Transactions of the INSTITUTE of MARINE ENGINEERS

FOUNDED 1889. INCORPORATED BY ROYAL CHARTER, 1933.

To Advance the Science and Practice of Marine Engineering.

Patron: HIS MAJESTY THE KING

Vol. LIII

Session 1941-42.

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

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APRIL, 1942

Session 1941

Vol. LIII
No. 13

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

THE INSTITUTE OF MARINE ENGINEERS

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Minutes of Proceedings at the Fifty-Third Annual General Meeting, March 13th, 1942.

CHAIRMAN: THOMAS A. CROMPTON (Chairman of Council).

The fifty-third Annual General Meeting of The Institute was held at the Connaught Rooms, Great Queen Street, London, W.C.2, on Friday, 13th March, 1942, at 11.30 a.m.

In the unavoidable absence of the President, Sir Percy E. Bates, Bt., G.B.E., who expressed keen regret at his inability to be present, having been called away from London on urgent business of national importance, Mr. Thomas A. Crompton (Chairman of Council) presided. He was supported by Mr. H. J. Wheadon (Vice-Chairman of Council), Mr. Alfred Robertson, C.C. (Honorary Treasurer) and the Secretary, Mr. B. C. Curling.

The Chairman, opening the proceedings, requested the Scrutineers, Mr. G. B. Plows and Mr. F. A. Hunter, to retire for the purpose of examining the voting papers and of reporting to him in due course. The Scrutineers thereupon retired.

At **the Chairman's** request, the Secretary read the Annual Report (see p. vii).

The Honorary Treasurer then presented the Annual Financial Statement (see p. xviii) and his own report on the financial affairs of The Institute as follows:—

"I do not propose to read our Chartered Accountants' Report, as copies are in the hands of all Members present. I will, however, make reference to a few specific items and will deal with the Revenue Account first.

The item Bank Charges covers cheque books and draft stamps.

Stationery & General Printing has been very materially reduced from £284 2s. to £124 3s. 4d., a reduction of £159 18s. 8d. This is accounted for by:—Institute booklets (illustrated booklets describing The Institute and its activities) having been discontinued; membership application forms are no longer issued to Members in the TRANSACTIONS; no second arrears notice is sent out (this also means saving in envelopes); using small size letter headings where practicable; and using economy labels, thus saving envelopes.

Examination Expenses, although £33 9s. 4d. higher than last year, are unavoidable but consistent with the increased activities of The Institute in this connection.

Subscriptions and contributions to other bodies for Research include the following payments:—

	£	s.	d.
William Froude Research Laboratory	21	0	0
British Standards Institution	3	3	0
Joint Committee on Materials and their Testing ...	10	0	0
Parliamentary and Scientific Committee	10	10	0
British National Committee, World Power Conference	1	11	6
British Non-ferrous Metals Research Association (Condenser Tube Corrosion Research)	25	0	0
British Electrical and Allied Industries Research Association	15	0	0

The Sundries item of £239 15s. 8d. needs explaining, as this is rather large. It covers amongst other things rent and fares for our Caretaker from Watford to Minories, Christmas gratuities, travelling expenses, subscription to the Austin Memorial Fund, removal of furniture to High Wycombe and a number of other small items.

Air Raid Precautions £213 13s. 9d. This appears in our accounts for the first time. It covers numerous items of expenditure for the protection of our building, equipment and firewatching expenses. Part of these expenses is recoverable and has been allowed for in the accounts. Quite recently, however, arrangements have been made to sub-let part of our premises at a rental of £150 per annum. In addition, the tenants are taking over the liability for fire watching.

Insurance. We have to pay a National Defence Contribution to the Inland Revenue on our property at the rate of 2s. in the £ on the assessment, amounting to £11 16s. However, we recover the greater part of this from our Ground Landlords, the City Corporation, leaving a balance of £1 9s. 6d. which we have to meet, and this is included in our general insurance figure of £30 1s. 3d.

War Damage Contribution of £131 5s. covers insurance on the contents of the building in the Minories and at High Wycombe in the total valuation of £7,000.

H.M.S. "Worcester" Prize appears in the accounts for the first time and will henceforth be awarded annually. This has been very much appreciated.

The total of our Expenditure Account is only increased by £89 13s. 10d. On the credit side Income from Subscriptions is up. There is an income from the new Australian 3¼% Registered Stock which appears for the first time, as also do Examination Fees, in the sum of £11 5s.

The increase in our total income is £168 14s. 4d., which, after deducting the increase in general expenses, shows a net increase, as compared with last year, of £79 0s. 6d. The resulting balance on the year's working is £1,202 8s. 11d., which is undoubtedly a very satisfactory result and stands at a higher figure, in spite of war conditions, than for some years past.

On reviewing the Balance Sheet you will find that this is similar in most of the items to that of last year, the Capital Account being increased by the balance from Revenue Account of £1,202 8s. 11d., making a grand total of £32,476 14s. 2d.

"The Running and Maintenance of Marine Machinery" handbook you will notice shows a profit on the year of £75 16s. 8d., and we had stock remaining unsold at the 31st December, 1941, of 1,104 copies. This has been a most satisfactory transaction and the profits have very materially helped the Revenue Account of the Guild of Benevolence.

On the other side of the Balance Sheet we have a debit balance of £41 16s. 1d., against a stock of 1,557 copies unsold of "Electricity Applied to Marine Engineering" at the 31st December, 1941. This publication will also show up very satisfactorily financially, and I am hoping the Council will decide to treat the income from this source in the same way as they have previously treated that obtained from the "Running and Maintenance of Marine Machinery" handbook.

There is one new investment purchased during the year, *viz.*, £500 Australian 3¼% Registered Stock.

The Guild of Benevolence Accounts are ready for publication. The total income for the year was £1,453 14s. 4d., which includes a contribution from the King George's Fund for Sailors War Fund of £250.

The amount distributed in relief is slightly below that of the previous year, but the Guild has been able to assist most of the applicants from whom claims have been received.

The Capital Account of the Guild has been increased very materially during the past year by donations totalling £1,367 8s. This increase is due to the kind generosity of a number of firms and individuals and comprises two contributions of £250 each, four of 100 guineas each, one of £100 and a number of small items. From this point of view the building up of the Capital Account of the Guild of Benevolence is progressing very satisfactorily. It would, however, be good to see a much greater influx of annual subscribing members. Perhaps when all our Members realize the good work the Guild of Benevolence is doing, many more will take up membership. The annual contribution is so small that it ought to be a definite attraction to all our Members to join.

If there are any questions in connection with the Accounts I shall do my best to give satisfactory explanations".

Mr. H. S. Humphreys (Member), proposing the adoption of the Report and Accounts, said: If my remarks are brief, it will not be due to any lack of appreciation of the work of the Council and Officers who have been responsible for the presentation of this excellent Report and Financial Statement. I would particularly express my appreciation of the work of the Papers and TRANSACTIONS Committee. That in these days of stress we have been able to publish the concise, interesting and valuable articles in the TRANSACTIONS is a very fine achievement. I have also a word of praise for the Junior Section articles. Our juniors of to-day are the seniors of to-morrow and we must look after them. The present series of articles in the Junior Section are of very great value to young marine engineers, and indeed many older members, such as myself, derive benefit from them. Mr. S. N. Kent (Vice-President) originated the scheme to publish articles of special value to junior

members, and we owe him our warm thanks for the valued feature of our work which this section has become. I hope articles of a similar kind will be maintained for many years.

It is with the greatest pleasure that I now move the adoption of the Report and Accounts.

Mr. T. A. Bennett, B.Sc. (Member), in seconding the proposal, said: When we held our Annual Meetings in The Institute premises in the Minories before the war, the steady progress of The Institute's work and a maintained increase of membership year by year made the adoption of the Report and Accounts a matter of routine. To-day our activities are restricted and we show a loss of membership. But this loss of membership is small and our financial position is sound, and I am confident that when this horrible war is over we shall have plenty of recruits to make up our losses. I have much pleasure in seconding the adoption of the Report and Accounts.

The Chairman then put the motion to the meeting and it was carried unanimously. On his proposal it was agreed to send a letter to the Papers and TRANSACTIONS Committee expressing the meeting's special approval of their work.

The Chairman next presented the following awards:—

The Institute Silver Medal (in duplicate) to Mr. W. Yorath Lewis and Mr. Struan A. Robertson.

Herbert Akroyd Stuart Award to Mr. C. C. Pounder (Member).

Mr. Lewis and Mr. Robertson were present in person and were warmly applauded on receiving their awards and the Chairman's congratulations. Mr. Lewis, on behalf of Mr. Robertson and himself, responded in a brief speech. It was announced that Mr. Pounder was unable to cross from Belfast, but that the financial part of the award had already been sent to him and that the certificate would follow as soon as it had been signed by the President.

The Chairman then moved a vote of thanks to the President in the following terms: The Institute of Marine Engineers was indeed fortunate when Sir Percy Bates, having agreed to act as our President, was elected to that office by the unanimous vote of its Members.

During his presidency he has always been ready to help and to guide us as we naturally expected he would, having in mind those great qualities of leadership he possesses, which have enabled him to forge ahead to the position he now occupies in the shipping industry, the prosperity of which depends so much on such men as Sir Percy.

In that industry, Sir Percy Bates, his contemporaries of the other shipping companies, and the country can depend on the full co-operation of all members of the marine engineering profession, both ashore and afloat, towards the successful operation of the Merchant Navy, not only now but in the post-war period. Already the industry as a whole, including those representing the personnel side, is engaged in planning for the future needs of the Merchant Navy. The Institute of Marine Engineers is also ready to give every assistance to the common cause. Let us hope that the united efforts of both shipowners and personnel will have the full, unstinted support and assistance which will undoubtedly be required from the Government of the day when final recommendations are adopted by them.

This country and indeed the whole British Empire and our gallant Allies are full of admiration for the part the Merchant Navy has played in the present conflict, admiration that is thoroughly well deserved. That great part the Merchant Navy will continue to play until peace comes.

I am sure that it must be a source of gratification not only to Sir Percy but to all of us, that in his last year of office the funds of the Guild of Benevolence have been augmented by very nearly £2,500, the interest from which will go to help the more needy of our fellow marine engineers.

Gentlemen, it is a great pleasure to me to propose a very hearty vote of thanks to our retiring President and to wish him long life and every prosperity. I call upon the Vice-Chairman of Council, Mr. Wheadon, to second the motion.

Mr. H. J. Wheadon (Vice-Chairman of Council) said: To-day marks the conclusion of a period of service in the presidential chair which is unique in the annals of our Institute—unique not only because Sir Percy Bates is the first in the line of Presidents to have occupied it for three years, but also by reason of the exceptional difficulties which have existed during his tenure of office.

Since the outbreak of war, Sir Percy has shared our feelings for our colleagues in the engine-rooms of ships at sea—feelings that alternated between periods of anxiety and relief as the losses by enemy action rose and fell. He hands over the wheel of office at a moment when we have been warned to brace ourselves against an intensified attack upon our ships, in regard to which we may hear more from the First Lord of the Admiralty at the Luncheon to-day.

Much of the wonderful work performed by our merchant vessels will not be fully appreciated until after the war—particularly is this so in regard to those magnificent ships of the Atlantic Blue Riband class with which Sir Percy is so closely connected and of which he has good reason to feel proud. We may be sure that when the war-time history of these ships is written, it will be seen that they have more than played their part in defeating the enemy

Gentlemen, it is with great pleasure that I second the Chairman of Council's motion that a hearty vote of thanks be accorded to Sir Percy Bates for the services he has rendered us during the past three eventful years, and I am sure I express the feelings of us all in wishing him and his fleet the best of luck in the difficult times ahead.

The motion was then put to the meeting and an enthusiastic and loudly applauded vote of thanks was accorded to Sir Percy Bates.

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

President:—The Right Hon. Lord Mottistone of Mottistone, P.C., C.B., C.M.G., D.S.O.

Vice-Presidents:—

London: A. E. Crighton, J. Carnaghan, J. Hamilton Gibson, O.B.E., M.Eng., R. M. Gillies, J. B. Harvey, S. N. Kent, R. Rainie, M.C, R. T. Wilson, F. W. Youldon.
Liverpool: Lee Wood.
Barrow-in-Furness: Eng. Rear-Admiral Sir R. Beeman, K.B.E., C.B., C.M.G.
Sunderland: F. H. Reid, B.Sc., Wh.Ex.
Southampton: Eng. Com'r. W. A. Graham, O.B.E., R.N.R.
Glasgow: Sir J. R. Richmond, C.B.E.
Greenock: M. McAffer.
Hull: G. A. Laing.
Calcutta: C. S. McCaskie.
Buenos Aires: J. C. G. Williamson.
Hong Kong: W. O. Lambert.
Capetown: A. H. Boyle, D.S.C.
San Francisco: C. E. Petersen.
Saigon, Indo-China: N. J. Griffin.
Montreal: D. B. Carswell.
Shanghai: D. A. MacFarlane.

Honorary Treasurer: Alfred Robertson, C.C.

Members of Council:—H. S. Humphreys, T. A. Bennett, B.Sc., S. A. Smith, M.Sc., F. M. Jones, B.Sc., J. D. Farmer.

Associate Member of Council:—W. R. Harvey.

The new President (Lord Mottistone) arrived at this point in the proceedings and was most warmly welcomed by the meeting.

The Chairman, inducting Lord Mottistone to his new office, said: In the unavoidable absence of our retiring President, Sir Percy Bates, it is my pleasing privilege and duty to declare Lord Mottistone our new President. I may say now that his nomination received the very keen and unanimous support of a full Council meeting and the view thus expressed has now been translated into his unanimous election by the Members. I now invite you, Sir, to occupy the presidental chair and to preside over this meeting for the remainder of its sitting.

The President thereupon took the chair and said: I am indeed grateful to you for unanimously electing me to this important office, which has been held by many distinguished men, including my immediate predecessor, Sir Percy Bates, who is a great friend of mine.

Another past-President, then the Hon. Alexander Shaw—a great man—said he could not think why he had been chosen because he did not know anything about marine engineering. But what shall I say, who know a good deal about sailing but nothing whatever of the technical side?

However, as I told your Vice-President, Mr. Dewar, who welcomed me before I came into the meeting, I do love the sea and that may serve as my justification for occupying the post of your President. I can assure you that I value most highly the opportunity which this office may give to do anything I can for marine engineers, both those on the design side and those who go

down to the sea in ships. In this time of war we realize more than ever what we owe to the marine engineer.

Mr. W. R. Harvey (Associate Member), proposing a vote of thanks to the Scrutineers (Messrs. G. B. Plows and F. A. Hunter) and to the Honorary Auditors (Messrs. W. D. Heck and H. J. Vose) and their re-appointment for 1942, said that we owed these gentlemen more than formal thanks for devoting to The Institute's work time which they could no doubt ill afford in these days of very limited leisure. The proposal was carried unanimously and warmly applauded.

Major-Gen. A. E. Davidson, C.B., D.S.O. (Member) said: It gives me great pleasure to propose a vote of thanks to the Council in general and to the Emergency Committee in particular for a very excellent year's work. As you have been told, it has not been possible for the full Council to meet very often, and particular thanks are due to the Emergency Committee consisting of Mr. T. A. Crompton (Chairman), Mr. H. J. Wheadon (Vice-Chairman), Mr. F. W. Youldon, Mr. A. Robertson (Honorary Treasurer) and Mr. B. C. Curling (Secretary)—a very good war cabinet.

General Davidson referred to the fact that it was in shipping that the promise of victory rested. Continuing, he said: The labours of the Council have been turned to good account in the cause of victory, for they have been devoted to the improvement of the status of the marine engineer and to the betterment of the conditions of those who man our ships. The Council have done much more than this. Despite the many difficulties, such as reasons of secrecy, as much information as possible about improvements in marine engineering has been placed in the hands of Members, to whom the TRANSACTIONS have given much pleasure and instruction. These TRANSACTIONS show The Institute to be worthily representing the profession. And finally, despite their many difficulties, the Council have enabled us to steer clear of debt. You will agree therefore that the Council deserve our warmest thanks.

Mr. James M. Dewar (Vice-President) said: Having been associated with the work of the Council for many years I can appreciate particularly well what have been the duties of the Emergency Committee during the past year, and I am confident those present will share my view that they have carried out their work uncommonly well. I particularly applaud the efforts that have been made to keep the TRANSACTIONS going, efforts the importance of which will be realized by all those who are aware of the usefulness to seagoing engineers of information circulated in the TRANSACTIONS of the many improvements in marine engineering. I heartily welcome the opportunity to second this vote of thanks.

The vote of thanks was accorded with acclamation.

The Chairman of Council (Mr. Thomas A. Crompton) said: I am sure that my colleagues of the Council generally, the Emergency Committee of the Council, the Conveners and Members of the various Committees, the Secretary, Mr. Curling, and other members of the permanent staff, will fully appreciate all the kind words you have said and I thank you on their behalf.

I would like to add my personal thanks to the Council generally, to the permanent staff, and especially to the Emergency Committee of the Council—Mr. Wheadon, Mr. Robertson, Mr. Youldon and our Secretary, Mr. Curling—for their unfailing loyalty and assistance, without which I should not have been able to carry out my duties as Chairman during my year of office.

To-day, six Members of Council, including myself, who have completed their term of office, retire. May I, on their behalf, wish the newly-constituted Council every success during the year ensuing. It will be a very important year in view of the attention they are giving to the future training of the engineering personnel of the Merchant Navy.

As you all know, a special committee has been formed to deal with this subject under the very able chairmanship of Mr. Robert Rainie. Deliberations, however, of all concerned would be easier if they could contemplate with some certainty what the future holds for those who go down to the sea in ships.

Finally, may I say that the Council and The Institute will keenly appreciate all that our President, Lord Mottistone, can and will do for the marine engineering profession.

The President then declared the proceedings at an end.

Annual Report of the Council.

The Presidential Office.

The Annual General Meeting at which this report is being presented marks the completion of the third year during which Sir Percy Bates has filled the office of President—a period of presidential service unique in the annals of the Institute, for which the Council tender to him their sincere gratitude on this, the occasion of his retirement from that office which he has held with such notable efficiency.

It is with much satisfaction that the Council has been able to announce the acceptance by the Right Honourable Lord Mottistone of Mottistone, P.C., C.M.G., C.B., D.S.O., of nomination for the office of President for the ensuing year.

Emergency Committee Exercising the Powers of the Council.

At a meeting of the Council on the 4th April, 1941, it was unanimously resolved to reappoint an Emergency Committee to carry on the work of the Council during the ensuing year. This Committee, consisting of the Chairman, the Vice-Chairman and the Honorary Treasurer, with the assistance of Mr. F. W. Youldon (past-Chairman, co-opted), has conducted the affairs of The Institute during the past Session, with the exception that a full meeting of the Council was convened in October to decide The Institute's policy and action to be taken on the question of the future training, grading and conditions of service of engineers for the Merchant Navy, to which reference is made later. The Emergency Committee have again received valuable help, which they gratefully acknowledge, from the Chairmen of various standing Committees, and particularly from the Chairman and Members of the Membership Sub-Committee and of the Papers and Transactions Committee.

A further full meeting of the Council was held at the close of the Session on February 26th, 1942, at which the appreciation of the Council was expressed to the Chairman and the Members of the Emergency Committee for the efficient manner in which they had carried out the work of The Institute during the Session.

Ordinary meetings and social events were again suspended during the year, with the exception of the Luncheon on the occasion of the Annual General Meeting.

Membership.

The net decrease of 56 in the total membership, shown in the accompanying table and chart, is attributable to war casualties and to the effect of prevailing conditions on the recruitment of new members.

Grade.	1st Jan., 1941.	Transfers From	Transfers To	Elected.	Died.	Resigned.	Lapsed.	Total 31st Dec., 1941.
Past Presidents ...	15				1			14
Honorary Members	2							2
Members	3,099		15	51	62	44	36	3,023
Companions ...	50				2	2		46
Associate Members	401	3		6	3	3	8	390
Associates	467	12	3	48	8	1	9	488
Graduates	88	1		8		1	1	93
Students	46	2		13			1	56
Totals ...	4,168	18	18	126	76	51	55	4,112

These losses can only be counteracted by personal effort on the part of all members to induce qualified marine engineers, both senior and junior, to seek election.

The part which the Council are taking, with the co-operation of the whole membership, in promoting an improved scheme of training, grading and conditions of service for engineers for the Merchant Navy marks the passing and the coming Sessions as among the most important in the annals of The Institute.

Deaths.

The Council mourn the loss of those members whose passing is recorded in the obituary notices at the end of this Report, many

of which bear further testimony to the dauntless heroism of the marine engineer amid the worst hazards of the war at sea. The Council extend renewed sympathy to the bereaved relatives.

From among the many public tributes to the personnel of the Merchant Navy, including those whose names have been added to the Roll of Honour, the Council wish to place on record the following copy of a telegram which was received by the Lord Mayor of London on the 8th January, 1942 :—

"The Right Hon. The Lord Mayor, Mansion House, E.C.

At a Wardmote held to-day in Aldgate as the Shipping Ward in the City a Resolution was unanimously passed expressing hearty and grateful thanks to the officers and crews of the Merchant Navy for their devoted service and sacrifice during the war period, with deep sympathy to the relatives of those who have made the great sacrifice. I was asked to send this message to your Lordship in the hope that you would notify the appropriate authorities. Copies of this telegram are going to the City Press, the Shipping Federation, the Seamen's Union, Officers' Federation, Institute of Marine Engineers, and Marine Engineers' Association.

Alexander, Alderman".

Included in the general obituary list is the name of Mr. William Livingston Roxburgh (past Member of Council), who will be affectionately remembered by many members and by his former colleagues on the Council. Another deeply regretted loss is that of Mr. W. W. Marriner, whose countless friends will cherish the memory of a great engineer and a man of sterling character. As a memorial to his father, Lt.(E.) G. T. Marriner, R.N. (Associate Member of Council) is offering through The Institute an annual prize to be devoted to the encouragement of young marine engineers.

Council.

At the April Council meeting Mr. Thomas A. Crompton was elected Chairman of Council and Mr. H. J. Wheadon Vice-Chairman for the 1941/42 Session. No changes in the personnel of the Council have occurred during the year.

Honorary Vice-Presidents.

Mr. John McLaren, formerly a Vice-President, has been elected an Honorary Vice-President in recognition of his long and valuable service to The Institute.

Vice-Presidents.

London.—Mr. F. W. Youldon has been elected to fill the vacancy caused by the promotion of Mr. McLaren, and Mr. R. M. Gillies has also been elected as a Vice-President for the London Area.

Hull.—Mr. G. A. Laing has been elected to fill the vacancy caused by the resignation of Mr. J. H. Mackirdy.

Shanghai.—Consequent upon the transfer of Mr. G. Pickering to South Portland, Maine, U.S.A., Mr. D. A. MacFarlane has been elected as his successor at Shanghai.

The Vice-Presidents retiring by rotation have been nominated for re-election.

Representatives on Outside Bodies.

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

Papers.

The following papers have been published in the Transactions during the year, in some cases with discussion by correspondence :—

Issue.	*Subject.*	*Author.*
January.	Marine Boilers—Their Troubles and Maintenance.	Eng. Lt.-Com'r. H. S. Humphreys, R.N. (ret.) (Member).
February.	Research at the William Froude Laboratory.	G. S. Baker, O.B.E., D.Sc.
March.	The Lewis Single-drum Water-tube Boiler for General Marine and other Service.	Wm. Yorath Lewis and Struan A. Robertson.
April.	The Computation of the Stresses in a Propeller Blade Section.	S. A. Smith, M.Sc. (Member).
May.	The Running and Maintenance of Marine Steam Turbines.	S. A. Smith, M.Sc. (Member).
June.	The Running and Maintenance of Marine Steam Reciprocating Machinery.	W. Dowling (Member).
July.	Appendix and Discussion : The Lewis Single-drum Water-tube Boiler for General Marine and other Service.	Wm. Yorath Lewis and Struan A. Robertson.
August.	A Review of Systems of Training and Grading of Marine Engineers in Great Britain and Foreign Maritime Countries.	Eng. Com'r. D. Hastie Smith, R.N. (ret.).
September.	Cylinder Wear.	R. A. Collacott, B.Sc. (Associate).
October.	The Conversion of Blast-injection Diesel Engines to Airless-injection.	C. C. Pounder (Member).
November.	Discussion : The Training and Grading of Engineers for the Merchant Navy.	
December.	The Manufacture of Crank-shafts in High Test Cast Iron.	E. M. Currie and R. B. Templeton.

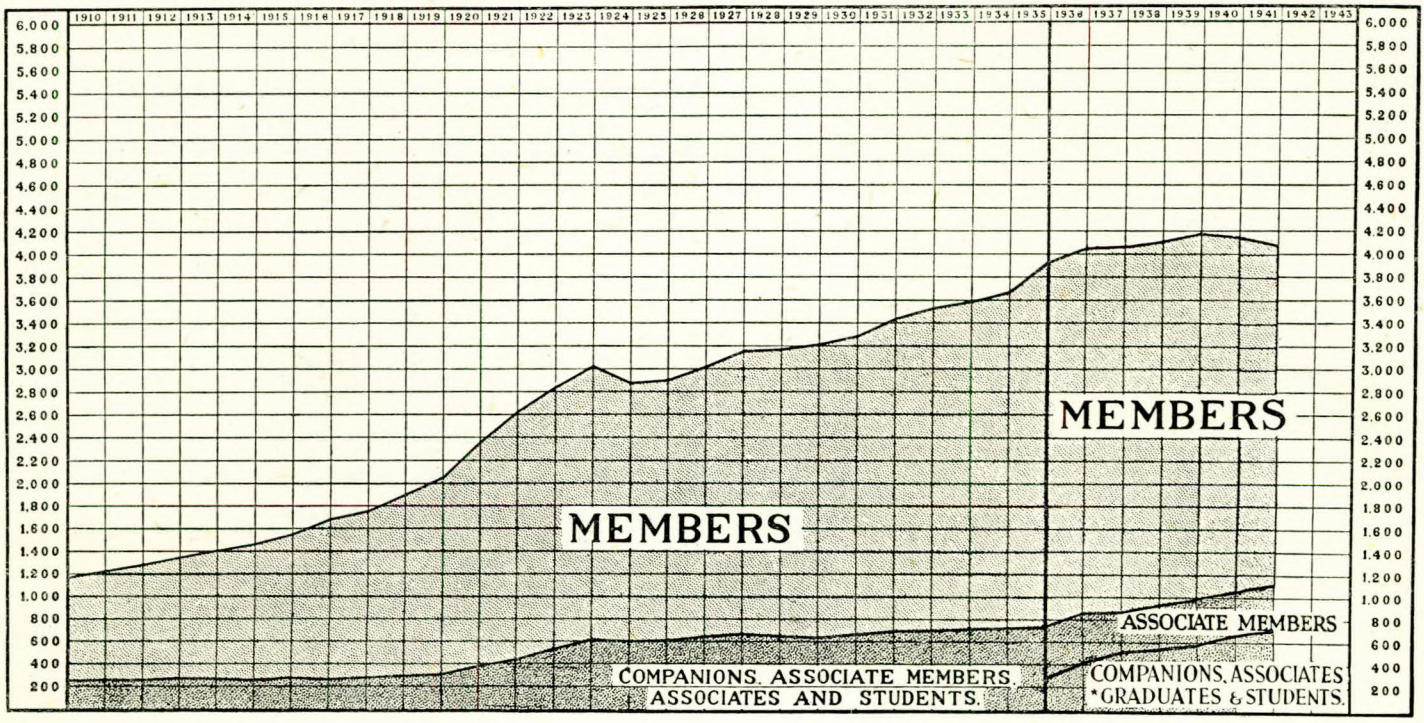

Chart of Membership.

Award of Medals.

On the recommendation of a Special Committee of Adjudicators the Council have decided to make no award of *The Denny Gold Medal* in respect of Papers contributed during the 1941 Session.

The Institute Silver Medal, in duplicate, has been awarded to Messrs. W. Yorath Lewis and Struan A. Robertson for their Paper entitled "The Lewis Single-drum Water-tube Boiler for General Marine and other Service", published in the March, 1941, TRANSACTIONS.

No paper having been contributed by a junior member, the award of *The Junior Silver Medal and Premium* lapses on this occasion.

Associate Membership Examination.

Three candidates entered for the whole examination, G. J. McLellan (Liverpool) passing in all subjects. One candidate at Colombo, B. E. L. Deckker, completed the examination by taking Section B, which he passed in all subjects.

Graduateship Examination.

No candidates sat this examination. Seven candidates have been admitted on exemption.

Studentship—Common Preliminary Examination.

One candidate passed the Common Preliminary Examination in April and has since been elected a Student. Fourteen applicants have gained admission as Students on exemption from the Examination.

Lloyd's Register Scholarship.

Fifteen candidates entered for the 1941 Scholarship, which was won by John Adam, of the Royal Technical College, Glasgow, an apprentice with Messrs. David Rowan & Co., Ltd. He has, however, been allowed to postpone taking up his Scholarship until such time as conditions may enable him to enter upon a degree course.

B. Hildrew, the previous year's winner, has been allowed to postpone the completion of his Scholarship course until after the cessation of hostilities and his release from the R.N.V.R.

J. Sloan, the 1939 winner, whose Scholarship had previously been postponed, has since been able to commence his degree course at Queen's University, Belfast.

R. Magill, the winner of the Scholarship in 1938, is completing his studies at Queen's University, Belfast.

It has been decided in conjunction with Lloyd's Register of Shipping, that in future the upper age limit for candidates for the Scholarship shall be 21 instead of 23 years as hitherto.

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:—

Swansea Technical College: K. B. O'Brien.
The Royal Technical College, Glasgow: G. C. Eddie.
Watt Memorial School, Greenock: J. A. Brogan.
Cardiff Technical College: H. E. B. Moore.
Hull Technical College: E. T. Andrews.
Dundee Technical College: A. McNicoll.
College of Technology, Belfast: E. J. Cairns.
The Woolwich Polytechnic: G. N. Wood.
University College, Southampton: R. F. C. Pickett.
Falmouth Technical School: D. Searle.
The Technical College, Plymouth: R. J. M. Rowe.
Constantine Technical College, Middlesbrough: A. P. Toms.
Robert Gordon's Technical College, Aberdeen: W. N. Duthie.
Portsmouth Municipal College: E. J. Pipe.
West Ham Municipal College: L. A. Goodyear.
Sunderland Technical College: J. Dixon.
Marine School of South Shields: R. Edgell.
West Hartlepool Technical College: T. E. Whitwell.
Rutherford Technical College, Newcastle-on-Tyne: B. Heron.
Birkenhead Technical College: G. Stockdale.
L.C.C. School of Engineering and Navigation: C. F. Greystock.
Regent Street Polytechnic: R. J. Wraith.

H.M.S. "Worcester".

The Institute Prize for 1941 was won by Cadet G. G. Watkins.

National Certificates with Special Reference to Marine Engineering.

9 Ordinary Diplomas, 7 Higher Diplomas and 3 Supplementary Endorsements of Higher Certificates with special reference to marine engineering have been endorsed by our President.

Examinations Board and Education Group.

There have been no meetings of the Examination Board or of the Education Group during the year. The direction of the examinations was carried out by the Chairman of the Examinations Board.

Essay Competitions.

The annual competitions for the various essay awards are still in abeyance.

Akroyd Stuart Award.

The above award for the period 1939/41 was granted to Mr. C. C. Pounder for his paper entitled "Some Recent Diesel Installations and Their Characteristics", which was published in the February, 1939, TRANSACTIONS.

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

No examination for Extra-First Class Certificates having taken place during 1941, the award of The Institute Medal has had to be temporarily discontinued.

Junior Section.

The activities of the Junior Section have remained in suspension during the year. The Council have continued to serve the special interests of junior engineers by devoting a section of the TRANSACTIONS to a series of articles of special value to the junior membership.

Transactions.

The more stringent rationing of paper which became operative in August necessitated cutting down the quantity of paper used for the TRANSACTIONS to one-third of pre-war consumption. By various measures it has been possible to maintain the editorial matter published at not less than two-thirds of that issued in a normal year.

Arduous work and frequent disappointment have been the lot of the Committee in endeavouring to provide papers for publication in the TRANSACTIONS. In view of the preoccupation of authors, it is very satisfactory to record that each issue of the TRANSACTIONS has contained a leading item of the standard to which members are accustomed. While the Committee have reason to believe that their efforts will have no less successful results during the coming year, offers of papers or suggestions in this connection would be warmly welcomed.

The Abstracts Section of the TRANSACTIONS has continued to earn expressions of approval from members in all parts of the world. Although the Institution of Naval Architects has found it necessary to curtail the promised measure of financial assistance in the preparation of the Abstracts, the Council consider that the usefulness and popularity of this Section more than justify the assumption of this additional financial responsibility.

The abstracts from the Russian shipbuilding journals have proved to be of considerable interest and value.

Publication of Books.

The revised and enlarged edition of "The Running and Maintenance of Marine Machinery" Handbook, which was published in March of last year, has sold in the large numbers the Council had been led to expect by the reception given to the previous edition. The financial success of this new edition is already assured, to the subsequent advantage of the Guild of Benevolence, to which the profits on the sale of this book accrue.

During the past year the sales of "Electricity Applied to Marine Engineering", by W. Laws, M.Sc., have been maintained at the highly satisfactory rate attained in the preceding few months of the book's existence. The Institute and the author can be congratulated in that the present rate of disposal indicates that a new edition will be required considerably ahead of original anticipations.

The Council have already announced their intention to publish Mr. R. S. Hogg's current series of articles on "Naval Architecture and Ship Construction" in book form. The number of requests for such publication which have been received has fully justified this further publishing venture, which will make a substantial addition to The Institute's series of books devoted to the technical education of junior marine engineers.

Library.

During 1941 there has been a further decrease in the output of technical books. Copies of all new technical books of probable value to marine engineers have been acquired for the Library, as recorded in the TRANSACTIONS. To the numerous members who have rendered valuable service in reviewing these books, the Council tender their special thanks.

Premises.

Since the carrying out of the temporary repairs referred to in the last Annual Report, The Institute building has escaped further air-raid damage and is being maintained in as satisfactory a condition as circumstances permit. Sundry additional items of A.R.P. equipment have been installed during the year, and war damage and additional fire insurances effected. While the building has been open for those wishing to use the Library, the work of the staff has been carried on at the emergency office accommodation at High Wycombe.

Staff.

R. Cane, junior clerk, is still with his unit, the Royal Army Pay Corps, and J. Willis, assistant to the caretaker, continues his service in the Merchant Navy. Mrs. E. Fertleman has replaced Miss F. H. Marshall as shorthand-typist.

Guild of Benevolence.

To the personal efforts of three Members, who have interested a number of firms and individuals in the Guild's work, are attributable some considerable accretions to the capital funds of the Guild during the past year. A first grant of £250, to be expended in relief, has been received from King George's Fund for Sailors War Fund. Particulars of these donations will be given in the report on the past year's work which will be presented at the Annual General Meeting of the Guild in April.

A less satisfactory aspect of the Guild's affairs is that no marked increase in subscribing members can be recorded. The aftermath of the war is likely to place a great strain on the Guild's resources, and the Council again appeal for the desired increase in subscribing membership.

National Service—Central Register.

The Marine Engineering and Naval Architecture Panel of the Central Register has dealt with only an insignificant number of vacancies during the year. A number of Members, however, have been placed in posts notified to the Mechanical Engineering Panel. The shortage of technical personnel has led to developments in the work of the Register, such as arrangements for the transfer of individuals from one type of work of national importance to work for which their qualifications and experience make them better adapted. Members, other than seagoing, who consider their abilities could be used to better advantage in the war effort should communicate with the Secretary immediately.

Since December, 1941, the Marine Engineering and Naval Architecture Sub-Committee has been dissolved and its functions merged with those of a new Mechanical Engineering Committee, representing all categories of professional engineers other than the Civil and Electrical groups.

Parsons Memorial Lecture, 1942.

The Institute being due, by rotation, to provide the Annual Parsons Memorial Lecture in 1942, the Council have nominated Dr. S. F. Dorey (Vice-President) to deliver this lecture. The subject chosen by Dr. Dorey is "Reduction Gearing for Marine Steam Turbines", and the lecture will be delivered in the Lecture Hall of The Institution of Mechanical Engineers on Wednesday, 16th September, at 5.30 p.m.

Engineering Association of Malaya.

At their meeting on February 26th the Council recorded their sympathy with the Engineering Association of Malaya in their present ordeal during the enemy occupation of Malaya. The Institute has had a reciprocal agreement with the Association for some years past.

Training, Grading and Conditions of Service of Engineers of the Merchant Navy.

The maintenance and improvement of the status of the marine engineer and the profession of marine engineering—an important responsibility of The Institute defined in the Royal Charter—has engaged the earnest attention of successive Councils since 1933.

Lengthy discussions of ways and means led to the appointment, in 1937, of a Special Committee, whose subsequent recommendations (which have since been published in the November, 1941, TRANSACTIONS) were submitted for the consideration of the Council then in office. At that time the generally unfavourable condition of the shipping industry, the apathy of the Government, and public ignorance of the conditions of employment and status of those on whom, as events have shown, not only the well-being but the very existence of the people of this country depends, combined to persuade a section of the Council that the time was inopportune to press urgently-needed reforms. Chiefly, however, owing to lack of unanimity of agreement on their basic recommendation, the Special Committee's proposals were not adopted and put forward in the name of The Institute.

Events since 1937 have created a more instructed public, conscious to an increasing extent of its debt to the officers and men of the Merchant Navy. A more appropriate time than the present is unlikely to occur for the propagation of The Institute's views on the vital importance of an adequately trained, reasonably remunerated and well-conditioned, and numerically sufficient personnel for the Merchant Navy of the future.

During the past Session, therefore, the Council deemed it opportune to publish a review of the present systems of training and grading of marine engineers in Great Britain and various foreign maritime countries, with a view to promoting thought and discussion on the subject of a scheme applicable to the British Merchant Navy. This review was published in the August TRANSACTIONS and the discussion in the November issue. Meanwhile, it happened that a political campaign opened with the object of securing an impartial and judicial inquiry into the problems underlying the evident desire for an improvement of conditions in the Merchant Navy. An amount of controversial correspondence through the columns of *The Times* was followed with close attention, and on the 3rd October a letter was contributed by the Emergency Committee of the Council associating The Institute with the efforts to bring about such an inquiry.

At a full meeting of the Council on the 29th October a Special Committee was appointed to formulate The Institute's proposals for the training, grading and conditions of service of engineers of the Merchant Navy. At the close of the year the work of this Committee was well in hand, and it is anticipated that its report and recommendations will be ready shortly for the Council's consideration.

Reports of Representatives on the Various Outside Bodies.

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

A meeting of the Joint Council was held on the 20th March, 1941. A communication was considered from the Institution of Mechanical Engineers with regard to possible alterations in the Constitution and Bye-Laws of the Engineering Joint Council with the object of rendering the Council a more effective body. It was decided that proposals should be formulated by the Institution of Mechanical Engineers and submitted to the Joint Council. In view of war conditions it was agreed that the matter should remain in abeyance until the cessation of hostilities.

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

Meetings of the Board were held on 16th July and November 14th. The first Common Preliminary Examination was held in April, 1941, when 98 candidates entered for the examination; 58 passed, 32 failed and 8 did not sit. The second Examination was held in October, 1941, when 87 candidates sat; 57 passed and 30 failed. For 1942, dates of examinations were arranged and examiners and moderators appointed. Qualifications were added to the list of those recognized as exempting from the Common Preliminary Examination. Temporary modifications were approved to standing orders affecting the apportioning of the expenses of the Joint Board, for the period of the war, so that "Examination Expenses" shall be defrayed after each examination by constituent institutions submitting candidates for examination, on the basis of the relative number of papers marked, and "General Expenses" shall be defrayed by each constituent institution contributing annually equal sums. Copies of the question papers set in the Common Preliminary Examination can be purchased from Messrs. William Clowes at 1s. per set.

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

The time spent by investigators in dealing with problems arising in the use of condenser tubes has increased very considerably and Mr. May, the senior investigator, is almost wholly employed on these problems. Much valuable knowledge on the behaviour of condenser tubes in severe conditions of use is being obtained in this way. Loss of specimens and records through fire has necessitated the repetition of much of the work which was described in the report for 1940, in particular that on the resistance of copper-nickel alloys containing iron. Further potentiometric work, which has been carried out to investigate the mechanism of attack in the presence of organic substances containing sulphur released into the sea-water by bacteria and biological changes, has given some confirmation of the

theory of depolarisation of corrosion cells by substances acting as oxidation-reduction systems. The relative resistance of various alloys, used in the manufacture of condenser tubes, to sea-water contaminated with organic substances has been determined. Some work has been carried out on the resistance of various brasses, including brasses containing the beta phase, to attack by sea-water, and measurements have been made of the comparative resistance of these brasses to both impingement attack and dezincification. The extensive work on service problems is likely to increase further in 1942 and the research programme has had to be considerably curtailed. It consists mainly of the continuation of the work described above. No meetings of the Research Sub-Committee were held during 1941.

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

The R.1 Committee is proceeding with work on the weldability of steels and as an outcome a new British Standard (No. 968, High Tensile Steels) has been issued, and a number of memoranda have been made available for circulation concerning the welding of these steels which are applicable to shipbuilding and ship repairs. The R.2 Committee on the weldability of non-ferrous metals have issued a number of reports on the welding of copper-aluminium alloys. The work of R.41 Sub-Committee on ships' structures has been almost at a standstill, but the Institute's report on this work has been published and a further series of experiments are progressing slowly. Reprints of the various research reports issued can be purchased, and a special progress report of the Welding Research Council, covering the five years existence which it will have completed in March, 1942, will shortly be published.

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

The Committee has not been active during the year, but it is understood that negotiations are in progress with a view to the resumption of meetings as soon as conditions permit.

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

There is nothing to report except that the Committee's publication "Science in Parliament" has been received regularly throughout the year and is available in the Institute's Library for Members interested.

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 the creep and corrosion of steels at high temperatures has been actively pursued during the year. The work on carbon steels has included the determination of the McQuaid-Ehn grain size of all the steels and its correlation with their creep properties. The effect of heat treatment temperature in this connection has also been investigated. Study is being made of grain coarsening in relation to creep and includes the determination of grain coarsening temperatures, the effect of time of treatment at a temperature above the grain coarsening temperature, and the effect of additional heat treatment on the creep properties and microstructure of the specimens. The austenitic grain size developed at a number of heat treatment temperatures, as well as the particular grain sizes developed under the specified conditions of the McQuaid-Ehn test is being compared with the creep properties.

Investigations have also been made on the comparative creep properties and microstructure at 450° C. and 550° C. of acid and basic open hearth steels after various heat treatments and when aluminium or silicon killed. Dimensional stability tests have been made to see if it had any influence on the creep rate at the above two temperatures.

Work has been continued on the creep resistance of carbon and molybdenum steels used in superheaters and steam pipes, that on the carbon steels being almost completed.

Further progress has been made with the investigations on the properties and microstructure of molybdenum and molybdenum-vanadium steels in various conditions and after various heat treatments, including creep and impact properties and the solubility of the carbides.

Advantage is being taken in practice of the better creep resistance of steels containing molybdenum compared with plain carbon steels, especially for service at temperatures between about 450° C. and 550° C. An important feature of plain molybdenum steels and of some of the other low alloy steels containing molybdenum is the nature of their failure at high temperatures when stressed sufficiently long to produce rupture by creep. This failure occurs by intercrystalline cracking and with much less elongation than is associated with rupture in a tensile test at the same temperature. This mode of rupture is not confined to steels containing molybdenum; other steels as well as non-ferrous metals show the same features above certain temperatures which vary with the material. A report on the properties and mode of rupture of molybdenum and molybdenum-vanadium steels judged from prolonged creep tests to fracture has been issued to contributors and published during the year.

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

The war has increased the activities of the Committee during the past year, but reference to this is permissible only in general terms. Economy in the use of steel, as well as in the time and labour involved in the construction of ships and their machinery, has been the aim of the Society. Improvements have been introduced in the structural design of cargo ships and oil carriers, and the use of electric welding in these structures has been developed. Assistance has been given to the various Government departments concerned with the maintenance of ships under wartime conditions, and in the arrangements for their deeper loading during the present emergency. The Ship and Machinery Rules have been under revision, but the changes approved for the new edition to be published in 1942 are not of a radical nature.

British Society for International Bibliography. (Representative: Mr. B. C. Curling).

A full programme of papers and discussions was carried out during the year and published in the Society's *Proceedings.* Under the aegis of the British Standards Institution, the Society's Committees made good progress in the work of editing and publishing the English edition of the Universal Decimal Classification.

Association of Special Libraries and Information Bureaux. (Representative: Mr. B. C. Curling).

The Association's work has been further developed, in spite of wartime difficulties. In particular, an enquiry into the supply of current European scientific and technical periodicals produced valuable results.

A second, revised edition of the *ASLIB War-time Guide to British Sources of Information on Fuel* has been issued. The compilation of a similar Guide, on *Electrical Engineering and Telecommunications,* has been begun.

British Standards Institution Committees.

Petroleum Industry Section: Technical Committee PT/2, Fuel Oils and Sub-Committee PT/2/1, Diesel Fuel Oils.

An emergency specification for bunker oil has been prepared at the request of the Ministry of War Transport. 55 A.R.P. specifications have been prepared, including one for petroleum jelly for sealing gastight jars and one for bleach ointment (anti-gas ointment).

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

A specification for air receivers under nine inches diameter is in course of publication. Draft specifications for pressure paint receivers and for valves, gauges and similar fittings for air receivers, are in course of preparation. B.S. 429, Riveted Steel Air Receivers, has been revised.

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

During the past year the Committee prepared at short notice B.S. No. 978-1941, War Emergency British Standard Gears for Clockwork Mechanisms. This standard was required by the director of jigs, tools and gauges of the Ministry of Supply. The Committee also considered the proposal of Committee 15/35, Cast Iron, to substitute high-duty cast iron for cast steel for gear material wherever possible.

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

This Committee did not meet during the year, but by arrangements adopted for working under emergency conditions, recommendations were considered and dealt with by correspondence. B.S. 15, Steel for Bridges, etc., was modified to provide for copper bearing steel. B.S. 592, General Steel Castings, was modified to reduce the amount of material required for testing, and a few alterations were made to B.S. 5006 and 5007, Automobile Steel Strip and Sheet. In response to representations made by the Ministry of Supply a War Emergency Specification (No. 968-1941) for High

Tensile Fusion Welding Quality Structural Steel was prepared and published. This steel is stated to have good welding properties. British Standards No. 933-1941 (Magnetic Materials for use under Combined D.C. and A.C. Magnetisation) and No. 970-1941 (Wrought Steels—superseding Nos. 5005, 5008, 5010 and part of 5006) were also published during the year.

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

The following specifications and revisions of specifications were approved for publication: B.S. 29, Carbon Steel Forgings for Ship and Marine Engine Purposes; B.S. 592, Carbon Steel Castings for Ships and for Marine Engines and General Engineering Purposes; engineer's squares; feeler gauges; precision levels for engineering purposes; screw threads; dimensions of black bolts and nuts; screw thread gauge tolerances; steel tubes and tubulars, light and heavy weight qualities; ships' side scuttles and frames; micrometers; malleable cast iron and cast copper alloy pipe fittings for water and steam; ferrous pipes and piping installations for land boilers; rivets (other than boiler rivets); boiler rivets; limits and fits for engineering; dimensions, limits and tolerances for screwing taps; dial gauges; engineer's parallels; screw threads of Whitworth form; direct reading hardness test (Rockwell principle); machine cut gears; Manila ropes; railway rolling stock material—solid rolled steel wheels and disc wheel centres.

Solid Fuel Committee: Sub-Committees on Coal Burning Appliances, Nomenclature and Definitions, and Steam Generators and Boilers. (Representative: Mr. E. W. Green, O.B.E.).

The Solid Fuel Committee has done a good deal of work, chiefly on test codes. Standard No. 992-1941, Test Code for Fuel-fired Melting Furnaces used in the Non-Ferrous Metals Industry, was issued during the year.

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

The specification for water-tube boilers is on the point of completion. This specification completes the range of British Standards for land boilers and their ancillary equipments. B.S. 806, Ferrous Pipes and Piping Installations for Land Boilers, has been revised. A draft specification for non-ferrous pipes and piping installations for land boilers is in course of completion. Draft specifications are in course of preparation for fusion welded steel and for fusion welded copper pressure vessels.

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

B.S. 29, Carbon Steel Forgings for Ship and Marine Engine Purposes, has been published. B.S. 14, Steel for Marine Boilers, and B.S. 13, Steel for Shipbuilding, are being revised. B.S. 592, Carbon Steel Castings for Ships and for Marine Engines and General Engineering Purposes, has been revised.

Technical Committe on Fans. (Representatives: Mr. T. A. Bennett, B.Sc. and Mr. J. Dunlop).

B.S. No. 367-1941 (Ceiling Type Electric Fans) has been published during the year, and it is hoped that all interested will assist in the general adoption of this Standard.

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

Preparation of the specification for mattocks, picks and beater picks is in abeyance.

The activities of the other outside bodies and committees on which The Institute is represented are in abeyance for the time being, no meetings having been held during the past year.

T. A. CROMPTON,
Chairman of Council.

B. C. CURLING,
Secretary.

Obituary.

PETER BLAIR ALLAN (Member 6397) died at the General Hospital, Shanghai, on the 4th May, 1940. Born in 1890, Mr. Blair served his apprenticeship from 1905/10 at the Carron Ironworks. From 1910 to 1928 he served with various shipping companies in the Far East, his last Company being the Ho Hong S.S. Co. In 1929 he became engineer on dredge erection at Bannasan, S. Siam, and in the following year assistant general manager of the Larut Tin Fields. He subsequently returned to the sea, and as the result of an accident while crossing the gangway plank between two vessels in the Shanghai river, he received injuries from which he died as stated above.

JAMES PERCY ANDERSON (Associate Member 6278) died on the 6th September, 1941. Born at Glasgow in 1890, Mr. Anderson was educated at Queen's Park School and the Royal Technical College, Glasgow. On completion of his apprenticeship with Messrs. Alley & MacLellan, Ltd. he joined the technical staff of Messrs. G. & J. Weir, Ltd., in 1913. After demobilization from the Army in 1918 with the rank of captain, he resumed his duties with Messrs. Weir and in 1929 was appointed manager of the land installation department at this firm's London office, where he was employed at the time of his death.

LANCELOT BURN ARKLEY (Member 8909) lost his life by enemy action in April, 1941. Born at North Shields in 1892, Mr. Arkley was educated at the Scotch Church School there and served his apprenticeship with The Wallsend Slipway & Engineering Co., Ltd. From 1919 to 1926 he served with Messrs. Shaw, Savill & Albion Co., Ltd. After a short period ashore, he returned to the sea in 1928, and in 1929 he was appointed chief engineer with Messrs. J. Hunting & Son, in which capacity he was employed at the time of his death. He leaves a widow and young son.

ANDREW DICK BEVERIDGE (Member 8177) died in a prisoners-of-war hospital in Germany during December, 1941. Mr. Beveridge was born in 1890 and on the completion of his apprenticeship in 1911 he joined the Red Star Line as a junior engineer. In 1918 he left this Company to enter the service of Messrs. Furness-Houlder Argentine Lines, Ltd., and in 1936 he was chief engineer of this firm's "La Rosayina". In December, 1940, he was made a prisoner-of-war, and twelve months later he contracted dysentery to which he succumbed in hospital.

GERALD BISHOP (Member 8222), killed by enemy action in May, 1941. Mr. Bishop was born at Shrewsbury in 1898 and educated at St. Mary's R.C. School and the Priory Secondary School in that town. His apprenticeship from 1913-20 with Messrs. Joseph Healey of Garston was interrupted by a period of war service, but on its completion he served for eleven years at sea with Messrs. C. T. Bowring & Co. From 1932 to 1940 he was employed by several firms, including The Lightfoot Refrigeration Co., Messrs. J. & E. Hall, Ltd., Messrs. Murex Welding Processes, Ltd., and The Buell Combustion Co. In 1940 he was appointed Lieutenant (E) in the R.N.R., and while on active service met his death. He leaves a widow and two children.

JOSEPH EMMERSON BLACK (Member 8853) presumed drowned by enemy action during March, 1941. Born at Glasgow in 1900 and educated at Overnewton School, Mr. Black served his apprenticeship with Messrs. Burmeister & Wain from 1915-17 and Messrs. A. & J. Inglis from 1917-20. He then joined the Nourse Line as a junior engineer and subsequently entered the employ of the Clan Line. In 1929 he joined Messrs. Gow, Harrison & Co. as 2nd engineer and in the following year was promoted. He remained in their service until 1937, when he joined The Anglo-Saxon Petroleum Co., Ltd., as 4th engineer with the object of obtaining a Diesel Endorsement of his certificate. He was transferred to this Company's "Dorsinia" and in 1939 was promoted to 2nd engineer of the m.v. "Eulima". In 1941 he was transferred to another vessel of this Company and was in their employ at the time of his presumed death.

JOSHUA BREWER (Associate 9339) died at sea as the result of an accident on 30th January, 1942. Born at Higher Walton, Preston, in 1906, Mr. Brewer served his apprenticeship with Messrs. G. & R. Dewhurst, Ltd., of Preston, and in 1937 commenced his sea career as 5th engineer in the m.v. "Gold Shell". He then served as 3rd engineer in the m.v. "Dromus" and the m.v. "Carelia" and later still as junior 2nd engineer in the m.v. "Patella". Recently he joined The British Tanker Co. and while serving in one of their vessels he received injuries from which he succumbed as the result of an explosion in the pump room. He and three other engineers who lost their lives were buried in the Sailors' Lot, St. Paul's Churchyard, Paget.

GEORGE WILLIAM BUCKWELL (past Vice-President and Member 224), died at Liverpool, 20th February, 1942. (See obituary in April, 1942, TRANSACTIONS).

ERNEST A. BUGG (Member 1943) died 31st March, 1941, aged 56 years. Mr. Bugg served his apprenticeship with Messrs. Yarrow &

Co., Poplar, and was educated at East London College. After a period in Messrs. Yarrow's drawing office he served for a short time in a consultant's office and then entering the drawing office of The Thames Iron Works. Eighteen months later he entered the service of The India Rubber and Gutta Percha Telegraph Works, Silvertown, with which Company he eventually became controller of engineering. In 1934 he joined Messrs. Elliott Bros. (London) Ltd., of Lewisham, with whom he was associated at the time of his death. For many years Mr. Bugg, who was a Member of The Institution of Mechanical Engineers, lectured in engineering subjects for the L.C.C.

James Buyers (Member 6447) died at Durban on the 1st October, 1941, aged 51 years. A native of Aberdeen, Mr. Buyers served his apprenticeship with Messrs. Clyne, Mitchell & Co. and was educated at Robert Gordon's Colleges, Aberdeen. In 1911 Mr. Buyers commenced his sea career and in 1918 joined Messrs. Andrew Weir & Co. He was promoted to chief engineer the following year by this Company, in whose service he remained continuously until the time of his death. Owing to illness he was compelled to leave his ship at Calcutta and had been for some weeks in a nursing home at Durban prior to his death. He leaves a widow and children.

Thomas Ormiston Callender (Companion 8414) died at Bidborough, Kent, on 10th May, 1941, aged 45 years. Mr. Callender was educated privately and at Cambridge and during the last war served in France as a Lieutenant in the Royal Marine Light Infantry. He entered the firm of Messrs. Callender's Cable & Construction Co., Ltd. in 1920 and after going through the shops was employed on outside contracts at home and abroad. In 1928 he became manager of the marine department and in 1930 was appointed an advisory director. He became a member of the board in 1932. Mr. Callender, who had travelled widely, was a member of the Kent County Council, and President of the Works Band, the Athletic and Social Club and the Ex-service Club associated with the Company. He was an Associate Member of The Institution of Electrical Engineers.

Alexander Fraser Campbell, 2nd Lt., R.E. (Member 8693) killed on active service in October, 1940. Mr. Fraser was born at Dalmellington in 1898 and educated at the Higher Grade School there. After the completion of his apprenticeship he served in France during the last war, and on demobilization entered the service of The Glen Line and subsequently The Clan Line. For some time afterwards he was on the staff of Messrs. Babcock & Wilcox, Ltd., Renfrew, and from there was appointed a charge shift engineer at Rothesay Corporation Power Station. On the outbreak of the present war he joined the Royal Engineers and was engaged on bomb disposal work when he met his death. It has been announced in the "London Gazette" that "The King has approved the award of the George Cross to second lieutenant Alexander Fraser Campbell, R.E., for most conspicuous gallantry in carrying out most hazardous work in a very brave manner".

Ronald Victor Castle (Graduate 8992) lost his life at sea by enemy action during September, 1941. Born at Dover in 1919, Mr. Castle was educated at the Dover County School for Boys and served his apprenticeship in the Marine Engineering Department of the Southern Railway. He then went to sea as 4th engineer and served (attached to the Royal Navy) during the evacuation of Dunkirk. From January to August, 1941, he was in the employ of Messrs. John I. Jacobs & Co. as 4th engineer, and latterly served in the same capacity with Messrs. John Morrison & Son.

Harold S. Caswell (Member 5548) died on the 7th August, 1941. Mr. Caswell was born in 1879 and served his apprenticeship with Messrs. Belliss & Morcom, Ltd. and with The London & Glasgow Shipbuilding Co., Ltd. Subsequently he served nine years with The City Line and some time after leaving the sea he entered the service of the Colombo Port Commission. He remained in the employment of the Commission until his retirement from the post of mechanical superintendent to which he was promoted after a period of service as deputy mechanical superintendent.

Nigel Elford Chubb (Associate 8533) believed to have lost his life at sea by enemy action during April, 1941. Mr. Chubb was born at Buckfastleigh, Devon, in 1908, and was educated at Burnley Grammar School. He matriculated in 1925 and then commenced his apprenticeship with Messrs. Cox & Co., of Falmouth. In 1931 he obtained a position as 7th engineer in the New Zealand Shipping Co.'s s.s. "Norfolk" and in the following year he entered the service of The King Line. From 1934 to 1936 he was in the service of Messrs. Moss & Co., first as 3rd engineer and then as 2nd engineer of the m.v. "Luxor". He was then in the employment of a Dutch company until 1938, when he joined The Anglo-American Oil Co., for whom he superintended the installation of the engine in the m.v. "Edy R. Brown" building at Turin. He later became chief engineer of this vessel. He remained in the service of The Anglo-American Oil Co. until his death, at which time he was engaged to be married.

Eduard August Claeijs (Member 8777) died as a result of an accident at Tilbury Dock about August, 1941. Mr. Claeijs was born in Belgium in 1899 and served his apprenticeship at the Repairing Works at Antwerp. From 1920 until his death he was employed as a marine engineer, his last position being chief engineer of the m.s. "President Francoui".

William Bennett Connolly (Member 8237) killed by enemy action at Liverpool in May, 1941. Born at Bootle in 1911, Mr. Connolly was educated at the Merchant Taylors School, Great Crosby, and served his apprenticeship with Messrs. Cammell, Laird & Co., Ltd., Birkenhead. In 1932 he went to sea and served with Messrs. T. & J. Harrison, Ltd. until 1939, when he was appointed ship and engineer manager to Messrs. Grayson, Rollo & Clover Docks, Ltd., where he was employed at the time of his death. Mr. Connolly's wife lost her life at the same time.

Alfred John Daniels (Member 6968), presumed drowned as a result of enemy action in January, 1941. Mr. Daniels was born at Gourock in 1903, educated at Aberdeen and served his apprenticeship with Messrs. Hall, Russell & Co. In 1926 he joined The British Tanker Co. and in 1930 entered the service of Messrs. Shaw, Savill & Albion Co. in whose employ he was at the time of his death.

Fred W. Dunn (Member 2872) died in London on the 9th January, 1942. Born at Lambeth in 1860, Mr. Dunn was educated at a private school and at Richie's Grammar School. His apprenticeship was served with Messrs. Maudslay, Sons & Field and he received his technical training at King's College, London, having won one of the Maudslay Scholarships. For a short time he then worked for Messrs. Simpson's Pumping Engine Works, Pimlico, and Messrs. Humphrays of Deptford. Returning to Maudslay's he was appointed in 1887 as their inspector at Genoa on work being carried out for the Italian Government at Messrs. Ansaldo's works. On the termination of the agreement he remained at Messrs. Ansaldo's as works manager. In 1904 he returned to England and joined Messrs. Babcock & Wilcox, Ltd., as travelling superintendent engineer, in which capacity he visited many parts of the world. During the last war he spent some time in France as a civilian training members of the Royal Engineers to handle a mobile power station. Mr. Dunn retired in 1931 and settled in London.

Reginald W. Filby (Member 5512) presumed lost by enemy action in October, 1940. Born in 1903, Mr. Filby served his apprenticeship at H.M. Dockyard, Sheerness. He then joined Messrs. Furness, Withy & Co., Ltd. as a junior engineer and had followed a sea career until the time of his death.

Sidney James Fish (Associate 8663) killed by enemy action in May, 1941. Mr. Fish was born in 1908, and shortly after the completion of his apprenticeship went to sea. In 1938, at the time he joined The Institute, he was 2nd engineer of The Hain Steamship Co.'s s.s. "Lahore", and it is believed that he was continuing his sea career at the time of his death.

Leonard Monro Fox (Member 2094) died suddenly at Leeds on the 25th February, 1942. Born at Leeds in 1874, Mr. Fox was educated at Ilkley and at Leeds Grammar School. He served his apprenticeship with The Leeds Forge Co., Ltd., of which at this time his father was manager and his uncle managing director. Later he held a managerial post with this Company, but relinquished it to accept a position on the New Zealand Railways. After a short time in New Zealand he decided to go to sea as an engineer, in which capacity he served for 10 years, mostly with The New Zealand Shipping Co., Ltd. During this period he obtained his First-Class Board of Trade certificate. In 1900 he retired from the sea to take a position as manager of The Acetylene Illuminating Co., Ltd., a business which was established by the Fox family. He was eventually appointed general manager and secretary of this concern, which subsequently became The Dissolved Acetylene Co. and later still was absorbed by Messrs. Allen Liversidge, Ltd. Mr. Fox retained his position as general manager during these changes until his retirement from business in 1930. During his early association with these Companies he was closely connected with the motor-car industry, in which at that time acetylene lighting was in use, and was prominently concerned with the introduction, before the 1914-18 war, of the oxy-acetylene welding process for ship repair work. Mr. Fox, who leaves a widow, was a past-President of the British Acetylene Association and of the Institution of Welding Engineers

(now the Institute of Welding) and a member of the Institution of Mechanical Engineers.

HORACE FREDERICK FRENCH (Associate 8207) presumed to have lost his life at sea by enemy action in February, 1941. Born in 1907 Mr. French served his apprenticeship with Messrs. R. & H. Green & Silley, Weir, Ltd. and on its completion in 1929 he embarked upon a sea career and served with several companies during the ensuing years. Eventually he entered the service of the Anglo-American Oil Co. and was in their employ as a 2nd engineer at the time of his death.

A. DOUGLAS GRAY (Member 7293) killed by enemy action in January, 1941. Mr. Gray was born in 1891 and served his apprenticeship with Messrs. Dunsmuir & Jackson, Ltd. of Govan. Most of Mr. Gray's subsequent career was spent at sea, and for many years he was chief engineer with The Blue Star Line, Ltd., a position in which he was serving at the time of his death.

JAMES GEORGE HAWTHORN (past Member of Council and Member 6) died at Forest Gate on 17th February, 1942. (See portrait and obituary in April, 1942, TRANSACTIONS).

FRANK HAY (Member 6839) died 1st August, 1941. Mr. Hay was born at Shilbottle, Northumberland, in 1875, and was educated at Rutherford College, Newcastle. After serving his apprenticeship with Messrs. R. & W. Hawthorn, Leslie & Co., Ltd., he joined The Prince Line in 1901. After serving 29 years at sea with this firm, he was appointed superintendent engineer for the Company at Manchester Docks, a position which he retained for the 11 years prior to his death, thus completing 40 years' service with the Company.

GEORGE MEWSE HELM (Member 8390) presumed to have lost his life by enemy action in May, 1941. Mr. Helm was born at Sunderland in 1896 and educated at St. Bede's College there, his apprenticeship being served with Messrs. G. Clark, Ltd. of Southwick. From 1915 to 1918 he served in H.M. Forces and shortly afterwards embarked on a sea career. After service with various companies he joined The British Tanker Co., Ltd. in 1924, and remained in their service until his death, at which time he was holding the position of chief engineer. He leaves a widow and a young son.

JOHN LESLIE HENDERSON (Associate 9030), presumed drowned during 1940 as a result of enemy action. Born in 1907, Mr. Henderson served his apprenticeship with Messrs. Dunlop Bell & Co., Ltd. and Messrs. R. & J. Evans & Co., Ltd., of Liverpool. In 1929 he commenced his sea career and after serving with various companies until 1938 he then joined The Elder Dempster Lines. He was in this Company's service at the time of his death.

GEORGE MAXWELL BROOKE HILTON (Member 5933) died 3rd September, 1941. Mr. Hilton was born at Derby in 1880, and attended St. Anns' Church School and the Collegiate School in his native town, and finally St. Oswald's College, Ellesmere, Salop. He was apprenticed to Messrs. A. Handyside & Co., Derby, and Messrs. H. J. Coles, Ltd., Derby. He then joined the P. & O. S.N. Co., whom he left in 1907 to become a surveyor, first with the Law Accident Insurance Society and afterwards with the United Legal Indemnity Insurance Society, Ltd. In 1911 Mr. Hilton, who was a Member of the Institution of Mechanical Engineers, joined Messrs. Heenan & Froude, Ltd., and eventually became chief engineer of all this firm's outside sales organisation.

ROY STANLEY HOGG (Associate Member 7931) lost his life on active service in February, 1941. Mr. Hogg, whose parents were of pioneer New Zealand stock, was born near Hamilton, N.Z., in 1905, and educated at the Tamaranui School, which consisted of mixed white and Maori students. His apprenticeship was served with Messrs. Mason & Porter of Auckland, after which he entered the service of Messrs. Shaw, Savill & Albion Co. He left the sea in 1936 to take up an appointment in the South African State Mines where he was doing exceedingly well, but in November, 1940, he responded to urgent appeals for engineers for the South African Navy. While serving as chief engineer of a minesweeper in the Tobruk area, Mr. Hogg lost his life by enemy action. Of exceptionally likeable character, Mr. Hogg remembered all the kindnesses he received as a young engineer, and never missed an opportunity to render similar service to his juniors. He leaves a widow.

ROBERT ARTHUR HOLMES (Member 7653) presumed lost as a result of enemy action in September, 1940. Born in 1873, Mr. Holmes served his apprenticeship with Messrs. Thos. Green & Son of Leeds. Mr. Holmes served many years at sea and obtained an Extra-First Class Board of Trade certificate. Later he was employed by The Parsons Marine Steam Turbine Co. and with Messrs. British Inspecting Engineers. In 1936 he returned to the sea and was in the service of Messrs. Houlder Bros. at the time of his death.

WILLIAM ALBERT HOPKINS (Member 6847) killed by enemy action in April, 1941. Mr. Hopkins was born at Cardiff in 1897, educated at Barry, and served his apprenticeship with The Barry Docks & Railway Co. From 1917 to 1921 he served at sea with Messrs. Alfred Holt & Co., and in the latter year was appointed engineer surveyor to The National Boiler & General Insurance Co., Ltd. He retained this post until his death, the whole of his service with the Company being in the East London district.

IAN CAMPBELL HOWDEN, Lt.-Com'r. (E), R.N. (Member 8124) lost his life by enemy action when H.M.S. "Gurkha" was sunk on the 9th April, 1940, off the Norwegian coast. Commander Howden was born in 1907 and after his initial naval training was appointed an engineer officer in 1930, in which capacity he served for some time in H.M.S. "Bruce". In 1938 he was promoted to lieutenant commander (E) and was serving with this rank in H.M.S. "Gurkha" when this vessel was damaged by enemy air attack and eventually foundered as stated above.

HENRY HUTCHINGS (Member 1649) died at Plymouth on the 7th April, 1941, aged 71 years. Mr. Hutchings served his apprenticeship with Messrs. Earle's Shipbuilding & Engineering Co. of Hull, and subsequently he spent many years at sea. As long ago as 1903 he was serving as chief engineer with The Tyser Line, and had been living for some years in retirement when his death occurred. He had been in ill health for some time prior to his death, but this was accelerated by his experiences during the air raids on Plymouth during March, 1941.

ARTHUR ERNEST JACKMAN (Member 3460) died at Richmond, Surrey, December 4th, 1941. Mr. Jackman was born at St. Johns, Newfoundland, in 1870, and served his apprenticeship with Messrs. Laird & Co. After obtaining a diploma in engineering at Dundee University he went to sea and very quickly became a chief engineer with Messrs. D. MacIver & Co. After being torpedoed during the 1914-18 war, he was appointed superintendent of Messrs. Howard Holden & Middleton. In 1920 he became a private consultant and also acted in this capacity for The Scindia Steam Navigation Co., a connection he maintained until his death. Mr. Jackman was chairman of Messrs. Salomon & Co., of Rainham, and a director of The Welsall Varnish Co.

ROBERT LANG (Member 7143) died in February, 1941, as a result of enemy action. Born at Glasgow in 1896, Mr. Lang served his apprenticeship with Messrs. McKie & Baxter of Govan. In 1922 he joined the B.I.S.N. Co., Ltd., and was on his way home on leave, after having completed his fourth long spell of service on the Indian Coast, when his ship was sunk by enemy action. He leaves a widow and daughter.

EDWARD H. LAW (Member 3151) died on the 26th November, 1940. Born at Gateshead in 1868, Mr. Law served his apprenticeship with Messrs. Marshall & Co., of South Shields. After a number of years at sea he became superintendent engineer for Messrs. H. Harrison (Shipping), Ltd., during the last war, and he acted in a similar capacity for Mr. E. T. Lindley, positions which he occupied at the time of his death. Mr. Law also acted as a private consultant and had many friends in shipping circles in almost every port around the coast.

ALBERT S. LONGO (Member 4434) lost his life at sea by enemy action during January, 1942. Mr. Longo was born at Valleta, Malta, in 1893, where he was educated, and served his apprenticeship at the Phoenix Engineering Works on the island. In 1916 he commenced service in the Merchant Navy and three years later joined The British Tanker Co., Ltd., in whose service he remained (for many years as chief engineer) until his retirement in 1937. After his retirement he settled in this country, but on the outbreak of war he again offered his services, and at the beginning of 1941 he resumed his sea career.

WILFRID JAMES MCDONALD (Associate Member 6443) presumed lost at sea by enemy action during February, 1941. Born in 1909 Mr. McDonald was educated at St. Cuthbert's Grammar School, Newcastle-on-Tyne, and served his apprenticeship with Messrs. R. & W. Hawthorn, Leslie & Co., Ltd., during which period he attended evening classes at Rutherford Technical College. In 1932 he joined the Anglo-Saxon Petroleum Co., Ltd. as a junior engineer and remained in this Company's service without interruption until his death, at which time he held the position of senior second engineer. Mr. McDonald leaves a widow.

JOHN STARKE MCGAVIN (Member 2030) died 30th June, 1941, at Bolton. Born at Greenock in 1871, Mr. McGavin was educated at the Kilblain Academy there and served his apprenticeship with Messrs. John Hastie & Co. After a short period of sea service he joined the China Navigation Co. in 1895 and became superintendent marine engineer of the Company in 1908, a position which he held until his retirement in 1927.

JOHN JACK MCKENZIE (Vice-President and Member 5096) died at Walton-on-Thames, 29th January, 1942. (See portrait and obituary in March, 1942 issue of the TRANSACTIONS, page 26).

ALEXANDER MACLEOD (Member 7619) presumed lost at sea by enemy action during September, 1941. Born in 1900, Mr. MacLeod served his apprenticeship with Messrs. Alexander Stephen & Sons of Linthouse from 1917-1922, and subsequently embarked on a sea career. He quickly obtained his Board of Trade Certificates (with Motor Endorsement) and by 1934 had attained the position of 2nd engineer with Messrs. Maclay and McIntyre. It is believed that Mr. McLeod remained at sea until his death.

ALEXANDER MCNAB (Member 3849) died suddenly on March 7th, 1941, while on a train journey near Sanderson, Texas. Born in Scotland 60 years ago, Mr. McNab served his apprenticeship with Messrs. D. J. Dunlop & Co., Port Glasgow, and later was for some years in the Royal Navy, from which he retired with the rank of engineer lieutenant-commander. An outstanding inventor and engineer, Mr. McNab subsequently founded his naval engineering business under the name of McNab of Bridgeport, Incorporated. During his exceedingly interesting life, Mr. McNab was senior military instructor with the New York National Guard, military attaché in Mexico, president of the Camp Fire Club of America, and he took part in big-game and small-mammal hunting in Kenya. He is survived by his third wife.

DOUGLAS GEORGE MILLICAN (Member 7133) lost his life at sea by enemy action during May, 1941. Mr. Millican was born in 1887 and served his apprenticeship with Messrs. George Clark, Ltd., of Sunderland. In 1932 he had completed 23 years sea service and at this time was employed as senior 2nd engineer with Messrs. Lamport & Holt, Ltd., with which Company he was believed to be still serving at the time of his death.

WILLIAM WRIGHT MARRINER (Member 8567) died at Halifax, Nova Scotia, on the 29th October, 1941. Born in 1868, Mr. Marriner received his early education at Bradford Grammar School, from which he proceeded to Leeds University where he graduated B.Sc. in 1887. In the same year he entered Messrs. Yarrow & Co.'s yard at Poplar as an apprentice, and on its completion remained with the firm as a draughtsman. Three years later he became assistant manager and subsequently engineering manager. Later still he became a director of the Company. A skilful experimentalist, with a strong scientific bent in addition to sound engineering skill, he played a notable part in the development of high-speed marine machinery and in solving the problems, especially of vibration, to which it gave rise. His share in the evolution of the Yarrow-Schlick-Tweedy system of balancing was considerable, and in later years he was equally and successfully concerned in countering the effects of vibration in turbine machinery. He was also prominent in the introduction of the Yarrow water-tube boiler, and in many marine engineering improvements. He was an Associate Member of the Institution of Civil Engineers and a Member of the Institution of Engineers and Shipbuilders in Scotland and of the Institution of Naval Architects, on the Council of which he served in 1916. A few years ago he founded with his son, Lt. (E) G. T. Marriner, R.N., the firm of Marriner & Co. His death, which occurred as he would have wished—while actively engaged in the service of his country—will be keenly felt by his many friends, not only as a great loss to the firm of Yarrow & Co., Ltd., which he served so long and well, but to the world of marine engineering as a whole.

JAMES MARSHALL (Member 8161) killed by enemy action in February, 1941. Mr. Marshall was born in 1900 and on the completion of his apprenticeship took a position as junior engineer. By 1929 he had risen to the position of chief engineer and was serving in this capacity in one of Messrs. John Holt & Co. (Liverpool) Ltd.'s vessels at the time of his death.

JAMES MATTHEWSON (Associate 8987) died at Darjeeling on the 11th October, 1941. Born in 1906, Mr. Mattewson served his apprenticeship with Messrs. Wm. Philip & Son of Kirkcaldy from 1922 to 1927. In 1929 he became a junior engineer with The British India Steam Navigation Co. and during 1934 and 1935 served with Messrs. Kaye, Son & Co., Ltd. After a year's service with Messrs. C. T. Bowring & Co., he was appointed an inspector of boilers for the Bengal Government, a post he occupied at the time of his death.

THOMAS LIGHTLEY MILLER (Member 8615) lost his life by enemy action in February, 1941. Born at South Shields in 1903, Mr. Miller served his apprenticeship with The Middle Docks & Engineering Co. He then joined Messrs. Anglo-Saxon Petroleum Co. as junior engineer, transferred to the Cairn Thompson Line and subsequently became associated with The Imperial Oil Co. of Canada. He then entered the employ of The Anglo-American Oil Co. and stood by during the building on the Continent of several new ships for this Company. He was still in the Company's service when his ship was torpedoed and he lost his life. Mr. Miller, who leaves a widow and young family, was highly regarded by his employers.

JOHN MURRAY (Member 2468) died at Melbourne, Australia, in August, 1941. Mr. Murray served his apprenticeship with Messrs. Bow, McLachlan & Co., of Paisley, and on its completion he went to sea as a junior engineer. He was elected to The Institute in 1910, at which time he had completed 20 years sea service, a career which he is believed to have followed until his retirement.

THOMAS RICHARD NELSON (Member 7898) died 19th May, 1941. Mr. Nelson was born at Seaforth, Liverpool, in 1896, and educated at Christ Church, Waterloo, Liverpool Central Technical School and Skerry's College. His apprenticeship was served partly with Messrs. Henry Wilson & Co., of Liverpool, and completed at the works of Messrs. C. & H. Crichton, Ltd. In 1914 he joined the Royal Engineers and served at Galipoli, in Egypt and in France. He was mentioned twice in despatches and awarded the Military Medal. In 1920 he entered the service of The Pacific Steam Navigation Co., in whose service he remained until his death. During this period he was employed in various vessels of the Company and in 1931 was appointed senior second engineer of the m.v. "Reina del Pacifico", of which ship he was promoted staff chief engineer in 1934, a position which he continued to hold until his death. Mr. Nelson leaves a widow.

GEORGE HENRY NUNN (Member 2459) died suddenly at Aden on the 1st January, 1941. Mr. Nunn was born at South Shields in 1878 and served his apprenticeship with The North Eastern Marine Engineering Co., Ltd. From 1902-05 he served at sea with The Britain S.S. Co. and in the following year he accepted an appointment with The Wallsend Slipway & Engineering Co., Ltd. In 1908 he joined the firm of Messrs. Luke Thomas & Co., of Aden. He eventually became superintendent engineer of the Company, with whom he remained until 1926 when he was appointed non-exclusive surveyor to Lloyd's Register of Shipping at Aden. Mr. Nunn was highly popular with his colleagues and in engineering circles in the port.

BRIAN EOGHAN O'BRIEN, Lt.-Com'r. (E), R.N. (Member 8334) died on active service in August, 1940. Born in 1907, Commander O'Brien was educated at Eton and received his initial naval training in the "Thunderer" and at Keyham College. After a period of service in cruisers of the County class he specialized in submarines and served three years as engineer officer of H.M. Submarine "Perseus". For the next two-and-a-half years he acted as assistant Admiralty engineer overseer at Messrs. Vickers-Armstrongs, Ltd., Barrow, returning in 1939 to the submarine service. He leaves a widow and a daughter.

HENRY PERCY OWEN, Eng. Com'r., R.N.R. (ret'd.) (Member 2880) died at Salisbury, Wilts., on the 4th October, 1941. Born at Liverpool in 1873, Commander Owen was educated at the Liverpool Institute and served his apprenticeship with The White Star Line. He then joined the sea-going staff of the Company and by the end of the last war had risen to the position of assistant superintendent engineer. He represented the Company at Hamburg in connection with the reconstruction and completion of the "Majestic" for the Reparations Committee. In 1931 he entered a partnership which was dissolved and reformed as a limited company under the title of Messrs. Owen & Green Ltd., of which he was a life director.

THOMAS FREDERICK PADDON (Member 8349) killed by enemy action, at his home at Plymouth, in April, 1941. Mr. Paddon was born at Lewisham in 1906 and was educated at Devonport High School, his apprenticeship being served with The Bickle Engineering Co. After a short period of service with Messrs. Yarrow & Co. he served at sea in R.F.A. vessels from 1929 to 1933. He was then engaged as a surveyor with The British Engine Boiler & General Insurance Co., a post which he continued to hold until his death. Mr. Paddon, who was a violinist of some ability, leaves a widow and one son.

J. R. PARSONS (Member 1321) died at Marley, near Exmouth, on the 9th November, 1940. Born at Blackheath in 1865, Mr. Parsons

was educated at the Sutton Valance School and served his apprenticeship with The General Engine & Boiler Co., Hatcham Iron Works, S.E. As long ago as 1899 Mr. Parsons was superintendent engineer of the Dartmouth & Torbay S.P. Co. and The Channel Coaling Co., Ltd., and subsequently he was employed as a Lloyd's surveyor.

GEORGE JOHN PATERSON (Member 5392) died at Cardiff on 21st August, 1941. Born on Clydeside in 1881 and educated at St. Bonaventures School, Glasgow, he served his apprenticeship with Messrs. Caird & Co., of Greenock. After a period at sea, when he rose to be chief engineer with the C.P.R. Co., he was for some time employed at the Chicago Power Station. During the 1914-1918 war he was employed by the Admiralty with the rank of engineer lieutenant-commander, and subsequently became superintendent with The Llewellyn Shipping Co. and associated concerns. Since 1925 he practised as a consultant at Cardiff.

FREDERICK WILLIAM PORTER (Companion 8166) died at Liverpool on 30th January, 1942. Mr. Porter was the proprietor of Messrs. F. H. Porter, Ltd., of Liverpool.

JAMES RITCHIE (Member 3055) died at Milford Haven on the 19th October, 1940, aged 71 years. A native of Greenock, Mr. Ritchie served his apprenticeship with Messrs. Caird & Co. of that town, and was then for a period in the drawing office of Messrs. Blake, Barclay & Co. During a subsequent period of 17 years at sea he served with The Gulf Line and as guarantee engineer in several ships of The Hill Line. He then became superintendent engineer of The West Coast Co-operative Ship Repairing & Engineering Co., Ltd., Milford Haven. After the last war he took over this business with his partner, Mr. W. T. Davies, and remained managing director of the Company and of Messrs. Ritchie & Davies, trawler owners, until his death.

THEODORE B. ROBSON (Associate 6522), killed by enemy action in October, 1940.

WILLIAM ASHLEY ROWE (Member 8751), killed by enemy action at Bristol in May, 1941. Born in 1887 at Plymouth, Mr. Rowe was educated at a private school at Burnham-on-Sea. His apprenticeship was served with Messrs. Stuart & Co., Plymouth and then, after a short period of service with The Egyptian Mail S.S. Co., he joined Messrs. Elders & Fyffes, Ltd. From 1914-19 he served in the Royal Naval Reserve, and then resumed his employment with Messrs. Elders & Fyffes, Ltd., of which firm he was chief superintendent engineer at the time of his death. It was while on duty as a part-time member of the Auxiliary Fire Service that Mr. Rowe lost his life.

JOHN ROWNTREE (Member 8082) lost his life at sea by enemy action during December, 1941. Born in 1899, Mr. Rowntree commenced his sea career in 1924 and for some time was in the service of the King Line. At the time of his death he was employed as a chief engineer by the Moss Line.

WILLIAM LIVINGSTON ROXBURGH (Past Member of Council and Member 3270). See portrait and obituary in May, 1941 TRANSACTIONS (facing page 55).

EDWARD W. RUTTER, Eng. Com'r., R.D., R.N.R., ret'd. (Member 1257) died on the 5th April, 1941. Com'r. Rutter was born at Laceby in 1861 and served his apprenticeship at Messrs. Earle's Shipbuilding & Engineering Co., Ltd., of Hull. In 1897, after some years at sea, he joined The Atlantic Transport Co., in whose service he remained until 1917. His last ship with this Company was the "Anglian", which was sunk by enemy action in the last war. He was then transferred to assist the superintendent on hull and machinery repairs. From 1918 to 1921 Commander Rutter acted as temporary engineer surveyor to Lloyd's Register of Shipping. As long ago as 1890 he received commissioned rank in the R.N.R., from which he retired in 1919.

JAMES RYRIE (Member 2328) lost his life at sea by enemy action during September, 1941. Born at Glasgow in 1878, Mr. Ryrie was educated at the Royal Technical College in that city. On the completion of his apprenticeship which he served at the Springburn Locomotive Works and with Messrs. John Brown & Co., Ltd., he entered the service of The Anglo-American Oil Co. as a junior engineer, eventually becoming a chief engineer with this Company in whose employ his remained for very many years. During this period of his life he experienced the San Francisco earthquake which occurred in 1906. For three years Mr. Ryrie was in the service of Messrs. Maller & Co., of Shanghai. Latterly he had resumed sea life.

FRED. E. SHEPPARD (Member 1867) died on the 12th July, 1941, at Thames Ditton, Surrey. Mr. Sheppard served his apprenticeship with Messrs. John Stewart & Son, of Blackwall, and subsequently spent some ten years at sea. The next few years saw him firmly established as an agent and consulting engineer in the City of London, where he was a popular figure and where he maintained his business until just prior to his death.

DAVID SMAIL (Member 2018) died at Glasgow on the 6th June, 1941. Born at Edinburgh, he served part of his apprenticeship with his father and the remainder with Messrs. Brown Bros. and Co., Edinburgh. After gaining further experience as a draughtsman, with a North of England shipbuilding company, he went to sea in 1887 as fifth engineer in an Atlantic passenger liner, and within four years had gained his chief's certificate. On leaving the sea Mr. Smail began practice as a consulting marine engineer in 1895, and he had since built up a business with very wide connections. Directorships had given him links with the ship-repairing, salvage and welding industries, and he was well known as an expert witness in the Law Courts and in arbitration proceedings. He was a member of the Institution of Engineers and Shipbuilders in Scotland and a founder member of the Society of Consulting Marine Engineers and Ship Surveyors. He sat on the last-named body's Council for Scotland from the inception of the Society 21 years ago, and he was president of the Society in 1936-37.

WILLIAM HENRY VINE (Member 2464) died at Bristol on the 1st June, 1941. Born at Newport, Mon., in 1882, Mr. Vine was educated at the Higher Grade Technical School, Bristol, and served his apprenticeship with Messrs. Peckett & Sons in that city. He then entered the service of The Canadian Pacific Steamship Company as a junior engineer and by 1911 had attained the rank of chief engineer with this Company, in whose service he remained until May, 1939, when a serious accident to his foot in the engine room of the "Duchess of Bedford" incapacitated him.

SIDNEY RAE WALLACE (Member 7730) killed by enemy action in 1941. Born in 1888, Mr. Wallace served his apprenticeship with Messrs. Fraser & Sons of Arbroath and then joined the Anchor Line in 1910. In 1923 he entered the employ of Messrs. G. & J. Weir, Ltd., whom he left in 1929 to return to the sea with The Lyle Shipping Co. In 1932 he became chief engineer of the Peebles Hydro, but was at sea at the time of his death.

JOSEPH WATSON (Member 7252) killed by enemy action at Edinburgh in May, 1941. Mr. Watson was born at Glasgow in 1900 and educated at the Mount Florida Secondary School. After serving his apprenticeship with Messrs. D. & W. Henderson, Ltd., he served for two years with Messrs. Harland & Wolff, Ltd. In 1925 he joined the Ben Line and two years later entered the service of the Houston Line. After a short period of service with Messrs. Wilcock Ashdown & Co., of Bombay, he returned to the sea with The Clan Line, leaving this Company in 1937 to become junior charge engineer at the Portobello Electric Power Station, a post which he held at the time of his death. He is survived by his wife.

JOHN WHITE (Member 6264) died on the 27th July, 1941, two days after reaching this country from India. Mr. White served his apprenticeship at the works of Messrs. Hutson & Sons, Glasgow, and spent over 20 years at sea. For 4½ years of this period he was in the Royal Naval Reserve. Subsequently he was appointed assistant engineer at the Cochin Harbour Works, India.

WALTER LEONARD WHITING (Member 8274), presumed to have lost his life at sea by enemy action in February, 1941. Born in 1906, Mr. Whiting served his apprenticeship with Messrs. J. Readhead & Sons, of South Shields. In 1926 he commenced his sea service and by 1936 had risen to the position of chief engineer of the steamship "Goleta". It is believed that he remained at sea until his death occurred.

ALFRED ERNEST WHITESIDE (Member 3864) died at Kensal Rise on the 3rd December, 1941. Born in Middlesex in 1875, Mr. Whiteside spent most of his early life in Italy, and was educated privately. Later he spent some years with his family in Sevastopol, where his father, as in Italy, was working for Messrs. Maudsley, Sons & Field, Ltd., a firm with whom Mr. Whiteside was formally apprenticed. On his return to this country, Mr. Whitside, by then a fluent linguist in English, Russian and Italian, entered the service of the P. & O. Company as a junior engineer. Later he sailed as chief engineer with the Tatem Line, and in 1913 or 1914 joined Messrs. Blair & Co., of Stockton, for whom he went to sea as guarantee chief engineer in the new s.s. "Moorish Prince". He then transferred to the service of The Prince Line until ill health compelled his retirement in 1919 or 1920. Later he worked for a few months as an inspector for the London County Council. Mr. Whiteside was a keen Member of The Institute and invariably attended meetings. His jovial presence will be much missed.

ALFRED LEONARD F. L. WILLIAMS (Associate Member 6337) presumed drowned by enemy action during March, 1941. Born at Cardiff in 1900 Mr. Williams was educated at Cardiff Technical College and the Cardiff Marine Engineering Academy. From 1916 to 1921 he served his apprenticeship with Messrs. Hills Dry Dock & Engineering Co., Ltd., of Cardiff, on the completion of which he went to sea. He quickly obtained his First-Class Board of Trade certificate and Motor Endorsement, and after service with various shipping companies he joined The Anglo-Saxon Petroleum Co., Ltd., in whose service he was employed for the past fourteen years. During the last war he undertook war service at the Welsh Hospital, Netley, Southampton. Mr. Williams, who leaves a widow, was attached to the Cardiff 4th Rover Scout Movement, St. Andrews, and was a noted swimmer and keen on all outdoor sport.

JAMES WINNING (Associate 8721) lost his life at sea by enemy action in February, 1941. Born at Barrow in 1904, in which town he was educated, Mr. Winning served his apprenticeship with Messrs. Harland & Wolff, Ltd., Glasgow, from 1923-28. In the following year he joined The Cunard White Star Line, whose employ he left in 1932. From 1935-37 he served as 3rd engineer in Messrs. Elder Dempster Lines' s.s. "New Brooklyn", and in 1938 entered the service of The British Tanker Co. He left this Company in 1940 and was serving as chief engineer of one of Messrs. T. E. Evans & Co., Ltd's vessels when his death occurred.

T. T. WRIGHT (Member 2562) died at Vancouver, B.C., on the 21st May, 1941. Mr. Wright served his apprenticeship with Messrs. D. & W. Henderson of Glasgow, and spent many years of his life at sea. He is believed to have been living in retirement in Canada for some years.

JOHN THOMAS WIGHT (Member 5894) died at Lasswade, Midlothian, March 18th, 1942, aged 59 years. A native of Lasswade, Mr. Wight was educated at Lasswade Academy and at Heriot-Watt College, Edinburgh. His apprenticeship was served with Messrs. MacTaggart, Scott & Co., Ltd., and during this period he continued his technical education at Heriot-Watt College, gaining the Diploma in Mechanical Engineering in 1901 and other honours and prizes in subsequent years. In 1905 he was appointed senior demonstrator in engineering at Heriot-Watt College and two years later, having qualified as a registered teacher under the City and Guilds regulations, he became assistant in the drawing department of the College. In the following year Mr. Wight was given charge of the machine-design department and in 1910 was made lecturer in prime movers. Later he assisted Professor Stanfield in the design and erection of new engineering laboratories. In 1913 Mr. Wight was appointed assistant professor of mechanical engineering at Heriot-Watt College and continued in this capacity for the next five years. In 1918 he came to London to take up the appointment of head of the engineering department of Woolwich Polytechnic. Subsequently he became secretary and manager of Messrs. Hydraulic Gears, Ltd., Hammersmith. In 1922 Mr. Wight returned to Scotland as general manager to Messrs. MacTaggart, Scott & Co., Ltd., and was subsequently made managing director and vice-chairman of the Company. About 15 months ago he accepted an appointment with Messrs. W. Simons & Co., Ltd., of Renfrew. Mr. Wight was a Fellow of the Royal Society of Edinburgh, a Member of the Institution of Mechanical Engineers, and the author of several technical works, among which may be mentioned "Elementary Graphic Statics".

JAMES WYLIE (Member 3906) died in hospital at Jacksonville, U.S.A., January 3rd, 1942. Mr. Wylie was born in 1881 and served his apprenticeship with Messrs. Victor Coates & Co., Ltd., of Belfast. In 1904 he commenced his sea career and for a number of years was employed as a chief engineer by The Standard Fruit & Steamship Co., of New York, in whose service he was at the time of his death. On a voyage from Haiti to Philadelphia he developed an overwhelming malarial infection. His ship, the s.s. "Granada", was diverted and he was landed for treatment at Jacksonville hospital, but his death took place as recorded above.

TABLE A.

	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.			31st Dec., 1941.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Receipts from Subscriptions	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	6,515	1	9
Entrance Fees...	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	178	15	0
Advertisements ...	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	1,458	9	0
Total Income ...	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	8,956	1	9
General Ex. A/c.	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	3,241	8	7
Rent, Rates and Taxes	647	19	9	477	15	8	470	4	6	484	10	·	519	2	1	536	2	1	542	18	2	565	17	1	661	16	7	705	11	8
House A/c. ...	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	371	19	6
Repairs and Redecorations	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	89	6	0
Transactions ...	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	2,790	7	0
Sundry Creditors	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	411	6	11
Capital A/c. ...	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	32,476	14	2
Balance on Revenue A/c.	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	1,202	8	11

SARDINIA HOUSE,
LINCOLN'S INN FIELDS,
LONDON, W.C.2.

To the Members, *25th February, 1942.*

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 the 31st December, 1941, and we set out below our observations.

(1) The Revenue Account shows a Surplus of £1,202 8s. 11d. as compared with £1,123 8s. 5d. last year, an increase of £79 0s. 6d.

(2) The Gross Revenue was £8,956 1s. 9d., an increase of £168 14s. 4d., made up as follows:—

	Decrease. £ s. d.	*Increase.* £ s. d.
Subscriptions	—	158 5 6
Entrance Fees	2 15 0	—
Examination Fees	—	11 5 0
Advertisements	—	23 4 0
Interest	—	20 10 3
Contributions towards Expenses for use of Hall and Library	6 0 0	
Sundry Sales...	35 15 5	
	£44 10 5	213 4 9
Deduct Decreases	... ...	44 10 5
Increase as above	... ...	£168 14 4

(3) Expenditure charged to Revenue Account amounted to £7,753 12s. 10d., an increase of £89 13s. 10d., made up as follows:—

	Decrease. £ s. d.	*Increase.* £ s. d.
General Expenses	73 11 6	—
Rent, Rates, etc.	—	43 15 1
House Account	108 13 2	—
Repairs	115 1 11	—
Air Raid Precautions	—	213 13 9
Insurance	—	133 16 2
Transactions	—	38 8 3
Transactions (Bound Volumes)...	43 16 6	—
Library and Reading Room Account	13 5 8	—
Depreciation	—	3 9 4
Heat Engines Prizes	—	1 9 9
Silver Medal	—	1 9 0
Extra First Class Certificate Medal	—	0 19 3
Junior Silver Medal and Premium	—	5 0 0
H.M.S. Worcester Prize	—	2 2 0
	£354 8 9	444 2 7
Deduct Decreases	... ...	354 8 9
Increase as above	... ...	£89 13 10

The increase in Insurance is caused by compulsory War Damage Contribution. The item of Air Raid Precautions is largely Wages and Allowances to Firewatchers; a refund of £20 0s. 6d. has been obtained in respect of the Government Allowance for Firewatching and has been credited to this account.

(4) The difference between the increase of £168 14s. 4d. in Revenue and the increase of £89 13s. 10d. in Expenditure accounts for the increase of £79 0s. 6d. in Surplus Revenue.

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

In accordance with the Council Minute of 3rd July, 1933, £28 18s. 8d. has been paid to the Guild of Benevolence. A revised edition was published during the year and the whole of the cost of this edition of £351 4s. 9d. has been met by Sales and Advertisement Revenue, leaving a surplus of £64 3s. 6d. There is a surplus on the old edition of £11 13s. 2d.

(6) *Electricity Applied to Marine Engineering Handbook.*

Sales during the year amounted to £271 5s. 1d., leaving a balance of £41 16s. 1d. of the original cost still to be recouped.

(7) *Investments.*

The Market Value at the 31st December, 1941, of the Institute's free Investments standing in the books at £16,410 1s. 8d. was £16,579. During the year £500 Australia 3½% Registered Stock 1956/61 was purchased at a cost of £491 6s. 0d.

(8) We have verified the Investments and Bank Balances and have inspected the Insurance Policies and Title Deeds, and we have obtained all the information 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.*

SOCIAL EVENTS ACCOUNT.

Dr. *Cr.*

	£ s. d.		£ s. d.
To Payments	176 15 8	By Balance at 31st December, 1940	227 13 9
„ Donation to Guild of Benevolence	100 0 0	„ Receipts	163 5 6
„ Balance at 31st December, 1941	114 3 7		
	£390 19 3		£390 19 3

LIBRARY AND READING ROOM ACCOUNT.

	£ s. d.		£ s. d.
To Reading Room Expenses	24 12 2	By Sales	2 6 8
„ Book Purchases and Binding	15 16 5	„ Revenue Account..	38 1 11
	£40 8 7		£40 8 7

BALANCE SHEET, 31st DECEMBER, 1941.

	£ s. d.	£ s. d.
Sundry Creditors		**411 6 11**
Subscriptions in Advance		**491 9 6**
Life Subscriptions to be Invested		**63 0 0**
Denny Gold Medal Fund (£250)		
Balance at 31st December, 1940:		
Capital Fund	250 0 0	
£ s. d.		
Accumulated Income ... 10 0 0		
Add Interest at 4% per annum 10 0 0		
20 0 0		
Less Award 17 10 0		
	2 10 0	**252 10 0**
Denny Award (£100)		
Balance at 31st December, 1940:		
Capital Fund	100 0 0	
Accumulated Income ... 3 6 4		
Add Interest at 5% per annum 5 0 0		
	8 6 4	**108 6 4**
Stephen Legacy Fund (£100)		
Balance at 31st December, 1940:		
Capital Fund	100 0 0	
Accumulated Income ... 2 13 10		
Add Interest at 2½% per annum 2 10 0		
	5 3 10	**105 3 10**
John I. Jacobs Award (£200)		
Balance at 31st December, 1940:		
Capital Fund	119 0 0	
Accumulated Income ... 7 6 8		
Add Interest on Investment 5 0 0		
	12 6 8	**131 6 8**
D. F. Robertson Award (£100)		
Balance at 31st December, 1940:		
Capital Fund	100 0 0	
Accumulated Income ... 4 6 6		
Add Interest at 4% per annum 4 0 0		
	8 6 6	**108 6 6**
Murdoch Legacy (£100)		
Balance at 31st December, 1940:		
Realised on Sale by Executors	62 11 6	
Accumulated Income ... 1 8 3		
Add Interest at 2½% per annum 2 10 0		
	3 18 3	**66 9 9**
Lord Inverforth Award (£100)		
Balance at 31st December, 1940:		
Capital Fund	100 0 0	
Accumulated Income ... 0 3 11		
Add Interest at 3½% per annum 3 10 0		
	3 13 11	**103 13 11**
Akroyd Stuart Award (£700)		
Balance at 31st December, 1940:		
Capital Fund	700 0 0	
Accumulated Income ... 203 14 2		
Add Interest on Investments 32 0 6		
235 14 8		
Less Award 50 0 0		
	185 14 8	**885 14 8**
"Running and Maintenance of Marine Machinery" Handbook		
Balance at 31st December, 1940 ...	40 11 10	
Less Transferred to Guild of Benevolence	28 18 8	
	11 13 2	
New Edition:		
Sales 220 5 3		
Advertising 195 3 0		
415 8 3		
Less Cost 351 4 9		
	64 3 6	**75 16 8**
Social Events Account		
Balance in Hand	114 3 7	
Donation to Guild of Benevolence not yet paid over	100 0 0	
		214 3 7
Social Events Account—Junior Section ...		**8 2 10**
Capital Account		
As at 31st December, 1940	31,274 5 3	
Add Balance of Revenue Account for the year ended 31st December, 1941	1,202 8 11	
		32,476 14 2
		£35,502 5 4

	£ s. d.	£ s. d.
Cash at Bank and in Hand		
Current Account	391 3 5	
Social Events Account	214 3 7	
Social Events Account—Junior Section	9 2 4	
Post Office Savings Bank Account ...	533 16 8	
In Hand	31 11 1	
		1,179 17 1
Sundry Debtors		
For Advertisements	736 6 9	
Sundries	137 0 11	
		873 7 8
Investments		
£2,500 3½% War Loan at cost *less* Bonus	2,570 14 6	
£2,800 3½% War Loan at cost	2,836 4 8	
£6,000 5% Conversion Loan 1944-63 at cost	6,240 8 0	
£2,500 3½% Conversion Loan 1961 at cost	2,668 0 0	
£1,000 3% National Defence Loan 1954/58 at cost	998 17 0	
£200 Bank of England Stock at cost...	703 17 0	
£500 Australia 3¼% Registered Stock 1956/61 at cost	491 6 0	
		16,509 7 2
(Market value 31st December, 1941, £16,684).		
Investments (Awards)		
Akroyd Stuart Award		
£915 3½% Conversion Loan, 1961, at cost	698 4 11	
John I. Jacobs Award		
£200 2½% Consols as valued at 31st January, 1919	119 0 0	
		817 4 11
City Premises at cost		**14,650 0 5**
City Premises Redemption Policies		
Single Premiums to Royal Exchange Assurance Company to secure the payment on 1st Novr., 2011 of	£10,000**	
on 10th June, 2012 of	£2,000*	
„ 10th June, 2012 of	£1,000*	
„ 10th June, 2012 of	£1,000*	
„ 10th June, 2012 of	£1,000*	
„ 10th June, 2012 of	£5,000†	
The Canada Life Assurance Company to secure the payment on 10th June, 2012 of	£1,000*	
Atlas Assurance Company, to secure the payment on 10th June, 2012 of	£1,000*	
Sun Life Assurance Society to secure the payment on 10th June, 2012 of	£1,000*†	
	£23,000	
**Premium paid out of Capital.		
*Premiums paid out of Life Subscriptions.		
†Premium paid out of Revenue.		
*†Premiums paid partly out of Life Subscriptions and partly out of Revenue.		
(The present surrender value of the above Policies is £2,450).		
Furniture, at Cost, *less* Depreciation		
As at 31st December, 1940	821 19 1	
Additions during year	116 3 3	
	938 2 4	
Less Depreciation at 5% per annum ...	46 18 1	
		891 4 3
Electric Fittings, Lamps and Lighting Apparatus, Bells, etc., throughout the City Premises, at cost *less* depreciation		
As at 31st December, 1940	65 13 6	
Less Depreciation at 5% per annum ...	3 5 8	
		62 7 10
Books in Library at cost		**302 2 0**
"Electricity Applied to Marine Engineering"		
Balance at 31st December, 1940	282 4 6	
Additional Expenses	30 16 8	
	313 1 2	
Less Sales during the year	271 5 1	
		41 16 1
Insurance, Rates, etc., in advance		**174 17 11**
		£35,502 5 4

REVENUE ACCOUNT, 1st January to 31st December, 1941.

Dr. *Cr.*

	£ s. d.	£ s. d.
To General Expenses		
Bank Charges	2 2 0	
Postage and Telegrams	217 0 6	
Engrossing Certificates	18 2 4	
Examination Expenses :—		
Students	32 15 8	
Associate Members and Graduates	78 7 7	
Lloyds Register Scholarships	31 14 1	
Awards Expenses	8 0 0	
Stationery and General Printing	124 3 4	
Staff Salaries and Clerical Assistance	1,974 2 1	
Chartered Accountants :— £ s. d.		
Additional for 1940 Audit 30 0 0		
1941 „ 100 0 0		
	130 0 0	
Telephone	108 5 11	
Affiliation Subscriptions and Contributions to Institutions for Research	87 5 6	
Sundries	239 15 8	
Staff Pension Insurance	189 13 11	
		3,241 8 7
„ **Rent, Rates, etc.**		
Ground Rent, Land Tax and Tithe	118 0 6	
Rates	363 12 6	
Gas and Electricity	15 16 3	
Water	38 1 5	
Inclusive Rental of High Wycombe Premises	170 1 0	
		705 11 8
„ **House Account**		
Wages of Caretaker and Cleaner	242 6 3	
Coal	53 2 1	
Sundries	30 0 4	
Window Cleaning	21 9 0	
Health and Unemployment Insurance	25 1 10	
		371 19 6
„ **Repairs**		89 6 0
„ **Air Raid Precautions**		213 13 9
„ **Insurance**		
General	30 1 3	
War Damage Contribution	131 5 0	
		161 6 3
„ **Transactions**		
Printing	1,250 7 7	
Abstracting	273 9 5	
Postage	469 10 3	
Wrappers and Addressing	186 19 2	
Advertisements	610 0 7	
		2,790 7 0
„ **Transactions (Bound Volumes)**		29 4 7
„ **Interest**		
Denny Gold Medal	10 0 0	
D. F. Robertson Award	4 0 0	
Sir Archibald Denny Award	5 0 0	
Stephen Legacy	2 10 0	
Murdoch Legacy	2 10 0	
		24 0 0
„ **Library and Reading Room Account**		38 1 11
„ **Depreciation**		
Furniture	46 18 1	
Electric Fittings	3 5 8	
		50 3 9
„ **Heat Engines Prizes**	23 16 4	
„ **Silver Medal (Joint Award)**	4 4 0	
„ **Extra First Class Certificate Medal**	3 7 6	
„ **Junior Silver Medal and Premium**	5 0 0	
„ ***H.M.S. Worcester* Prize**	2 2 0	
		38 9 10
		7,753 12 10
„ **Balance, being Excess of Income over Expenditure for the year, carried to Balance Sheet**		1,202 8 11
		£8,956 1 9

	£ s. d.	£ s. d.
By Subscriptions		
Members	5,723 19 5	
Associate Members	577 17 5	
Associates	526 9 7	
Graduates	79 0 10	
Students	33 16 6	
Companions	65 7 6	
	7,006 11 3	
Less Subscriptions Paid in Advance	£ s. d.	
Members	352 7 4	
Associate Members	21 17 9	
Associates	95 2 0	
Graduates	13 14 2	
Students	6 6 3	
Companions	2 2 0	
	491 9 6	
		6,515 1 9
„ **Entrance Fees**		178 15 0
„ **Advertisements**		
Transactions		1,458 9 0
„ **Rent Receivable**		
Basement		140 0 0
„ **Interest**		
3½% War Loan	182 0 0	
5% Conversion Loan	300 0 0	
3½% Conversion Loan	87 10 0	
3% National Defence Loan	30 0 0	
Bank of England Stock	24 0 0	
Australia 3¼% Registered Stock	8 2 6	
Bank Account	4 2 4	
Post Office Savings Bank Account	13 0 0	
		648 14 10
„ **Sundry Sales**		
Books	3 5 7	
Institute Badges	0 10 7	
		3 16 2
„ **Examination Fees**		
Associate Members	6 0 0	
Graduates	2 0 0	
Students	3 5 0	
		11 5 0
		£8,956 1 9

Institute Luncheon.

The Annual General Meeting at the Connaught Rooms, Great Queen Street, London, W.C.2, on Friday, March 13th, 1942, was followed by a Luncheon in the Grand Hall. A record gathering of 429 members and guests assembled for the occasion.

The President (The Rt. Hon. Lord Mottistone, P.C., C.B., C.M.G., D.S.O.) was in the chair, supported by a number of eminent guests including the Rt. Hon. The Lord Mayor, the Rt. Hon. Stanley M. Bruce, P.C., C.H., M.C. (High Commissioner for Australia), M. Erik A. Colban (the Minister for Norway), the Rt. Hon. A. V. Alexander, P.C., M.P. (First Lord of the Admiralty), the Rt. Hon. Lord Leathers (Minister of War Transport), Admiral of the Fleet the Earl of Cork and Orrery, G.C.B., G.C.V.O., Vice-Admiral Sir William J. Whitworth, K.C.B., D.S.O. (Second Sea Lord), the Rt. Hon. Lord Marchwood, K.C.V.O., J.P. (Master of the Honourable Company of Master Mariners), Sir Cyril Hurcomb, K.C.B., K.B.E. (Director-General, Ministry of War Transport), Alderman Sir George Broadbridge, Bt., K.C.V.O., M.P., Sir Amos L. Ayre, Kt., O.B.E. (Director of Merchant Shipbuilding and Repairs), Sir E. Julian Foley, C.B. (Secretary to the Ministry of War Transport) (Past-President), Alderman Sir Frank S. Alexander (Chairman, The Baltic Mercantile and Shipping Exchange), Eng. Vice-Admiral Sir George Preece, K.C.B. (Engineer-in-Chief of the Fleet), Sir Westcott S. Abell, K.B.E. (Past-President), Alderman and Sheriff Sir Howard Button, J.P., Mr. Sheriff R. de la Bere, M.P., Basil Sanderson, Esq. (Chairman, Shipping Federation, Ltd.), M. P. de Malglaive (Chief of the Mercantile Marine Department, Free French Naval Forces), Sir Stephen J. Pigott, J.P., D.Sc. (Past-President), A. T. Roach, Esq., LL.B. (Town Clerk, City of London), Captain T. A. Solberg, U.S.N. (American Naval Representative), Captain Morozovsky (Russian Naval Representative), Lieut.-Comd'r. A. de Booy (Netherland Naval Attaché), D. Bramah, Esq., C.B.E. (General Secretary, The Marine Engineers' Association, Ltd.) and G. V. Boys, Esq., M.A. (Secretary, Institution of Naval Architects). Also present as guests were Captain D. S. Tennant (Officers' [Merchant Navy] Federation, Ltd.) and representatives of the Merchant Navies of enemy-occupied countries, including Messrs. K. Kristensen (Norway), J. Mentink (Holland), Captain L. Droguet (France), U. Krzyzanowski (Poland), A. J. Janssens (Belgium) and V. A. Skakke (Denmark).

Invitations to the Luncheon were also accepted by His Excellency the Belgian Ambassador (Baron E. de Cartier de Marchienne), Philip Runciman, Esq. (President, The Chamber of Shipping of the United Kingdom), and Captain W. H. Coombs, all of whom at the last moment were unable to attend.

After the Loyal Toasts had been proposed by the President and duly honoured, **The President** said: Before we commence our proceedings, I have a telegram from the Belgian Ambassador, a very good friend, not only of this country but especially of our Institute. He has attended here very often—Baron de Cartier. He would have been sitting here by your side, my Lord Mayor, but he telegraphed to me, "So very sorry unable to be present at The Institute of Marine Engineers luncheon to-day owing to a bronchial chill. Pray accept very best greetings and good wishes. Cartier, Belgian Ambassador".

I am sure you would wish me—and in fact I will do so—to send him a message wishing him a speedy recovery and that we Marine Engineers most cordially hope his gallant country will soon once more be free.

The Rt. Hon. A. V. Alexander, P.C., M.P. (First Lord of the Admiralty) proposing the toast of the Rt. Hon. the Lord Mayor and the Corporation of London, said: My Lord President, Your Excellency, my lords and gentlemen, it is a very great privilege to be asked by your Institute to move the toast of the Rt. Hon. the Lord Mayor and Corporation of London. I come from no mean city myself, Bristol, with many of the characteristics and very similar pages of history and traditions to the City of London, but, Sir, when we speak of the toast of the Rt. Hon. Lord Mayor of London and Corporation, we know we speak of the finest city, with the greatest history and with the greatest record in defence of freedom of any city of the world. It is always a good thing, for example, for any parliamentarian, however prominent, however humble, to be reasonably informed of the independence of spirit in the past of the City of London, and even though it allowed Parliament to go a long time without re-election they still cannot ignore the City of London.

When one remembers what the citizens and burgesses of London have done for liberty of spirit, for civic freedom and for freedom of conscience, I think one is justified in saying that it is the greatest city on that account in the world.

But we are gathered together to-day at this hospitable board provided by the The Institute of Marine Engineers, about whose history and general merits I am going to say nothing really because Admiral of the Fleet the Earl of Cork and Orrery has that important toast and he will be dealing with it later, but the connection between the Marine Engineers, through the great Mercantile Service to which they belong, and the City of London is very important. What a great port is our Port of London! I wonder how many of us have thought, for example, what a tremendous monetary asset the Thames itself has been to the nation as we stand on its banks and see the ebb and flow of its tides, carrying day by day hundreds of thousands of tons of goods, and how the Port with connections all over the world has grown up on that wonderful estuary. I think that the City of London may say to the Mercantile Marine, "We are glad and proud of the facilities we offer you", but I think the Mercantile Marine and Marine Engineers might well say to the City of London, "If it were not for us you would not have been able to make quite so much out of it", and that the City of London is grateful to the Marine Engineers I am certain.

I am not going to touch upon Lord Cork's speech but I will say this for the Admiralty that we are immensely grateful to the Marine Engineers; both we and the Ministry of War Transport are always admiring what they are doing, and I am particularly grateful for the great services done in the engine rooms of the Fleet by Marine Engineers in the Royal Naval Reserve.

May I say before I sit down, that we are passing through one of those very difficult periods in our naval history at sea with the Fleet. We are giving hard blows but we are receiving hard blows. These are the days in which the Fleet will know who really are its friends at home and who will stand by it and give it their confidence in the tremendously difficult task that it has to perform.

I am quite sure that amongst those friends none could be found more loyal to us than the Rt. Hon. Lord Mayor this year. He has already in this less than half period of his year of office endeared himself to all concerned and given a lead to the City and to the country in organizing our war effort, which is worthy of the admiration of every one of us. I hope as we rise to drink this toast of the Lord Mayor and the Corporation of London we shall think of its history and its defence of freedom and pay just tribute to that great citizen who now presides over its operations.

The Rt. Hon. the Lord Mayor of London, responding to the toast, said: My Lord President, Your Excellency, my lords and gentlemen, it is particularly happy that the City toast is proposed to-day by the First Lord of the Admiralty and the City, I am sure, will not fail to appreciate the compliment, not only of this fact but that the toast has been proposed in such happy terms in spite of the catastrophic days in which we live, and I am sure, not only in this room but practically throughout the Empire, we all admire the marvellous work which the First Lord is doing and has been doing. I am sure everyone must deprecate the petty criticism which is given at times in certain places. I think I do not exaggerate when I say that the City of London was the birthplace of the British Navy in past centuries. It was below our City that the ships were built. It was from the City that they were named and from London's old river that they sailed to challenge and to defeat the King's enemies.

Here to-day the Sheriffs and myself are the guests of The Institute of Marine Engineers. It is to the members of this Institute and those of other professions that we owe our British Navy as we know it in our day.

No one can over-estimate the importance of the work which has been done by the Marine Engineers and which is being done in these days not only for the Navy but also for the Merchant Service, our very life-line of existence.

In collaboration with the Chancellor of the Exchequer and the First Sea Lord, the City will shortly lead the whole of Greater London and Middlesex in a special effort for War Savings during our Warships Week which begins next Friday. For weeks we have been scheming and planning so that all shall play their part. Our target is no mean one, as the First Lord has said—£125 millions. I do not know what the City will raise towards this great sum but I do know that in the history of the City it has ever taken a lead in all just causes and in all wars of justice and freedom, and so on this occasion I feel certain that the City will again prove worthy of her traditions and place in the present world upheaval. I salute the First Lord, not only as Lord Mayor but as one of his admirals of the Port, and I thank him and all those present for the kindly appreciation with which he has proposed the toast, and the

very generous way in which you, my friends, have acknowledged it.

Admiral of the Fleet the Earl of Cork and Orrery, G.C.B., G.C.V.O., proposing the toast of The Institute of Marine Engineers, said: My Lord President, Your Excellency, my Lord Mayor, my lords and gentlemen, I feel greatly honoured to be here to-day as the guest of The Institute of Marine Engineers and I feel still more honoured by being in the position to address this very distinguished assembly. It is always a satisfactory toast to propose because however you may bungle your address you know it will be received with acclamation. (Laughter).

I notice in this assembly that there are representatives of the seafarers of all the Allied nations and we meet at a time when the seafarers are being put to as great a test as it is possible to conceive. I think we meet this crisis with more confidence than would be possible in any other gathering in London, because everybody here knows something of the men concerned, and everybody here has full confidence that in the end it will be the sailors of the Allies that will bring us to victory. (Applause).

The seamen are giving a demonstration of determined courage that will rank in the annals of sea heroism with the greatest performances that have ever been given in that line because seamen realise that sea communcations between Allied nations must be kept open, and who here doubt that they will be?

As a naval officer of some standing, I have long and fully recognized what those of us who have to direct and handle ships owe to those who design and control the propelling machinery. Well do I realize how helpless we would be, and how futile our efforts if we could not always depend upon the loyal co-operation of those who are below.

If I may, I want to strike for one moment a personal note. It interests me to learn that in the year 1889 this Institute was founded and began its useful career because that was a great year for me, it being the year in which I joined my first sea-going ship. And that allows me to get an even closer recognition than I should otherwise get of the strides in marine engineering in the intervening years, largely due to this Institute. Indeed, I go back further, for that ship had been completed in 1869 and it was among her rectangular Scotch boilers and horizontal engines that I got my first introduction to practical marine engineering. It is almost unnecessary for me to say how important a position The Institute of Marine Engineers has occupied in a nation such as our own, which is dependent on the sea, and not only dependent upon the sea but one of a group of nations and one of the component parts of a great Empire which grow close to each other in spirit and ideals but are yet separated by thousands of miles of salt water.

Moreover, The Institute has another task, in addition to the scientific development of marine propulsion. By its Royal Charter it is charged with looking after and raising the status of all marine engineers and I understand that plans are already in being in pursuance of that object in the post-war period. The other day I was talking to an admiral who has spent the last two years in convoy work and he had been nearly all over the world. I asked him if he had seen any signs of slackness in our dockyards and shipyards as they had come into the picture. He said, "No, on the contrary, I feel sometimes that the ships are turned round too fast and in consequence of marine engineers not having the time to overhaul the machinery you find ships are losing speed and having to go slow or stop in order to make good some defect". I said, "What happens to those ships?" He said, "They come on all right. They soon catch up to the convoy. The engineers of the Marine Service are marvellous in getting the better of their difficulties". The Navy is doing exactly the same accomplishment. I can only assume it is common in the whole profession of the Marine Engineer.

The number of senior naval officers of naval craft who are now connected with The Institute is proof of the close collaboration between the two Services, the Royal Navy and the Merchant Navy. Marine Engineers have, in addition to that bond of the sea, the wonderful link which a major interest in common always creates, which leads, as it does, to a free interchange of ideas and experiences which must be of the greatest value professionally and a tremendous help to all concerned. Every advance in marine engineering benefits shipping as a whole for it allows of development in other directions.

May I give you one example of this, of what may be done in the development of marine engineering. Compelled by those cursed naval treaties to refrain from building capital ships in the years just before this war, we should have been grievously handicapped in the opening stages had it not been for the development of marine engineering which allowed us to re-engine and re-boiler some of our older vessels, thereby increasing their speed and allowing a saving in weight and space which permitted those ships being re-armoured and additions being made to their armaments, thereby putting them on an equal footing to some modern vessels possessed by our enemies. Certainly this was a case in which it was well worth putting new wine into old bottles. The officers primarily responsible for that work were Lord Chatfield, who was First Sea Lord and took responsibility for laying up those ships for many months to allow the work to be done—that was one of the many services he rendered to the Navy and the country during his term of office for which we should be grateful—and the other who actually carried out the work was that distinguished Admiral, Sir Harold Brown, formerly a Vice-President of this Institute, who was Engineer-in-Chief of the Fleet and proved the versatility of a marine engineer by subsequently becoming a member of the Army Council! Then the officer who carried that work to completion is your guest to-day, the present Engineer-in-Chief, Sir George Preece. During the past few weeks I have been, with many others, visiting various places and addressing audiences in connection with Warship Weeks. On those occasions and, indeed, for several years now, I have taken great trouble to impress upon my hearers that the Royal Navy and the Merchant Navy cannot be considered apart. (Hear, hear). They are the two parts of one great whole. They are complementary one to the other and together they form that Sea Power of Britain, that Sea Power by which we stand or fall.

It has been said that every cloud has a silver lining and I am quite sure that the black cloud now hanging over us has a silver lining. But if it only does this, impresses upon the people of this country as well as the people of our sister dominions across the seas that the well-being and the efficiency of the Merchant Marine is a great national concern, a principal national concern, then all the sacrifices at sea will not have been in vain.

"Plans for the post-war period cannot be left until the end of the war" said a leading member of the Government recently, but what is the good of plans for the economic future of this country unless the Mercantile Marine and great shipping industry is given a very prominent place in the deliberations? True, we cannot tell what the position will be when victory arrives, but we are in a position now to say what we would like in the present moment of adversity and take that as a gauge of what we want in the years that will intervene between this war and the next.

It must have been noted from his inaugural speech that the new President of the Chamber of Shipping, Mr. Philip Runciman, is one of those who believe in thinking ahead and he has been doing so. He fixes as the minimum requirements of the Merchant Navy a fleet of 20 million tons gross; that he describes as our most essential need for the future without which no military preparations will be of any avail. There is nobody here who will quarrel with that figure of 20 million tons gross, which entails the creation of a mighty fleet to ensure that it is composed of vessels which are both suitable to the needs of commerce and the needs of the nation in times of adversity, and it will call for the greatest talents of the naval architects and marine engineers. Marine engineers will no doubt be called upon to wrestle with that problem of how to get from those ships greater speed without at the same time encroaching on the cargo space or increasing the size of the hull so as to render the vessel an uneconomic proposition.

One thing must be made quite clear and certain. We must never again have ships traversing the ocean that after having taken the proper precautions can only make a speed of seven knots towards their destination. We have no right to expose the gallant men who man those ships and the valuable cargoes they carry which are indispensable to the people of this country, to the increased risks this low speed involves. We have got to have an efficient and dependable merchant fleet in every respect. The greatest essential to the efficiency of any fleet is to have a well-trained and contented personnel serving under conditions which allow them to make a career of their profession, sure of a continuity of employment and recompense if, through no fault of the individual, he is temporarily unemployed. Never again ought we to allow the officers and men of the Merchant Navy to be treated as casual labourers to be signed on or off. Officers and men should be able to look forward to an assured competence in old age and that competence should be guaranteed by the nation to which they are quite indispensable. I cannot believe it is beyond the wit of man to find a compromise between the needs of commerce and the needs of the nation. The nation will want things in those ships required for its commercial undertakings and if the nation wants them because they are necessary for its life then it must keep up a first-class Merchant Marine and then must be prepared to put its hand in its pocket and contribute to the cost.

It is because we recognize the magnitude and complexity of this question that Lord Marchwood, and others who support him, ask

for a full enquiry as a preliminary in planning for the post-war period, and The Institute of Marine Engineers is one of the influential bodies connected with the Merchant Marine which supported that request, and a letter was published in *The Times* in which they gave their reasons, and they were very good reasons, the well-being of their members and the well-being of the Merchant Navy of Britain.

I am not going to engage in anything controversial. Being convinced that such an enquiry is essential, I naturally formed the highest opinion of the wisdom of your Council and the broad-minded view it took of the future, and there has now occurred another great decision which adds to my opinion of their wisdom and to which I now pass—I refer to the choice of President for the coming year.

Lord Mottistone is a man who has devoted his life to the public service and in the course of his career he has manifested ability in very many directions, as a statesman and politician, as an administrator and a soldier, and a sailor who has made his mark, and the quality which he has so consistently shown in various occupations has been one of straightforward courage. It has certainly been proved not only in the council chamber and in the political arena but also in a physical way on the battlefield in South Africa where he won the D.S.O., and again in the last war when he won the respect and admiration of the Canadian Cavalry he commanded, and I expect that those Canadian cavalrymen are just as difficult critics to please as you could imagine. I should say in this room full of seamen that he wears the gold medal for saving life at sea, and this he did as coxswain of a lifeboat and not one of the high-powered magnificent vessels which advanced marine engineers have put round our coasts now, but one which had to do its work with oars and sail.

Now, as Chairman of the National Savings Committee which has come to occupy such a prominent place in our national life and as Lord Lieutenant of Hampshire he continues to serve his King and country with marked success. I cannot conceive that you could have elected a better successor to the distinguished gentleman who has just laid down the position of President of this Institute.

I now, gentlemen, have the pleasure of asking you, first of all, to wish The Institute of Marine Engineers a very prosperous year under its new President and secondly to drink the toast of The Institute of Marine Engineers, coupled with the name of Lord Mottistone.

The President said: My Lord Mayor, your Excellency, High Commissioner, Sheriffs and my colleagues, I cannot think why you ever elected me President. I will only say this: I brought Lord Cork along to make a speech which, apart from his references to myself, was full of wisdom and sound sense and we thank him for it. I suppose it really had something to do with the fact that a little group of us—the Australians say "a little bunch", I think, Mr. High Commissioner—in the House of Lords have been trying to raise the status of the Mercantile Marine and notably the Marine Engineers. Lord Cork, who was a leader of that band with Lord Marchwood by his side, who is the Master of the Honourable Company of Master Mariners, to whom you made reference, and my humble self, have tried to bring this issue forward.

Marine Engineers know how so to contrive things that, as one of the largest ship owners in the world, the late Sir Richard Holt, assured me, no ship takes the water without being obsolete. (Laughter).

You have got here as one of your principal guests a man of the moment, Lord Leathers, the Minister of War Transport, under whose wise guidance this vast problem, daily becoming more complex, as Lord Leathers would be the first to tell you, the movement of ships is organized by which alone we live.

I happen to know we have in Lord Leathers a man who has the welfare of the engineering and the executive branch of the Mercantile Marine at heart and a man of the most remarkable quality and who, I happen to know, is himself pushing forward plans which will make a different thing altogether of the life of the sailor, whether he be of the engineering or of the technical branch. I know that is so and in advance I can thank him for it. He has told me he is not going to rest until he has put right many of the things which too long had been wrong. (Cheers).

I told you that Sir Richard Holt said that no ship takes the water until she is obsolete and another great ship owner whom I knew well, Lord Inchcape, said the same, and another Past-President of yours, a very intimate friend and great a man, Lord Craigmyle, then the Hon. Alexander Shaw, said the same at one of your banquets, but you know the language they used about you I could not possibly disclose in the presence of the Lord Mayor! This increase in knowledge is going on even now so that things are becoming obsolete. Watertube boilers, as we know, are becoming obsolete. All that is the plan by which we in this little island live. We could not survive as a great country—quite apart from the war menace on which I will close—unless these brilliant brains were devoted to increasing the efficiency of our Mercantile Fleet. I hope that you will go on and as the days go on and the war comes to an end you will realize how much these things are the arbiters of our country's fate.

It is you who make our ships fully efficient which alone enable an island fortress—that is what we are—to be the mistress of the seas and the glory of the whole world, as I claim the British Empire is.

Of course, that is the side of devising new plans, better machinery, better stream-lining, and so forth.

Just before the war I travelled on an Italian ship. I had to see Mussolini on behalf of His Majesty's Government and as I was going away after a very brief interview, he said, "Your quickest way will be to go on one of my ships". I did. It was a wonderful ship and was called the *Conte di Savoia,* and whether Mr. Alexander and his minions have sunk her yet, I do not know, but if he has, with her has gone all the newest gadgets ever invented by mortal man, amongst other things the most gigantic gyro. I daresay you must have heard of this. These strange things happen in Fascist countries. The plan was that the *Conte di Savoia* should be so big and have a gyro so immense that under no circumstances should she make any Italian or other person seasick. I had an interview with the captain and the chief engineer. Finally the captain said, "Sir, amongst the many things on this ship you will see during the all too brief voyage of eighteen hours you will be with us, is the gyro and it is the biggest in the world, and but for that this would not be the most perfect ship in the world as it is. I will now hand you over to the chief engineer who will take you to see this and other things".

When I got into the ship with the engineer he suddenly began to talk to me in perfect English, or rather Scottish, and as we approached the presence of this gyro on this ship, he said, "If I had my way, my lord, I would throw the ——— thing overboard". (Laughter). "Of course there is not a word of truth in what the captain said. If it does not function it is a waste of enormous space in a very awkward part of the vessel I have to propel, and if it does function in a big sea it will tear the bottom out of the ship". That just goes to show that Scottish engineers can be found in unexpected places.

Before I conclude, for it is not a custom for presidents to make long speeches on these occasions, I would like to add this: it is not only the people who design but it is, of course, those who use, and many of them they are first one and then the other, and I am told by your admirable secretary, Mr. Curling, that about half your members are sea-going at the moment, sea-going engineers, and our good wishes go to those men now ploughing the sea and those of us who have influence in Parliament vow to-day that we will do all we can to make it realized how great a part they play in our war effort as well as our peace effort. There is one in this room who a short time ago took part with others in what, I think, must be the most enjoyable experience of the war, the ramming of a submarine. I said, "Did you hit it hard?" and he said, "Yes, it was a hell of a bump". I said, "Were there any survivors?" He said, "Yes, the captain and most of the crew". I said, "Did she sink quick?" He said, "Too quick for us to get all we wanted, but what a thrill!" I said, "That was a great thrill for you on the upper part of your ship". It was something between a battleship and a torpedo boat, and I was so impressed that I said it must have been a great moment for him. "Ah", he said, "it was wonderful. It was wonderful and it was a thrill". I said, "What about the engineers driving it at top speed?" "Ah", he said, "they had none of the fun but all the anxiety".

Of course, it is true that compared with the days of Nelson there is this difference that the marine engineer officer and man has a more anxious time and has less of the thrill of battle than in the days gone by. Then all honour to them and shall we not do our utmost to see fair play for them? You, Lord Leathers, I know if you were there, would do that. The Institute will help and will be glad to do so. Lord Cork as Admiral of the Fleet never ceases to try, and plans the most dangerous thing in the most efficient way. That is why he hides himself in plain clothes. You will be glad that we have brought him here to-day and I, for my part as your President, must thank you most sincerely for having elected me to this high office and assure you that I will not fail by every means in my power to serve the great sea Service which I have loved so well all my life, and be worthy of the confidence you have placed in me.

Sir Westcott S. Abell, K.B.E. (Past President) proposing the toast of the guests, said: My Lord Mayor, Mr. President, your Excellency, my lords and gentlemen, we have to thank our guests who have come to be with us to-day, to spare a moment from tasks which strain every nerve and sinew twenty-four hours a day for all the years so long as this mental disease affects the brains of the pirates.

The Rt. Hon. the Lord Mayor honours us as Admiral of the Port of London and because we are, in all but name, a City Company.

Our old friend the Belgian Ambassador was prevented from coming, but the Minister for Norway is very welcome because he has many common bonds with us.

The First Lord rules the King's Navee and Lord Leathers has in his hands the transport of the seven seas—some transport! Our friends of all the nations striving for the right are here too—Captain Solberg of the U.S. Navy, Captain Morozovsky, U.S.S.R., as well as our friends from Holland, Norway, Free France, the Dominions, and it is a great pleasure to see and have with us here our old friend Sir Stanley Bruce.

Now the engineers of the sea—I was going to say the toilers—are the men in whose hands lies the future of the Merchant Navy and I beg to remind you that its traditions go back for over a thousand years. There is reason to feel that their presence here shows that they are more than grateful for the work our fellows have done for their country, feats of service beyond words.

John Masefield in his book, "In the Mill", makes a quotation of a great poet, "Cannot the mind that made the engine make a nobler life than this?" And I thought, surely, with all the talents of our guests we ought to be able to make a nobler life for our Merchant Navy of the future, for those fellows of ours want to carry on as their fathers have always done for many centuries, and they see no reason to halt because of pirates whom they have fought for centuries.

I am glad that Admiral Whitworth is to reply since he deals with the personnel of the Royal Navy and the time is here when men matter most. I only know of him as a sailor but there is always something about a sailor which appeals—you know what sailors are!

And I ask him, because he deals with men, whether he cannot make sure that all who serve us so nobly at sea, whether Royal or Merchant Navy, shall have the same privileges, which is not the case to-day.

It seems to me that where beer and baccy are free to some they should be free to all who are all for one and one for all.

I give you the toast of our guests and couple it with the name of Admiral Sir William Whitworth.

Admiral Sir William J. Whitworth, K.C.B., D.S.O., responding to the toast, said: My Lord Mayor, your Excellency, my lords and gentlemen, a simple sailor often finds himself in a predicament and mine at this moment is that I have to reply on behalf of a very long list of very distinguished guests and I feel that I am not up to the work and, therefore, I crave the indulgence of my fellow guests in what I have to say.

I am told that when we reply for the guests it is an opportunity for one to make a speech if one so wishes. I should like to allay any apprehension on that score by saying I do not wish to make a speech.

I should like to mention one or two among our guests. The first on the list I know personally is Mr. Alexander, the First Lord of the Admiralty, under whose leadership the Board of the Admiralty are a happy ship working loyally and co-operating in the great tasks they have to perform.

The next two on the list that I know personally are Lord Leathers and Sir Cyril Hurcomb, both of the Ministry of War Transport, with whom the Admiralty is working in close co-operation in the great task of defending our trade across the seas.

The next is Admiral the Earl of Cork, with whom I served 35 years ago as a young Lt.-Commander in, perhaps, the happiest ship I ever served in and he impressed me and inspired me with great enthusiasm and zeal for the Navy and the country and I will just tell you a story I recollect after all those years to show you the sort of man he is.

In 1907 the Channel Fleet was anchored off the Nore under the command of Lord Charles Beresford. We were having dinner. Suddenly a messenger came down and said, "A German ship is approaching the Fleet". Out of the blue came the *Hohenzollern* flying the Royal Standard of the Kaiser. He steamed straight through the Fleet. We thought he was a great nuisance. We all ran on deck from our dinner and manned the ship and cheered. We then went down to dinner and I remember, as if it was yesterday, Lord Cork saying, "The Kaiser is going to inspect his Fleet and if only we could have got under way to-night and fallen upon the German Fleet in the morning and utterly destroyed it there would be peace in Europe for fifty years".

Then there is Sir George Preece, the Engineer-in-Chief of the Fleet, who has done most valuable work for the Navy for a very long period of office. It is no secret when I say that he is shortly going to give up that high office and we at the Admiralty very much regret it.

I should like to thank Sir Westcott Abell for the way he has proposed the toast of the guests. He mentioned the Merchant Navy having the same privileges as the men in the Royal Navy, and if it were in my power to do so I would see to it when I got back to the Admiralty this afternoon by a stroke of the pen, because we in the Navy appreciate the great work of the Merchant Navy. We have this great bond of the sea which unites us, whether in the fishing fleets or the Merchant Navy, we have this great bond of comradeship and when we meet we have the common interest and start enjoying ourselves and it is a very real thing and we rather pity the landsman who has not this experience, this love of the sea. It is a great bond of comradeship which binds us together. This urge to go to sea amongst all those who follow the sea, an urge which nothing will prevent, an urge which takes men to sea in both peace and war, to brave the dangers of the sea, is something that will never be daunted. It is a national characteristic of seamen, and it is one of the most precious heritages of our nation and one which must be fostered throughout the ages.

I will close on behalf of the guests by thanking you all for the way in which the toast of the guests was received and by thanking The Institute of Marine Engineers for the hospitality which we have so very much enjoyed. (Applause).

The President: That concludes our proceedings, gentlemen, except for one toast which I am going to submit to you. We meet under quite extraordinary circumstances. We have here the representatives of the Naval and Merchant Fleets of so many powers that I am going to ask you to rise and drink their health. Some are free; most are bond, and we drink their health praying that those that are bond will soon be free and I will name those that are represented here. They are the United States—free; Russia—still free; Poland—soon free; the Netherlands, Denmark, Belgium, Free France, and last but not least amongst the greatest of the Merchant Fleets, Norway. Now in the presence of the Norwegian Minister I will ask you to rise and drink to the Allied Nations and their fleets, hoping that they will all soon be free.

The Minister for Norway: I am only going to say this, that every one of the Allied sailors now working for the Allies does so of his own free will and with the set purpose of winning this war. (Loud applause).

The proceedings then concluded.

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Simpson, Percival Henry	Member	July	111
Smith, James Alexander	*Associate	August	132
Stevenson, Robert Alexander	Member	February	12
Stewart, John Allan	*Member	July	111
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Wilson, Robert James	Associate	April	50
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