian ship had given instructions that £5 a month should be deducted from his wages.

Sir George paid a tribute to the admirable work of the marine engineers and said: "They are up against danger all the time, and in the maintenance of the ships and in the repair of them they are serving this country as greatly as any men can. We are already involved in the battle of the Atlantic and the marine engineers will play their part, and will need to play their part, to solve the difficulties which we have to face". (Cheers).

**The Rt. Hon. Ronald H. Cross, P.C., M.P.** (Minister of Shipping), proposing the toast of "The Institute of Marine Engineers", said that it was important to appreciate the key value of the national effort which was represented by the marine engineers, the officers and the men who manned our ships. "This is a war of industry. It is a war between the gigantic, unprepared Anglo-American industry and the intensively long-prepared German industry, and the key to that industry is the engineer. Transport is a branch of industry and I know I shall be preaching to the converted when I say it is the most vital, the most vulnerable, the most fundamental of all branches of industry in



this great struggle we are engaged in to-day, and the key of sea transport, the bottleneck of man-power, is the engineer, whether that be at sea or whether it be ashore".

At sea his work was not spectacular. But how many ships in convoy would have been stragglers if it had not been for the extra bit of fine technical knowledge, of hard work on the part of the engineers which enabled their ships to keep their position in the convoy and escape the dangers of being attacked? It was not only a matter of skilled engineering but of leadership and of getting the best out of one's subordinates. Moreover, it was within the power of the trained engineer to reduce the volume of repairs which fell upon the shore worker, and he knew very well indeed—perhaps in a sense too well—how great a contribution could be made by the marine engineer to the national effort by relieving the burden that there was upon the facilities of marine engineering on shore".

Mr. Cross said that sometimes the engineers felt that they were forgotten and were not recognised. "I want to take this opportunity to say on behalf of the Ministry that their work is not forgotten. We are very conscious that it is easy to fall into that error of failing to recognise the magnificent work done by the engineers at sea, that we are always on the look-out to remedy any errors that may occur, and we are always anxious that they should receive full recognition".

He told the story of a British ship which was attacked by a German bomber. The second bomb fell close to the ship and the ship's master was told that the ship's side was holed and that a torpedo was lying on the stokehold plates, in front of the centre boiler. Water was pouring in through the hole, but repairs were made. It was then found that it was not a torpedo but a 500-lb bomb which had ricocheted off the water and pierced the side of the ship. The bomb was hauled up a ventilator shaft by a rope, but the crowning thing was that, knowing the bomb might be of technical interest to the Admiralty, they took the trouble to bring it back to port and hand it over to the Admiralty.

Referring to the relaxation of standards of qualification for engineer officers, Mr. Cross said he hoped the Institute would feel that the Ministry had given proper regard to the professional interests in the matter. The relaxation was a war measure, and was easy to excuse on the grounds of war necessity, but they must always bear in mind the need of a minimum standard of efficiency. If they failed in that minimum standard he knew very well what it meant in terms of added troubles.

"We have reached the moment", said Mr. Cross, "when the enemy has promised us the very heaviest attack that we have ever known upon our shipping. While we never place any credence upon

the enemy's word I see no reason to disbelieve him on this occasion, and indeed it is the thing we all anticipated a long time before he made this promise. I think we shall all be confident that all ranks will face this danger with the same tenacity as they have faced dangers in the past. But I think, and I say it frankly, we are going to be faced with a really hard struggle at sea this year.

I know that the Government can look to your Institute to use its influence to give encouragement and support to those who are going to have to bear physically the brunt of this attack and to bring home to them the intense importance of saving ships' time—ships' time is cargo, and cargoes are vital—and the vital intense importance of keeping every possible ship on active service. Any support or help I can give will be only too gladly and willingly given. Your members have one of the greatest parts to play in the testing time that lies ahead of us. We can look to the marine engineers to bear this in the future as they have in the past, both honourably and well".

**The President** (Sir Percy E. Bates), responding to the toast, said that he wished to stress the realisation that the members of The Institute who actually serve at sea were nearer the torpedoes than anyone else. He was sure he could speak for them in saying that the whole talents, skill, endurance and work of every member of The Institute and of the profession were at the service of the nation in this ordeal.

Speaking for himself, he thought that all their members and all engineers who were not members would work better if they knew that the Minister of Shipping had in the last resort full authority in all shipping matters. They wished Mr. Cross enough work to do and enough strength and health to do it.

**Mr. F. W. Youldon** (Chairman of Council), proposing the toast of "The Guests", referred with pleasure to the presence of Vice-Admiral Muselier, of the Free French Forces, and to members of the Mercantile Marine of our Allies. He also expressed pleasure at the attendance of members of the Senior Service.

**Sir Alexander Ramsay**, replying, praised the achievement of marine engineers, and said that their problems had been even more difficult than those of other branches of engineering since their work had already been reasonably highly developed. There was not much romance or glamour in the work of the marine engineer to-day, yet those men and others were standing not only between the enemy and our welfare, but between the enemy and the very life of the people of this island.



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