

Transactions of the
INSTITUTE of MARINE ENGINEERS

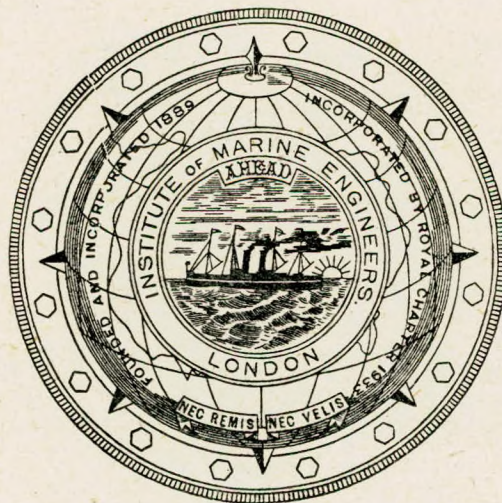
FOUNDED 1889.

INCORPORATED BY ROYAL CHARTER, 1933.

To Advance the Science and Practice of Marine Engineering.

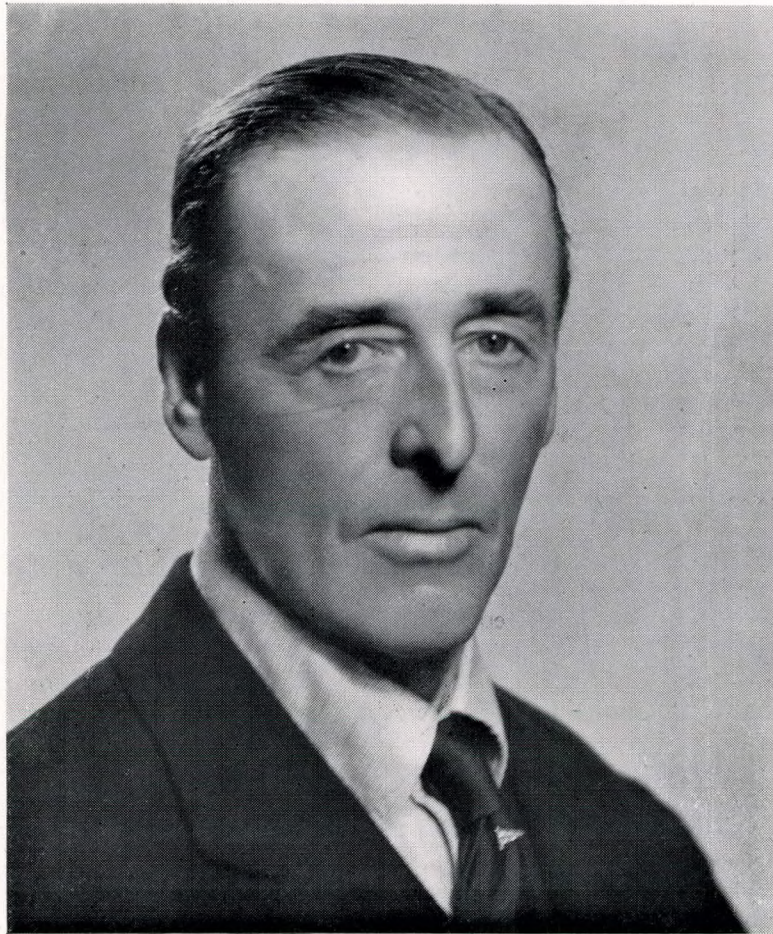
Patron: HIS MAJESTY THE KING

Vol. LIV.



Session 1942-43

President: The RT. HON. LORD MOTTISTONE, P.C., C.B., C.M.G., D.S.O.



The President.

THE RT. HON. LORD MOTTISTONE, P.C., C.B., C.M.G., D.S.O.

THE RT. HON. LORD MOTTISTONE, P.C., C.B., C.M.G., D.S.O.

Lord Mottistone was born in 1868, the youngest son of Sir Charles Seely, and was educated at Harrow and Trinity College, Cambridge. He was called to the Bar, Inner Temple, in 1897. Lord Mottistone commenced the military part of his distinguished career in South Africa, 1900-1, when he served with the Imperial Yeomanry. In this campaign he was mentioned in despatches, was awarded the Queen's medal (5 clasps) and the D.S.O. In the 1914-18 war he was mentioned in despatches five times and was awarded the distinctions of C.B. and C.M.G.

Lord Mottistone's public career began with his election as Liberal M.P. for the Isle of Wight in 1900. His outstanding ability having marked him out for office, he became Under-Secretary for the Colonies in 1908 and Under-Secretary of State for War in 1911. In the following year he became Secretary of State for War, a post which he relinquished in 1914. In 1918 he resumed service in the Government as Parliamentary Under-Secretary, Ministry of Munitions and Deputy Minister of Munitions, while in 1919 he served as Under-Secretary of State for Air and President of the Air Council. During his long Parliamentary career as a Liberal politician he represented the Isle of Wight from 1900-6, the Abercromby Division of Liverpool from 1906-10, the Ilkeston Division of Derby from 1910-22, and again the Isle of Wight from December, 1923 to October, 1924.

Promoted to the rank of Major-General in 1918, Lord Mottistone holds the ranks of Colonel and Major-General T.F. Reserve and is an Honorary Air Commodore. He was the recipient of a gold medal from the French Government in 1891 for saving life at sea. His versatility is exemplified by his authorship of six important books during the past twelve years.

THE INSTITUTE OF MARINE ENGINEERS

Founded 1889.

Incorporated by Royal Charter 1933.

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 - 1906-18 A. H. MATHER.
 - 1919- ALFRED ROBERTSON, C.C.

*Deceased.

THE INSTITUTE OF MARINE ENGINEERS

Founded 1889.

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PATRON: HIS MAJESTY THE KING.

SESSION 1942-43.

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† Retire in 1945.

‡ Retire in 1943.

* Retire in 1944.

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Minutes of Proceedings at the Fifty-Fourth Annual General Meeting, March 12th, 1943.

CHAIRMAN : THE PRESIDENT.

The fifty-fourth Annual General Meeting of The Institute was held at the Connaught Rooms, Great Queen Street, London, W.C.2, on Friday, 12th March, 1943, at 11.30 a.m.

The President, the Rt. Hon. Lord Mottistone, P.C., C.B., C.M.G., D.S.O., was in the Chair, and was supported by Eng'r. Vice-Admiral Sir George Preece, K.C.B. (President-elect), Mr. H. J. Wheadon (Chairman of Council), Mr. J. Calderwood (Vice-Chairman of Council), Mr. A. Robertson, C.C. (Honorary Treasurer), and Mr. B. C. Curling (Secretary).

The President, opening the proceedings, requested the Scrutineers (Mr. G. B. Plows and Mr. C. J. Hampshire, acting for Mr. F. A. Hunter who was unavoidably absent through illness), to retire for the purpose of examining the voting papers and of reporting to him in due course. The Scrutineers thereupon retired.

The President next requested the Secretary to read the Annual Report (see page viii).

The Honorary Treasurer then presented the Annual Financial Statement and his own report on the financial affairs of The Institute as follows:—

"I will read the main paragraphs of Messrs. West & Drake, our *Chartered Accountants' Report, before making a reference to some of the items in the Revenue Account and Balance Sheet (* see page xxi).

If you will examine the Revenue Account I will draw your attention to a few of the figures therein.

Examination Expenses this year total £124 11s. 6d. against a total expenditure last year of £142 17s. 4d. Examination Fees received this year are only £6 as compared with £11 5s. 0d. in the previous year.

Staff Salaries (£2,103 12s. 6d.) are up this year due to the fact that war bonus additions have been granted to all the members of the staff.

Chartered Accountants' Fees cover one year only, whereas in the previous year's accounts they covered one year plus an increase granted to them for the previous year.

The Telephone Account has very materially increased from £108 5s. 11d. to £155 19s. 4d.

Subscriptions and contributions to other bodies for research are £81 9s. 6d. against £87 5s. 6d. in the previous year and they cover mainly the following:—

	£	s.	d.
British Electrical and Allied Industries Research Association	15	0	0
William Froude Research Laboratory	21	0	0
Parliamentary and Scientific Committee	10	10	0
British Non-Ferrous Metals Research Association	25	0	0

Repairs this year have been negligible, as there has been no object in spending money on the small portion of the premises now actually occupied by The Institute.

Air Raid Precautions expenses are only £8 9s. 3d. this year against an expenditure last year of £213 13s. 9d.

Under Insurance, the war damage figure of £62 14s. 6d. relates practically entirely to the contents of our premises at the Minorities and at High Wycombe, only £1 9s. 6d. being paid by way of war damage contribution on the premises, the balance of the war damage contribution being met by our ground landlords, the City Corporation.

Under the heading of "Depreciation" you will note an item of £62 7s. 11d. on account of electrical fittings. This is the value of the electrical fittings as they appeared in our Balance Sheet last year and our Accountants suggested that as these had become so small in value they should be written off entirely.

A new item appears, and has been referred to by our Accountants, viz. £1,000 placed to reserve for repair and redecoration of premises. This provision has been deemed advisable by the Council as a contingency against heavy expenditure which we are bound to have to meet when the premises are re-occupied, apart altogether from what we shall be able to recover on account of war damage due to bombing.

Under the heading of "General Expenses" you will notice the amount paid out for Staff Pensions insurance is £209 5s. 4d. as against £189 13s. 11d. Owing to alterations which have been made in the Staff Pensions scheme for our employees, this item will henceforward be very considerably increased and will actually amount to slightly over £400 during the current year, plus an item of approximately £180 which has just been paid on account of premiums back-dated to last year, so that for 1943 only this figure will be about £600. Details of this scheme are still under consideration by the Finance and House Committee and will be further reported on to the Council in the immediate future.

On the income side of the Accounts you will notice that receipts from subscriptions are down from £6,515 1s. 9d. last year to £6,027 1s. 9d. in spite of the fact that our total Membership for this year is practically the same as last year.

Entrance Fees have gone up from £178 15s. to £237 15s.

Income from advertisements in the TRANSACTIONS has increased from £1,458 9s. to £1,576 16s. 4d., and we have to thank all those friends who have so faithfully stood by us during the war period in keeping their advertisements going.

Under "Rents Receivable" you will notice for the first time an income of £128 2s. 10d. for part of the Ground and First Floors. This is receivable on account of part of the premises having been requisitioned for Government purposes.

The nett result is a balance of £589 10s., the difference between income and expenditure, which I think the Members will agree is quite satisfactory in view of the amount that has been placed to Premises Reserve, although this would have been considerably less had the increase for Staff Pensions insurance been charged in the accounts for the year under review.

Turning to the Balance Sheet, the main item of interest and which is particularly satisfactory from the point of view of the Guild of Benevolence, is the profit derived from sales of "The Running and Maintenance of Marine Machinery" handbook and "Electricity Applied to Marine Engineering". As I indicated in my report last year, I felt sure the Council would agree to apply any profit made from our second publication, "Electricity Applied to Marine Engineering", for the benefit of the Guild of Benevolence. This they subsequently agreed to do. We shall therefore be able, at our next Council Meeting, to hand over a total of £262 18s. 5d. to the Capital Account of the Guild of Benevolence, which I think you will agree is a very handsome contribution.

Our Investments show an increase of £1,834, all invested in 3 per cent. Saving Bonds, although at the time £834 was invested we actually purchased £1,000 of 3 per cent. Savings Bonds 1955/65, £166 being credited to the W. W. Marriner Prize Account. The whole of this amount, viz., £166, was paid to The Institute by Lieut. G. T. Marriner as a tribute to the memory of his father.

The total of our Capital Account is now increased by the addition of the £589 10s. balance on revenue to a grand total of £33,066 4s. 2d.

In the ordinary course of events the Council consider the investment of any monies at their first meeting after the election of the new Council, but as this is "Wings for Victory" Week in London I trust the Council will not think it wrong on my part to suggest that you give me authority at this meeting to invest £1,000 in 3 per cent. Savings Bonds 1960 purchasable at par. It would be the means of The Institute adding their small contribution to the efforts being made in London to reach the grand total of £150 millions. I may say I have investigated the position and as Treasurer can recommend the adoption of this procedure without our finances being handicapped.

The Guild of Benevolence Accounts have not yet been presented for consideration by the Committee of the Guild of Benevolence, but I usually make reference to them at this meeting.

The Secretary has already referred to the fact that we have received contributions from the King George's Fund for Sailors' War Fund amounting to £400 during the year and £250 during the previous year.

To enable the Guild to continue to receive assistance from this source, which is undoubtedly a very valuable one and which the

Guild of Benevolence naturally very much appreciates, it is necessary for our accounts to be submitted in a special way which the administrators of King George's Fund prescribe. Owing to this necessity I think the General Committee will, when they meet, agree to print the accounts this year in both forms, *i.e.* in the form as hitherto presented by us and also in the form now prescribed to conform to the requirements of the King George's Fund authorities. This will give Members an opportunity of comparing the different style of accounting and our Accountants have prepared the accounts for printing accordingly.

It is very satisfactory to note that the Capital Account of the Guild of Benevolence has been increased during the past year from £22,329 1s. 10d. to £23,869 6s. 5d., a total increase on Capital Account of £1,540 4s. 7d. This is undoubtedly due to the excellent support we have received in donations from many quarters, one donor having presented £500, another £250, two 100 guineas each and one £100. There were 23 new life members.

The amount paid out in relief during the past year totals £940 8s. 6d. as compared with £841 12s. 9d. the previous year.

I am glad also to report that Ground Rents on all properties which we hold have been paid in full and will, as far as we can see, continue to be so paid, in spite of bomb damage having been sustained in several cases, particularly to the Ryde property in the Isle of Wight.

I think I have covered most of the points which arise in connection with our Accounts. There may be others upon which Members desire information; if so I shall do my best to answer them".

Mr. E. A. Garratt, O.B.E. (Member), moving the adoption of the Report and Accounts, said that all Members would be pleased with the clear account which had been given of the activities and financial transactions of The Institute during the past year. The excellence of the Report and the sound financial position indicated by the Accounts left very little on which he could attempt criticism. The one significant adverse feature to his mind was the slight decrease in the number of Associate Members. Had it anything to do with the entrance examination? He wondered whether or not under war conditions the examination was asking too much of candidates.

Otherwise he had nothing but praise for the work which the Report and Accounts revealed, and he had the greatest pleasure in proposing their adoption and the purchase of £1,000 3 per cent. Savings Bonds 1960 as recommended by the Honorary Treasurer.

Mr. R. G. Kincaid (Member), seconding Mr. Garratt's proposal, said that in associating himself with Mr. Garratt's remarks he would like to say how much all the Members appreciated the work of the Council in the difficult conditions of the fourth year of the war. It was a difficult task and it was gratifying to find the affairs of The Institute in such able hands.

It would be noted with pleasure that His Majesty the King had been graciously pleased to confer military honours on marine engineers.

It was terrible to see in the Report the large number of Members who had been lost by enemy action during the past year, and he was sure that it was the will of all present that their warmest sympathy be extended to the relatives.

With regard to the Accounts, that £589 credit balance remained on the Revenue Account after putting aside £1,000 for repairs to the premises after the war, was very gratifying indeed.

He had great pleasure in seconding the adoption of the Report and Accounts and the proposal that £1,000 3 per cent. Savings Bonds 1960 be purchased during London's "Wings for Victory" week.

The President then formally put the proposal that the Report and Accounts be adopted and that £1,000 3 per cent. Savings Bonds 1960 be purchased as recommended by the Honorary Treasurer. The proposal was carried unanimously.

The President next announced that the only award to be made on the present occasion was the W. W. Marriner Prize, a cheque for £5, to Mr. L. Sykes. Mr. Sykes was unable to be present to receive the award in person, and it would be forwarded to him immediately after the meeting.

The President then announced the report of the Scutineers, the result of the voting being as follows:—

President:—Engineer Vice-Admiral Sir George Preece, K.C.B.
Vice-Presidents:—

London: J. M. Dewar, S. F. Dorey, D.Sc., Wh.Ex., R. S. Kennedy, A. H. Mather, A. R. T. Woods.

Cardiff: A. W. Loveridge, B.Sc.
Swansea: Major E. W. B. Kidby, O.B.E., R.E.(ret.).
Newcastle: W. Hamilton.
Manchester: A. P. Traill, Wh.Sc.
Aberdeen: W. P. Hunter.
Belfast: W. E. McConnell.
Royal Navy: Engineer Rear-Admiral J. Kingcome.
*Sydney: A. J. McCowan.
Melbourne: R. Stark.

Los Angeles Harbour: F. G. Archbold.

Honorary Treasurer:—Alfred Robertson, C.C.

Members of Council:—R. G. Kincaid, W. L. Nelson, G.

Ormiston, J. C. Lowrie, E. A. Garratt, O.B.E.

Associate Member of Council:—L. J. Fulford.

*Elected by the Council to fill a vacancy which had occurred since the last Annual General Meeting and now confirmed.

Mr. H. J. Wheadon (Chairman of Council) said: It is my privilege as Chairman of Council for the past year to propose a vote of thanks to our retiring President for the services he has rendered during his year of Office. I do so with more than ordinary pleasure, being a son of the County of which Lord Mottistone has for many years been Lord Lieutenant.

Lord Mottistone's presidential year will be remembered in years to come as outstanding for the prominent part which, under his leadership, The Institute has taken in placing the marine engineer and marine engineering, and the vital rôle they play in the nation's affairs, before the public eye—this was perhaps to be expected inasmuch as Lord Mottistone has for many years championed the cause of seamen, both in and out of Parliament.

It was the Council's unanimous wish that he should continue as our President for a further term, and it was with sincere regret that we learned that he felt unable to accept. Our disappointment, however, is tempered by the fact that past Presidents of this Institute are something much more to us than a memory or a name inscribed on a roll of honour; we regard them as active Members and we welcome their advice and assistance at all times. In giving expression to our gratitude to Lord Mottistone, therefore, I couple with it the hope that he will be long spared to represent The Institute and the marine engineer particularly in the quarter in which he is most qualified to make his voice heard, *viz.*, His Majesty's House of Parliament.

I have much pleasure, Gentlemen, in moving that a hearty vote of thanks be accorded to Lord Mottistone for his services, not only to this Institute, but to the gallant officers and men of the Royal and Merchant Navies, and I call upon Mr. Calderwood to second the motion.

Mr. J. Calderwood, M.Sc. (Vice-Chairman of Council) said: It gives me great pleasure to second the vote of thanks to our retiring President. I find that some Members regard our Presidents as figureheads, but such members would gain a better appreciation of the work involved in the presidential office by a careful study of the Annual Report, from which at least a part of the work done by our President can be learned. The Report, however, does not show the very considerable amount of work which is done behind the scenes, and the demand upon a President's time for advice of every kind.

Lord Mottistone has not only carried out the normal presidential duties during the past year, but quite exceptional demands had been made upon his services in other ways, and we have every reason to be profoundly grateful that he has spent so much time in our interests.

Lord Mottistone's presidency would also be remembered for his most interesting and valuable Presidential Address.

On being put to the meeting by **Mr. Wheadon**, the vote of thanks was carried unanimously with acclamation.

The President, in reply, said: It was with great reluctance that I resigned my office as President and I am most grateful for the appreciative references to my services. It is a fact that I found several directions in which the position I hold as a Member of the upper House of Parliament enabled me to render service of real value to The Institute. My close friendship with Lord Cork and two other admirals was, I think, of some service to your cause. If that be so, I am indeed glad. I had many interviews apart from what appeared in the newspapers. I had many interviews with Lord Leathers, and I would say that I found him to be a man of keen sympathy who is especially aware of the debt we owe to your profession. In him marine engineers have a sincere friend. You will remember that in a letter to me he stated that he had given the closest consideration to our claims.

On the particular subject of awards, I am glad that His Majesty has graciously approved that officers and men of the Merchant Navy shall be eligible for the same awards as those given to the Royal Navy. It was an immense pleasure to me to see that almost immediately afterwards the D.S.O.—an Order to which I am privileged to belong—was awarded to a marine engineer in the Merchant Navy. I congratulate him and those others who have since received decorations.

I began by saying how reluctant I was to resign my office. Only the pressure of my other occupations has moved me to do so. In my capacity as Lord Lieutenant I have many duties to which I must attend. Also as chairman of the National War Savings Committee it will be realized that I have a great deal to do. And just at the time my period of service as your President was due to come to an end, there has become available, in Sir George Preece, a man who has just completed his outstanding service in the Royal Navy. For your having pressed me to retain the Presidency I am grateful, but the matters I have just mentioned made me deem my retirement wise in the interests of The Institute.

It is now my pleasing duty to congratulate your new President. I have been informed that the lengthy and very impressive record of Sir George which appears in "Who's Who" gives but a meagre part of his distinguished career, and I have no doubt that as my exceptionally able successor in this office he will carry forward the good work of The Institute.

In saying farewell to you as President, may I say that I warmly accept the invitation to be of service to you as a Past-President.

I think in conclusion I must make reference to this fact. In "The Times" to-day there is a statement that British ships have carried 2½ million people since the war began. That has meant marine engineers in all these ships, and of course you have had losses as in other services. It is perhaps not inappropriate that I should make reference to the loss Mr. Curling has suffered in the death of his gallant son in action as a fighter pilot in the Royal Air Force. As in the case of that great Service to which Mr. Curling's son belonged, so in the case of marine engineers. I enquired and was told that not once in this 3½ years of war on the sea has a British ship failed to start to time for lack of a marine engineer due to fear of enemy action. I salute the profession and I am proud to have been closely associated with it for this short time.

Engineer Vice-Admiral Sir George Preece, K.C.B., at this point in the proceedings took the Chair at the invitation of Lord Mottistone.

Sir George thanked Lord Mottistone and the meeting for the warm welcome on his election and his appreciation of the honour of holding the Presidential office. He added: I hope to be allowed to help in the Council's deliberations, which I understand from rumour are just as sprightly as those in which our retiring President takes part in the House of Lords. This is a great and gratifying thing.

It seems clear that our financial position is sound and I am sure that with Mr. Robertson to look after our financial welfare we are safe.

Lord Mottistone can feel greatly satisfied that during his year of office the fall in membership of The Institute has been arrested. In taking over after Lord Mottistone's successful year of office, I am conscious of the high standard to which I must aspire and a slight sense of worry that the next Report will reveal my shortcomings. However, I shall do my best.

The system of training and examinations of engineers everywhere is under review, and the arguments for and against the various proposals made are complex and difficult. Possibly a more stable position will be reached and much greater uniformity achieved, which would result in many improvements.

In my proper place I hope that I shall be able to do some things to help you. I do know something of marine engineers, and I am at your service.

On the proposal of **Mr. J. A. Rhynas** a hearty vote of thanks was accorded to the Scrutineers, Mr. G. B. Plows and Mr. C. J. Hampshire (in place of Mr. F. A. Hunter, absent through illness) and to the Honorary Auditors, Mr. W. D. Heck and Mr. H. J. Vose. On Mr. Rhynas' further proposal, Mr. G. B. Plows and Mr. F. A. Hunter were appointed Scrutineers and Mr. W. D. Heck and Mr. A. F. C. Timpson (vice Mr. H. J. Vose, resigned) Honorary Auditors for 1943.

Mr. T. A. Crompton (Member) said: In proposing a vote of thanks to the Council, I have the advantage over a few immediate past proposers of this vote, in that I have personal knowledge of, I think, all Members of Council, many of whom have been my own

colleagues on the Council. Apart, therefore, from the results summed up in their Report which you have just heard, I know their value and the interest each one takes in the various activities of The Institute.

The Report shows what they have accomplished during the year, and I am sure that all Members will be glad to hear and approve the steps taken in connection with the training, grading and conditions of service of the engineering personnel of the Merchant Navy. Their conclusions, through the good offices of our immediate Past-President, Lord Mottistone, are now in the hands of the Ministry of War Transport, who, we all hope, will use them to the ultimate advantage of the marine engineer and the engineering industry generally.

The Council are also to be congratulated on their other activities during the past year. Many papers have been presented and discussed, some of them very widely, being of interest to many people outside marine engineering circles. The thanks of the Members are also due for the excellent Presidential Address given by Lord Mottistone to our Members and friends at a meeting in the hall of the Institution of Mechanical Engineers, kindly lent for the occasion. This was followed by the greatly appreciated Parsons Memorial Lecture given by our Vice-President Dr. Dorey.

As a whole, the Council have worked well together, have produced good results, and thoroughly deserve our unstinted thanks.

In particular I would like to mention one or two Members of Council individually. First, our Chairman, Mr. Wheadon, for the most excellent way in which he has presided over the Council and various meetings of Committees. To-day he completes his first term of office as a Member of Council and, according to our constitution, he is not eligible to seek re-election for a further twelve months. This rule may have its advantages, but I think many will agree that the rule could with safety and benefit to The Institute be amended. Secondly, our Vice-Chairman, Mr. Calderwood, for his interest and the work he has done for The Institute over many years past, and for his very able support of his Chairman.

Then there is our old friend, Mr. Robertson, Honorary Treasurer for twenty-four years, still going strong, and just re-elected for the 25th time! The financial position of The Institute is very satisfactory and reflects the confidence and esteem of all our Members in the Treasurer.

Mr. Curling, too, has done excellent service and our thanks are due to him and his staff, more especially so, working as they are in these difficult times.

Lastly, Gentlemen, I would mention the Chairman of the Committee on the Training, Grading and Conditions of Service of Engineers in the Merchant Navy, Vice-President Mr. Robert Rainie. He has earned the thanks of us all, and the special thanks of the Committee themselves, for the masterly manner in which he presided over their many meetings.

Gentlemen, it is my great pleasure to propose a very hearty vote of thanks to the Council and Officers of The Institute.

Mr. A. Cross (Member) said: It is with the greatest pleasure that I second Mr. Crompton's proposal. I had hoped that he would leave me something to say, but he has covered the ground so thoroughly that there is nothing left for me to do other than warmly to endorse his remarks, particularly his friendly references to various Members of the Council which we all liked so much. I am well aware how hard the Council have to work and how much they deserve our appreciation.

The vote of thanks was carried unanimously amid applause.

Mr. H. J. Wheadon (Chairman of Council) in reply, said: It is now my duty, the last duty I have to perform as your Chairman of Council, to express the thanks of the Council, Members of Committees, Secretary and Staff for the appreciation of their work during the past twelve months, so kindly expressed by Mr. Crompton and Mr. Cross and so generously accorded by the meeting.

It has been the Council's aim as the year progressed to take full advantage of improving conditions to return, as far as possible, towards full and normal activities. The first step was the decision to hold Council meetings bi-monthly. My personal thanks are due to my colleagues who, despite the difficulties of travelling after dark, attended the Council meetings with commendable regularity, and I would gratefully acknowledge the advice and loyal support I have received from Members of Council and Vice-Presidents.

It has been said that the measure of success of a learned institution is firstly its membership, secondly the state of its finances, and thirdly the standard of and interest evoked by its written papers. To these I would add a fourth criterion—the zeal with which it pursues the objects of its formation.

The Annual Report has told you that our Membership position is good considering the losses we have sadly sustained amongst our sea-going members, and has shown you that our financial position is excellent. There is little I need say in regard to the third criterion—the interest aroused by written papers—except perhaps to say that the public interest in one of our most recent papers was such as to cause me no little embarrassment.

Nothing has impressed me more during my period of service on the Council than the zeal displayed by its members without exception in pursuing matters relating to the status of The Institute and its Members, as laid down as a prime duty under the terms of our Charter, and in this respect the year now drawing to its con-

clusion is, as Mr. Crompton has stated, outstanding for the publication of the Council's plan for the future training, grading and conditions of service of engineers in the Merchant Navy.

Measured by whichever yardstick you choose, I think we can justifiably claim that The Institute has more than held its own during the year.

On behalf of the Council, the Members of Committees, the Secretary and Staff, I express our thanks to the Meeting for the appreciation of our work during the Session, and on behalf of the retiring Members of Council I would take the opportunity to wish our newly-elected President, Sir George Preece, and the Council every success in the year ahead.

Annual Report of the Council.

The past year has been one of special interest by reason of various activities of great importance to the marine engineering profession, referred to later in this report.

It is with special appreciation that the Council acknowledges the influential and unsparing service which Lord Mottistone has rendered during his term of office. It was the unanimous wish of the Council that he should accept re-nomination for the ensuing year, and it was with much regret that it was learned that Lord

McKenzie, Mr. George William Buckwell and Mr. A. C. Heron, all Vice-Presidents who rendered valuable service to The Institute, and Mr. George Sloggett and Mr. Adam Girdwood who, though never office bearers, were two of our oldest Members.

Council.

At the meeting of the Council held on the 30th March, Mr. H. J. Wheadon was elected

Chairman of Council and Mr. J. Calderwood, M.Sc., Vice-Chairman for the 1942-43 Session. No changes in the personnel of the Council occurred during the year.

The Council wish to record their appreciation of the valuable assistance rendered during their three years of office by the five retiring Members of Council, Messrs. H. A. Garnett, D. Goodsir, Eng. Capt. A. W. Richardson, H. Scott and H. J. Wheadon.

Resumption of Meetings for Reading and Discussion of Papers.

Early in the Session consideration was given to the desirability of resuming the monthly lectures and discussions. The attendance at a test meeting in November, at which Mr. W. S. Burn's paper on "Cargo Ships and Propelling Machinery Adapted to War Conditions" was presented, justified the arrangement of a full programme of meetings for the second half of the Session.

Vice-Presidents.

Royal Navy.—Eng. Rear-Admiral J. Kingcome has been elected to fill the vacancy caused by the resignation of Eng. Vice-Admiral F. R. G. Turner on his appointment as Engineer-in-Chief of the Fleet.

Sydney.—Mr. A. J. McCowan has been elected to succeed the late Mr. A. C. Heron.

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

Additional Representatives on Outside Bodies.

Mr. H. J. Wheadon has been elected as the Institute's representative on the recently formed B.S.I. Committee on Boiler Water Tests.

Papers.

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

Issue.	Subject.	Author.
January.	Steam Tugs, Past, Present and Future.	G. T. Shoosmith, M.A. (Member).
February.	Metal Spraying by the Wire Process.	W. E. Ballard, A.I.C., G. F. Fairbairn and F. S. Pilkington, M.Inst.W.
March.	Discussion: The Conversion of Blast-Injection Diesel Engines to Airless-Injection.	C. C. Pounder (Member).
April.	Molecular Aspects of Heat Transference.	R. A. Collacott, B.Sc. (Associate).
May.	Care of Cargo at Sea—II. Interim Report on Dehumidification in Ships.	O. D. Colvin and Werner H. E. Hahne.
June.	Pumping Arrangements.	J. R. Beveridge, B.Sc. (Member).

Grade.	1st Jan., 1942.	Transfers		Elected.	Died.	Resigned.	Lapsed.	Total 31st Dec., 1942.
		From	To					
Past Presidents ...	14			1				15
Honorary Members	2							2
Members ...	3,023		23	69	54	18	53	2,990
Companions ...	46				1	1	2	42
Associate Members	390	8	3	5	5	1	13	371
Associates...	488	16	2	79	8	1	8	536
Graduates ...	93	4	1	4	1		4	89
Students ...	56	1		7	1			61
Totals ...	4,112	29	29	165	70	21	80	4,106

Mottistone's many other onerous activities precluded his accepting the invitation.

Resumption of Council Meetings.

At the meeting of the Council held on the 30th March, 1942, it was decided that the Emergency Committee exercising the powers of the Council should be dissolved and that the business of the Council should be conducted thenceforward at bi-monthly meetings of the full Council.

Various standing Committees, including the House, Finance and Papers Committees and the Membership Sub-Committee have been active during the year, and the Council wishes gratefully to acknowledge the valuable help received from the Chairmen of other Committees.

Membership.

From the accompanying membership table and chart, showing the changes during the year, it will be seen that the losses are almost balanced by the new elections. The arrest of the slight fall in total membership which has occurred during each of the war years is gratifying, a pleasing feature of the table being the marked fall in the number of resignations. Less satisfactory is the decline in the Associate Member grade, due possibly to the temporary discontinuation of the Extra-First Class Engineers Examinations, also to war conditions preventing sea-going engineers (including many Associates) from taking the Institute's examination.

Deaths.

The losses by death, recorded in the obituary notices at the end of this report, again include a regrettably large number of war casualties. These records bear further testimony to the undaunted valour of those engineers who endure the dangers of war at sea. The sympathy of the Council and Members has been extended to the relatives of all the deceased. Outstanding among the losses sustained during the year were those of two past-Chairmen of Council in the persons of Mr. J. Hamilton Gibson, O.B.E., M.Eng. and Mr. W. E. Farenden, each of whom will be long remembered by his colleagues on the Council and his many friends amongst the Membership. Other deeply regretted losses include Mr. James George Hawthorn, a past-Member of Council who was prominently associated with the founding of The Institute, Mr. John Jack

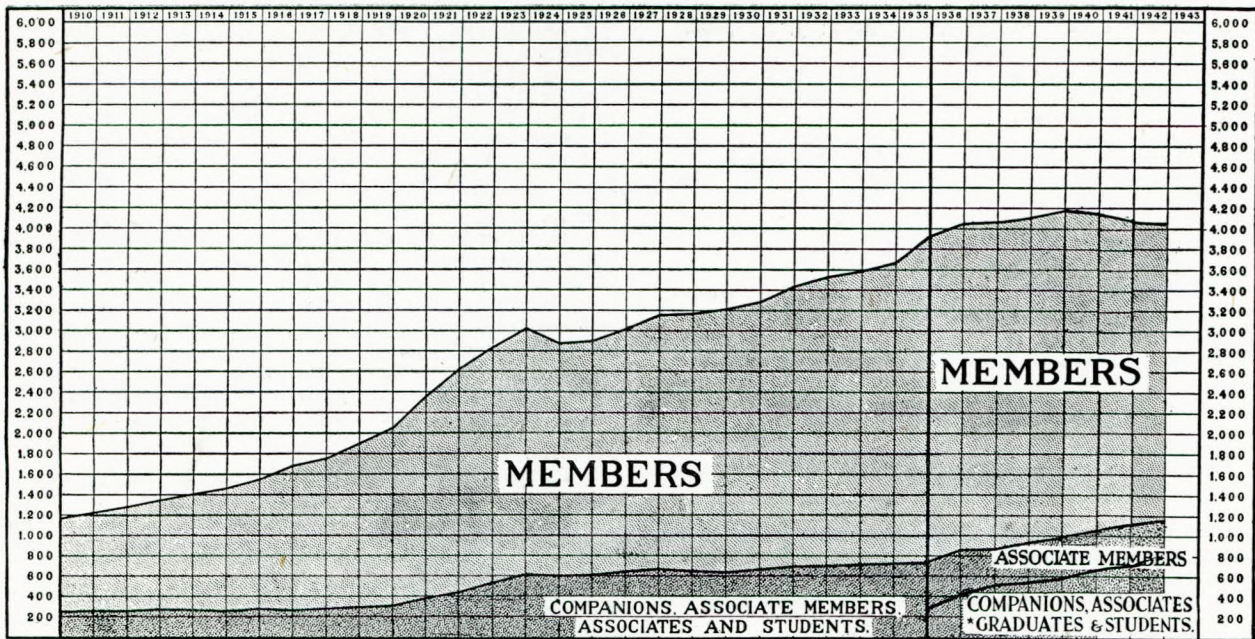


Chart of Membership.

Issue.	Subject.	Author.
July.	The Running and Maintenance of Marine Direct Current Electrical Machinery.	C. Wallace Saunders (Member).
August	Marine Steam Condenser Design and Practice.	S. A. Smith, M.Sc. (Member).
September.	Recent Welded Repairs of Marine Machinery.	C. W. Brett, M.Inst.W.
October.	The President's Address.	Rt. Hon. Lord Mottistone, P.C., C.B., C.M.G., D.S.O.
"	The Parsons Memorial Lecture, 1942. "Sir Charles Parsons and Mechanical Gearing".	S. F. Dorey, D.Sc., Wh.Ex. (Vice-President).
November.	Cargo Ships and Propelling Machinery Adapted to War Conditions.	W. S. Burn, M.Sc. (Member of Council)
December.	Operation of Diesel Machinery in Cross-Channel Vessels.	J. W. Coulthard (Member).

Institute Medal Awards.

No awards of these medals have been made in respect of 1942, for various reasons. In the case of the Denny Gold Medal, it happened that each of the authors of the three papers which would normally have been considered for the award had previously gained this Medal, and were therefore debarred from a second award.

Only two papers were considered for The Institute Silver Medal, and on the report and recommendation of the adjudicators no award was made on this occasion.

No paper having been contributed by a junior member during the session, there was no competition for the Junior Silver Medal and Premium.

The Presidential Address.

In view of the fact that accommodation for meetings at the Institute is at present confined to the Library, it was arranged that Lord Mottistone's Presidential Address should be delivered on the occasion of the Parsons Memorial Lecture at the Institution of Mechanical Engineers on 16th September.

The joint arrangement proved very successful, and a particularly happy event took place immediately after the meeting when a small, informal dinner was held at St. Ermin's Restaurant, at which the Chairman and Members of Council entertained Lord Mottistone, the Presidents of several kindred institutions, and a few other eminent guests.

The Parsons Memorial Lecture.

The Institute's turn to provide the Annual Lecture in memory of the late Sir Charles Parsons fell due in 1942. By invitation

of the Council the Lecture was prepared by Dr. S. F. Dorey and delivered by him at a special meeting, held as above-mentioned on the 16th September, at the Institution of Mechanical Engineers, by the kindness of the Council of that Institution. At the conclusion of the Lecture, and following a vote of thanks to the author, proposed by Admiral of the Fleet Lord Chatfield, seconded by Sir Richard Allen, the Parsons Memorial Medal was presented to Dr. Dorey by Professor A. C. G. Egerton, F.R.S., on behalf of the Royal Society.

Associate Membership Examination.

J. F. Brown, D. C. Chapman and T. Lea have successfully completed the examination. One candidate entered for Section A, but failed in Heat Engines.

Graduateship Examination.

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

Studentship—Common Preliminary Examination.

Two candidates entered for the April Examination; one failed and the other was referred in the subject of Mechanics. In the October Examination he sat this subject again, together with another candidate, but both failed. Seven candidates have gained admission on exemption from the examination.

Lloyd's Register Scholarship.

Six candidates entered for the 1942 Scholarship, which was won by H. Kay of Sunderland Technical College, an apprentice to the North Eastern Marine Engineering Co., Ltd. He is continuing his studies at Sunderland Technical College for the B.Sc.(Eng.) degree.

The tenure of the previous Scholarship, won by J. Adam, is still postponed due to war conditions, as is also that won by B. Hildrew in 1940.

J. Sloan, the holder of the 1939 Scholarship, is continuing his degree course at Queen's University, Belfast, and has enrolled for the B.Sc. Final Part I course in Mechanical Engineering.

R. Magill, the 1938 winner, has obtained a B.Sc. pass degree in Mechanical Engineering at Queen's University, Belfast. He has now taken up a junior seagoing appointment with the Port Line.

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:—

- West Ham Municipal College: R. W. Lewis.
- City of Liverpool Technical College: R. J. Ashbury.
- West Hartlepool Technical College: J. R. Frank.
- Portsmouth Municipal College: T. C. G. Diaper.
- Marine School of South Shields: J. E. Waugh.

Robert Gordon's Technical College, Aberdeen: J. Simpson.
Dundee Technical College: A. S. Bodden.
Constantine Technical College, Middlesbrough: E. S. Allen.
College of Technology, Belfast: W. F. K. Kerr.
Falmouth Technical School: J. W. Lowry.
Hull Municipal Technical College: L. Horncastle.
The Royal Technical College, Glasgow: J. D. Scoular.
University College, Southampton: R. W. H. Day.
The Technical College, Plymouth: C. E. Northam.
Sunderland Technical College: J. W. Oswald.
Watt Memorial School, Greenock: A. B. Robb.
Birkenhead Technical College: T. R. Capper.
L.C.C. School of Engineering and Navigation: H. F. Burton.
Woolwich Polytechnic: W. J. Gildon.
Regent Street Polytechnic: L. S. Denyer.
Cardiff Technical College: J. S. Andrews.
Rutherford Technical College, Newcastle-on-Tyne: M. Milne.
Swansea Technical College: R. L. Johns.

H.M.S. "Worcester".

The Institute prize for 1942, for excellence in Marine Engineering, was won by Cadet R. D. Johnston.

National Certificates in Mechanical Engineering with Special Reference to Marine Engineering.

132 Ordinary Certificates, 30 Higher Certificates, 21 Ordinary Diplomas and five Higher Diplomas have been endorsed by our President during the year.

Essay Competitions.

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

The Herbert Akroyd Stuart Award.

Members are reminded that the closing date for entries for the 1941-43 award is 30th April, 1943.

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

As the examinations for Extra-First Class Certificates remained suspended during 1942, no award of the Institute medal can be made for this year.

Junior Section.

The activities of the Junior Section have remained in suspension during the year.

Transactions.

The authors who have sacrificed their restricted leisure in these times of intense preoccupation to provide papers of a notably high standard for presentation at the meetings and for publication in the *TRANSACTIONS*, deserve the warmest praise for their contributions to the advancement of their profession.

It is satisfactory to record that a full programme of papers has been arranged for several months ahead. Nevertheless, the Committee would welcome offers of further papers or suggestions in this connection.

During the year two further measures—the adoption of a paper of lighter weight and the restriction of the advertisements to an average of 15 pages per issue—have contributed to a slight increase in the volume of editorial matter published, which now equals approximately three-quarters of that issued in a pre-war year. While the small type now in use increases the strain of reading the *TRANSACTIONS*, the Committee hope that Members generally will share their view that this is more than offset by the advantages.

The Abstracts Section of the *TRANSACTIONS* has attracted no criticism but rather numerous expressions of approval which justify the assumption that this feature enjoys undiminished popularity. The Institution of Naval Architects has again contributed a small measure of financial assistance in the preparation of the Abstracts.

An application for a permit to send copies of the *TRANSACTIONS* to Members of the Institute who are prisoners-of-war has been refused, but further representations are being made by the Council.

Publication of Books.

The continuing demand for copies of the second edition of "The Running and Maintenance of Marine Machinery" Handbook and the Institute's other publication "Electricity Applied to Marine Engineering", by W. Laws, M.Sc., will necessitate the publication of new issues of these books at an early date, for which arrangements are now being made.

The Council has granted permission to the Marine Department of the Polish Ministry of Industry and Commerce to make a Polish translation of "The Running and Maintenance of Marine Machinery"

for the use of young Polish marine engineer refugees in this country.

The series of articles by Mr. R. S. Hogg on "Naval Architecture and Ship Construction", published recently in the *TRANSACTIONS* to meet the special requirements of the junior members, has been reprinted in book form and is now on sale. The price is 7s. 6d., and copies may be obtained from the Institute or from Messrs. James Munro & Co., Ltd., Glasgow.

Library.

The re-cataloguing of the books in the Library has been carried out recently, and it is hoped that copies of the new Catalogue will be on sale by the end of March.

The Council tenders thanks to the members who have reviewed the numerous new technical books which have been added to the Library during 1942.

A large number of books have been issued on loan to members in this country during the year, while many books have been selected and purchased on request for overseas members.

Premises.

In the early part of the year the London premises, with the exception of the Library, the Basement, and the Caretaker's flat, were requisitioned by one of the Service departments. The Library is being used, in addition to its normal function, for the Institute's Ordinary Meetings.

The staff work has again been carried on at the emergency address at High Wycombe.

Staff.

Miss J. E. Miller, shorthand typist, resigned her appointment at the end of December and her place has been temporarily filled by Mrs. I. E. Redhead.

R. Cane, junior clerk, is still on active service in the Royal Army Pay Corps; J. Willis, assistant to the Caretaker, continues his service in the Merchant Navy.

Staff Pensions.

The Council has had under review the financial provisions which have so far been made against prospective pension requirements in accordance with the Rules laid down when the Staff Pension Scheme was established 12 years ago.

The matter has been thoroughly investigated by the Joint Finance and House Committee and their report and recommendations are at present under consideration by the Council.

Guild of Benevolence.

In addition to grants totalling £400 from King George's Fund for Sailors War Fund, donations amounting to about £3,000 have been received by the Guild during the year. Particulars of these donations and of the year's work of the Guild will be presented at the Annual General Meeting of the Guild in April.

The Executive Committee again regret that the subscribing membership, which is the mainstay of the Guild, has not increased during the past year.

National Service—Central Register.

The new Mechanical Engineering Committee—with which the Institute continues to co-operate—representing all categories of professional engineers other than the Civil and Electrical groups, has been in operation during the year.

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

From the Presidential Address published in the October issue of the *TRANSACTIONS*, Members will have learned of the conspicuous part taken by our President, Lord Mottistone, in the introduction to official circles of the considered views of the Council on the subject of the future training, grading and conditions of service of engineers of the Merchant Navy, to which reference was made in the last Annual Report.

The detailed proposals were published in the December issue of the *TRANSACTIONS*, and the Council are glad to have Lord Leathers' assurances that these proposals will be very carefully considered when post-war reconstruction is discussed. It is known that other bodies concerned with the post-war condition of the Merchant Navy personnel are also considering The Institute's proposals.

The W. W. Marriner Memorial Prize.

The Council have been pleased to accept an offer by the family of the late Mr. W. W. Marriner to found an annual award, in memory of their father, to be known as the W. W. Marriner

Memorial Prize. The award will take the form of an annual prize, value £5, for the best paper in Marine Engineering Knowledge submitted during the year by candidates in the Ministry of War Transport Examination for the Second-Class Certificate of Competency.

The Chief Examiner of Engineers has kindly consented to adjudicate this award, and on his recommendation the prize for 1942 has been awarded to Mr. Louis Sykes, of North Shields.

Awards for Gallantry to the Personnel of the Merchant Navy.

All Members of the Institute are no doubt aware of the persistence with which our President, Lord Mottistone, with the assistance of other interested peers, has brought considerable pressure to bear on the Government to secure equality of treatment for the Merchant Navy with the Royal Navy in the matter of awards for gallantry.

The Council learned with great satisfaction of the Governmental assurances which Lord Mottistone obtained on this point and of the subsequent award of a number of military decorations to personnel of the Merchant Navy.

British Council.

In response to an appeal from the British Council, the Institute has cordially offered the limited facilities at present at its disposal for the benefit of Empire and Allied Nationals now in this country.

Also at the request of the British Council, the Institute is sponsoring the preparation of a booklet on British marine engineering developments for circulation in Allied and neutral countries.

National Expenditure: Sub-Committee on Production and Supply (B).

At the invitation of the above-named Sub-Committee the Institute prepared and submitted a Memorandum giving replies to a questionnaire on present shipbuilding and marine engineering practice, and in particular on the possibility of increasing the output of shipbuilding yards in this country. The Institute's co-operation has been appreciatively acknowledged by the Sub-Committee.

H. J. WHEADON,
Chairman of Council.
B. C. CURLING,
Secretary.

Reports of Representatives on the Various Outside Bodies.

Owing to war conditions a number of outside bodies and committees on which the Institute is represented have been inactive during the year. These nil reports have not been included.

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

Although the rules concerning meetings to be held have been abandoned by consent, a meeting was held on 9th April, 1942, at which Dr. A. P. M. Fleming of the Institution of Electrical Engineers was nominated Chairman for Session 1942/43. Routine business was transacted.

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

One meeting of the Board was held during 1942 (on 26th June), when the Report for 1941-1942 and the Statement of Accounts for the half-year to the 31st December, 1941 were adopted. Dr. Lea relinquished the chairmanship of the Board and it was agreed that Professor Inglis be invited to accept this office. Mr. Roper was appointed as Registrar in place of Mr. Roberts, retired. The following is a report on the Examination:—

Whole Examination:

	Entered.	Passed.	Referred.	Failed.
October, 1941 ...	97	49	18	30
April, 1942 ...	93	46	34	13

One or two subjects:

	Entered.	Passed.	Referred.	Failed.
October, 1941 ...	36	31	—	5
April, 1942 ...	49	43	3	3

Total Candidates:

October, 1941 ...	153
April, 1942 ...	153

Additions have been made to the list of exemptions to the Common Preliminary Examinations, covering the cases of (a) Scottish Certificates; (b) Dockyard School 4 Years' Course; and (c) R.A.F. Higher Education Test.

A modification was made to School Certificate exemption, to read as follows:—

“provided a pass is obtained in at least five subjects, including passes with credit in at least three subjects. If a

credit has not been obtained in Mathematics and/or a Science subject the holder may be allowed to qualify in the deficient subject, or subjects, in the Common Preliminary Examinations”.

The meeting usually held in November did not take place in 1942. The dates of the 1943 examinations were fixed as 6th, 7th, 8th and 9th April, and 5th, 6th, 7th and 8th October. The Committee of Moderators was elected for 1942-43 and it was agreed that the Examiners for 1942 be requested to act for 1943.

Corrosion Research Committee of the British Non-Ferrous Metals Research Association.

Representative: Mr. James M. Dewar.

As was indicated in the report of the work during the year 1941, the anticipated preoccupation of the investigators with service problems has resulted in considerable curtailment of the research programme. Nevertheless, a meeting of the Research Sub-Committee which is directing the work on condenser tube corrosion was held in September, 1942, and a report dealing with the effect of organic sulphur compounds in sea water on the corrosion of condenser tube alloys was discussed. This report showed how small traces of such compounds could markedly affect the corrosion behaviour of various alloys used in the construction of condenser tubes and indicated how the deposition of a film of organic sulphur compounds could affect the film potential of a material in sea water.

A programme of future work was agreed which included continuation of the work on organic sulphur compounds, further work on the resistance of high iron cupro-nickel alloys to corrosion by sea water and the effect of stimulation of corrosion in sea water by electrolytic action by different metals in contact. Some tests are also being made on the tendency of various brasses used in marine engineering, including those containing the beta phase, to a form of corrosion known as dezincification with the object, if possible, of elucidating the mechanism of this form of attack and preventing it or minimizing its effects.

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

The investigation of the R.41 Sub-Committee of the Welding Research Council into the behaviour of welded and riveted beams and parts of ships' structures, which is being carried out on the large hydraulic testing machine at Glengarnock, has been resumed and is progressing at a satisfactory rate. The work on hand at the time of the Second Interim Report has been completed and considerable progress made with the second series of tests specified by the Committee. This includes testing of bulb, as well as channel and tee sections, and also tests of sections with different thicknesses of plating. In addition, several special sections have been tested at the request of the Director of Merchant Shipbuilding, so that information required for immediate use might be available. The detailed report for submission to the Research Council is in course of preparation, and it is hoped to submit it at an early date. With the very rapid increase in the use of welding for shipbuilding, it was considered that guidance should be given in welding technique, to take advantage of the developments which have taken place over recent years both in existing and in new processes. A memorandum on deep penetration butt welding is now in the hands of the printers and a memorandum on deep penetration fillet welding is in draft but cannot be issued until completion of confirmatory tests. Arrangements have been made by the Admiralty, in collaboration with the Sub-Committee, for the preparation of a schedule of standard welding procedures for welding in shipbuilding.

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

The annual general meeting of this body was held on 3rd February, 1942. The term of office of the officers elected was fixed as not more than three years. Ordinary meetings have been held regularly throughout the year and most useful work has been carried out by the Committee. The Committee's publication "Science in Parliament" is available in the Library to Members interested.

The British Electrical and Allied Industries Research Association: Joint Committee: Steels for High Temperatures. Representative: Dr. S. F. Dorey.

In studies of the creep properties of carbon steels over a number of years two lines of investigation have been followed; on the one hand, attempts have been made to determine the influence of carbon content, structural condition, processes of manufacture, etc., and, coincident with this, comprehensive tests have been made on representative samples of components utilized in plant operating at high temperature. While the information derived from investigation of the first type has shown the varied character of carbon

steels in the form of wrought bars and cast ingots, it was found necessary, in view of the specialization adopted in the fabrication of steels into various service components, to determine the particular properties of the material of these components in order to provide data showing the stress-temperature conditions under which they may be suitably employed in service. Stress-temperature data corresponding to from 0.1 per cent. to 0.5 per cent. creep in 100,000 hours at stresses ranging from 5 to 10 tons per sq. in. for representative samples of superheater header, steam pipe and superheater tube materials have been obtained with sufficient precision to warrant their acceptance for practical purposes. A report has been issued to members and contributors dealing with the properties of the material of such components in carbon steel, and similar components in 0.5 per cent. molybdenum steel are under investigation.

The investigations on the creep properties and microstructure of carbon steels after various heat treatments and with various rates of cooling, and the study of grain coarsening in relation to creep have been continued. Further work has been done on the creep properties of 0.5 per cent. molybdenum steels for creep test conditions of 4 tons per sq. in. and 600° C., and tests have been made on similar steels in various atmospheres (vacuum, steam and hydrogen) under creep test conditions of 7 tons per sq. in. and 590° C.

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

The Committee held four meetings during the past year. Consideration was given to various questions concerned with the improvement of ship structures, which have resulted in increased efficiency and hastened construction. Designs for prefabricated ships and other applications of welding have been developed. The Committee has co-operated with various Government departments in solving the many problems arising from the operation and maintenance of ships under wartime conditions.

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

The Association has been increasingly active during the year, particularly in connection with the recovery of valuable scientific and technical books and manuscripts from the national book salvage.

The fifth of the ASLIB Guides to Specialised information, that on Engineering other than Electrical, is ready and is on sale at 6s., post free. It contains the following sections:—

Section I.—Preface.

Section II.—List of Sources of Specialised Information:

- (a) Government departments.
- (b) Professional, research and trade organizations.
- (c) Educational organizations.
- (d) Appendixes: selected items relating to fuel, transport, raw materials, etc.

Section III.—List of Periodicals and Year Books:

- (a) Periodicals, printing abstracts or lists of references.
- (b) Trade and technical periodicals, other than those issued by professional institutions and industrial organizations.
- (c) Periodicals issued by professional institutions and industrial organizations.
- (d) Some selected periodicals relating to raw materials, etc.
- (e) Annuals—engineering.
- (f) Annuals—on matters of related interest.

Section IV.—Indexes.

The whole has been compiled in close collaboration with specialist advisers and the details concerning the activities and scope of each of the sources of specialist information in the main sections have been supplied by the individual organizations.

The ASLIB Book List of recommended literature continues to serve a widening field of research workers and students in all branches of science and technology.

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

Although, owing to war conditions, it has not been found possible to hold any joint discussions during the year, preparations are being made to enable normal activities to be resumed immediately conditions make this possible.

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

The Society has carried out a full normal programme in spite

of war conditions. The Society has been instrumental in securing an adequate supply of foreign scientific and technical periodicals during the war.

At the request of the Society the British Standards Institution has set up an Advisory Panel on the application and extension of the Universal Decimal Classification.

British Standards Institution's Committees.

Technical Committee ME/19, Manila Rope. Representative: Mr. T. R. Thomas, B.Sc.

The Committee has had in hand the preparation of war emergency slips dealing with the marking of pure manila rope to distinguish it from rope containing sisal. These slips will be issued shortly.

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

The following specifications were submitted to the Mechanical Industry Committee for consideration:—

B.S. 429, Riveted Steel Air Receivers (revision).

Small Fusion-welded Steel Air Receivers (less than 9in. internal diameter and working pressures not exceeding 250lb. per sq. in.).

Pressure Paint Containers.

Valves, Gauges and Other Safety Fittings for Air Receivers and for Compressed Air Installations.

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

The following specifications and revisions were approved for publication: B.S. 429, Riveted Steel Air Receivers (revision); small fusion-welded steel air receivers (less than 9in. internal diameter and working pressures not exceeding 250lb. per sq. in.); pressure paint containers; valves, gauges and other safety fitting for air receivers and for compressed air installations; B.S. 512, Hot-finished Weldless Steel Boiler and Superheater Tubes (revision); B.S. 494, Cold-drawn Weldless Steel Boiler and Superheater Tubes (revision); metric threads (interim specification); B.S. 84, Screw Threads of Whitworth Form (revision); engineers' comparators; B.S. 949, Screwing Taps (revision); B.S. 431, Manila Ropes (revision); water-tube boilers (including forged and fusion-welded boiler drums and forgings); cold forged mild steel rivets for cold closing; drilling jig bushes; sockets for wire rope for general engineering purposes (revision); wartime finish of machinery and plant; B.S. 308, Engineering Drawing Office Practice (revision); B.S. 978, Gears for Clockwork Mechanisms (revision); B.S. 275, Rivets, other than Boiler Rivets (revision); B.S. 425, Boiler Rivets (revision).

Amendment slips to the following specifications have also been approved: B.S. 308, Drawing Office Practice; B.S. 949, Screwing Taps; B.S. 948, Gears for Clockwork Mechanisms.

The following new work has been authorised by the Industry Committee: Reduction in the number of circular screwing dies; surface finish; diamond-tipped cutting tools; boiler water tests.

Solid Fuel Industry Committee SF/: SF/1, Nomenclature and Definitions for Solid Fuel Burning Appliances and SF/1/2, Steam Generators and Boilers. Representative: Mr. E. W. Green, O.B.E.

The Committee has produced six specifications during the year, none of which is of much interest to marine engineers except No. 1016 (Methods for the Analysis and Testing of Coal and Coke), and No. 1017 (Methods for the Sampling of Coal and Coke).

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

In consequence of the adoption of arrangements for working under emergency conditions, the Committee did not meet during the past year. Recommendations were considered and dealt with by correspondence.

The undernoted are among the British Standards revised and published: B.S. 13, Structural Steel for Shipbuilding and B.S. 14, Structural Steel for Pressure Parts of Marine Boilers.

The principal modifications to these specifications include a specified limit of sulphur and phosphorus content and the dispensing with temper bend tests.

The ultimate tensile strength for ships' plates has been amended to include two ranges—28/33 and 26/32 tons per sq. in.—while the ultimate tensile stress for boiler plates for shells, butt straps and girders, previously specified as 28/32 tons per sq. in., has been amended to 26/35 tons per sq. in.

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

A specification for water-tube boilers (including forged and

fusion-welded boiler drums, and forgings) was submitted to the Mechanical Industry Committee. This specification completes the series of nine different types of land boilers.

A draft specification for non-ferrous pipes and piping installations for land boilers has been proposed and it has been agreed, by the Committee responsible for its preparation, that it should be incorporated in the proposed British Standard for copper pipes and piping for land boilers.

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

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

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

Technical Committee ME/12, Chains and Fittings, and Sub-Committee ME/12/6, Anchor Chains. Representative: Capt. B. Warwick.

The principal business during the year has been the preparation of a specification which is a draft revision of B.S. 463 on Sockets for Wire Ropes for General Engineering Purposes. The sockets dealt with in this specification are of normal type for general engineering purposes as an alternative to thimble splicing, and are of the open and of the closed types. Complete dimensions are given, and the sockets are for wire ropes of circumferences ranging from $\frac{3}{8}$ in. to 5 in.

Technical Committee on Documentation. Representative: Mr. B. C. Curling.

The work of this Committee, as the British National Committee of the International Standards Association Committee on Documentation, is in abeyance for the duration of the war, owing to the impossibility of communicating with the other European countries concerned. The Committee is carrying on with the British side of the work in so far as it is able.

The preparation of an abridgment of the Universal Decimal Classification is under consideration, and good progress is being made in certain sections.

Obituary.

JOHN THOMSON ALLISON (Member 7808) killed at Mandalay by enemy air action during April, 1942. Born at Glasgow in 1897, Mr. Allison was educated at the Willowbank Public School there and served his apprenticeship with Messrs. Barclay, Curle & Co., Ltd. During his apprenticeship he attended Glasgow Technical College. In 1918 he joined The British India Steam Navigation Co., with which Company he remained until 1926, when he entered the service of the Government of Burma as an inspector of boilers at Rangoon. At the time of his death Mr. Allison had just reached Mandalay during the evacuation of Burma, and at this point expected to join an inland water transport unit operating on the Irrawaddy.

JOHN BARR (Member 6429) lost his life by drowning during the first year of the war. Mr. Barr was born in 1889 and served his apprenticeship with Messrs. Belliss & Morcom. From 1910 to 1914 he served in the Merchant Navy and in the latter year entered the Royal Navy. In 1920 he resumed his career in the merchant service and subsequently was in the employ of The Anglo-American Oil Co.

CECIL FRANCIS IVANSON BATT, Lieut.-Com'r. (E.), R.N.R. (Member 5640) died on 15th June, 1942, from the effects of injuries sustained in action. Commander Batt was born at Ilford in 1902 and was educated at Ilford College and the London Tutorial College. On the completion of his apprenticeship, which he served with Messrs. Marshall, Sons & Co., of Gainsborough, and Messrs. R. & H. Green & Silley, Weir, Ltd., he joined the P. & O. Company, for whom he served in many famous ships, including the "Viceroy of India". In 1931 he was accepted in the R.N.R., serving in a number of H.M. ships, including the "Repulse" and "Courageous". Commander Batt then obtained an Extra-First Class Board of Trade certificate, but his intention to become a surveyor to Lloyd's Register of Shipping was frustrated by the shipping depression at that time which precluded expansion of the Society's staff. He then entered the employ of the Wandsworth Borough Council as an engineer, and four years later was appointed chief engineer to the Cranage Hall Mental Institution, a post which he continued to occupy until the outbreak of hostilities when he was called upon to join the "Dunluce Castle". Later he was appointed to the ex-American destroyer H.M.S. "Bath", and served with outstanding merit and distinction in a number of other naval vessels prior to his death. Commander Batt was a keen sportsman and won several trophies at the regattas of the Gainsborough Rowing Club. Of recent years he was a member of the Sandbach (Cheshire) Golf Club, where he won several competitions, and he was a violinist of more than ordinary repute. He leaves a widow.

THOMAS BELL (Member 6542) presumed to have lost his life at sea by enemy action during August, 1942. Mr. Bell was born in 1885 and educated at Armstrong College, Newcastle-on-Tyne. From 1906-10 he was an engineer at sea and in the latter year became a draughtsman with Messrs. John Dickinson & Sons, Ltd., of Sunderland. In 1912 he returned to the sea as 2nd engineer of the s.s. "Northern", later becoming chief engineer of the s.s. "Roseleaf". He continued to serve at sea in various steam and motor vessels until the 'thirties, when he again became a draughtsman with Messrs. John Dickinson & Sons, Ltd. On the outbreak of war, however, he again resumed his sea service and was thus employed at the time of his death.

THOMAS MARTIN BUCHANAN (Member 9346) lost his life at sea by enemy action during September, 1942. Mr. Buchanan was born at Glasgow in 1895 and served his apprenticeship with Messrs. G. & J. Weir, Ltd., of Cathcart, this being interrupted from 1916-19, when he served as a corporal armament artificer in the R.A.F. In 1921 he joined the B.I. Line as a junior engineer, and in 1926 he transferred his services to Messrs. Andrew Weir & Co., by whom he was promoted in 1929 to chief engineer. He then became chief engineer with the African Wharfage Co., Mombasa, and in 1931 the chief engineer of the works of The African Marine & General Engineering Co., Mombasa. In this year he returned to England and became a partner in the Midland Bakery Engineering Co., of London, but in 1937 he resumed his sea career in the Royal Fleet Auxiliary. Mr. Buchanan, who leaves a widow, had already been a survivor on two previous occasions during the present war.

EDGAR GEORGE BUCKWELL (Member 7895) died as a result of exposure arising from enemy action during March, 1943. Mr. Buckwell was born at Newhaven, Sussex, in 1887, and was educated at the Merchant Taylors' School, Crosby, Liverpool, and other schools in various seaports at which his father, a Board of Trade surveyor, resided at different times. In 1903 he commenced his apprenticeship with Messrs. Vickers, Sons & Maxims, Ltd., Barrow, and in 1908 he joined the Bibby Line as a junior engineer. He left this Company in 1914 to join the Navy as an engine-room artificer. At the end of the war he entered the service of The North Eastern Railway Co. and was employed on the Harwich to the Continent run, and later he transferred his services to The Hain Steamship Co. He then joined The Blue Star Line by whom he was quickly promoted to the position of chief engineer, and he remained in this Company's employ until his death. He leaves a widow and two sons.

JOHN BURDON (Member 6672) presumed to have lost his life at sea by enemy action during October, 1941. Born in 1902, Mr. Burdon served his apprenticeship with Messrs. Wm. Doxford & Sons, Sunderland, and on its completion joined The Runciman Line of Newcastle. Subsequently he served with The Shell-Mex Oil Co. and in later years was in the service of Messrs. Dodd, Thomson & Co., of London, with which concern he rose to be a chief engineer.

ROBERT LINDSAY CAMPBELL (Member 8400) died suddenly at Belfast on the 6th July, 1942, from hæmorrhage of the brain. Born in 1889, Mr. Campbell served his apprenticeship with Sir Jas. Farmer, of Salford, and The Glasgow & S.W. Railway Works, Kilmarnock. After short periods of service with the Britannia Engineering Works, Kilmarnock, and Messrs. Harland & Wolff, Ltd., Southampton, he joined the White Star Line as a junior engineer. In 1913 he transferred to the service of The Royal Mail Lines, Ltd., in whose service he remained until his death. In 1937 Mr. Campbell, who was then serving in the s.s. "Alcantara", was appointed by the Company to Belfast to supervise the building of new tonnage and he was acting in this capacity until his death. Mr. Campbell, who was highly esteemed by his employers, was a widower and leaves a daughter aged 14 years.

ARTHUR NOEL COLLIGHAN (Associate Member 8972) lost his life at sea by enemy action during February, 1942. Born at South Shields

in 1913, Mr. Collighan was educated at St. Bedes School and the Marine School, South Shields, and at Sunderland Technical College, where he was awarded the Higher National Diploma in Mechanical Engineering in 1935. On the completion of his apprenticeship, which he served with The Middle Docks & Engineering Co., South Shields, he entered the service of The Royal Mail Lines, in whose employ he remained until his death. Among the ships on which he served were the "Atlantis", the "Alcantara", the "Asturias" and the "Ramon de Larrinaga".

WILLIAM ALFRED CORLETT (Member 7537) lost his life at sea by enemy action during March, 1942. Mr. Corlett was born in Sunderland in 1891 and served his apprenticeship with Messrs. J. Readhead & Sons, of South Shields, with which firm he was subsequently employed for two years as a draughtsman. He commenced his sea-going career in 1913 and served in various companies until 1924, when he joined the Anglo-Saxon Petroleum Co., Ltd. On obtaining his motor endorsement in 1927 he joined the British Tanker Co. as 2nd engineer and was very quickly promoted to chief engineer, a position which he was holding at the time of his death. Mr. Corlett leaves a widow.

HARRY PEEL CORNISH (Member 2176) died at Harrow, Middlesex, on 13th July, 1942. Mr. Cornish was educated at the City and Guilds Technical College and the London University Engineering College. He served his apprenticeship with Messrs. Wigham Richardson & Co., of Walker-on-Tyne and for a short period he was at sea. Later, he became a ship and engineer surveyor to Lloyd's Register of Shipping and was for some time stationed at Antwerp. In 1929 he was appointed superintendent of The United Baltic Corporation, Ltd., a post which he held until shortly after the outbreak of the present war when ill-health compelled his retirement. Mr. Cornish was a member of the Society of Consulting Marine Engineers and Ship Surveyors.

ERIC ERNEST COWLEY (Member 8959) lost his life at sea by enemy action during August, 1942. Mr. Cowley was born in 1902 and served his apprenticeship with Messrs. Cammell, Laird & Co., Ltd., of Birkenhead. On its completion in 1923 he entered the service of Messrs. Alfred Holt & Co., Ltd., by whom he was still employed at the time of his death.

LEWIS CROW (Member 2527) died at Newbury on 28th March, 1942, in his 67th year. A Londoner by birth, Mr. Crow had a varied practical experience in steam and other branches of engineering before becoming associated, some 38 years ago, with marine work. After a general education at St. Dunstan's College, Catford, he proceeded in 1892 to the Central Technical College, Finsbury, where, as a day student, he took a three years' course in mechanical engineering. This was followed by 18 months as an apprentice with Messrs. Bow, McLachlan & Co., Ltd., at Paisley. The next five years were spent as draughtsman and assistant plant engineer at the Ferguslie Thread Mills of Messrs. J. & P. Coats, Ltd., whom he left in 1902 to return to the London district as draughtsman with Messrs. Easton & Co., Erith. In 1904, Mr. Crow joined the staff of Mr. H. M. Rogers, consulting marine engineer, as superintendent on the Bristol Channel for the ships of Messrs. Harris & Dixon, Ltd., and other companies. Subsequently he went into practise on his own account, with an office in Cardiff, acting also as South Wales representative for Messrs. George Blair & Co., marine-engine builders, of Stockton, and the Central Marine Engine Works, West Hartlepool, and being retained as surveyor by various Continental shipowners. During the war of 1914-18 he was appointed marine surveyor for American Army transports, and acted in a similar capacity for the Ministry of Shipping. After the war, he was in partnership for some time with Mr. T. W. Barnett. Mr. Crow was a member of the Institution of Mechanical Engineers and the Institution of Naval Architects, and a founder member and Fellow of the Society of Consulting Marine Engineers and Ship Surveyors.

AMBROSE DAVIS (Member 8318) was killed at Mandalay by enemy air action during April, 1942, in the same incident which cost the life of another Member, Mr. J. T. Allison. Mr. Davis was born at Falmouth in 1887 and educated at the local grammar school. After serving his apprenticeship with Messrs. Cox & Co., of Falmouth, he became a junior engineer with the Shillocks Steamship Line and later entered the employ of the B.I.S.N. Co. From 1915-19 he served as an engineer lieutenant, R.N.R. In 1920 he resumed his employment with the B.I. Line, but left this Company in 1922, when he became an inspector of boilers for the Government of Burma. In 1934 he was appointed chief inspector of boilers and was stationed at Rangoon. He was still occupying this post at the

time of his death, which occurred when he was about to join an inland water transport unit during the evacuation of Burma. He leaves a widow and three children.

JOHN DERMOTT (Student 9159) lost his life at sea by enemy action during February, 1942, at the early age of 22 years. Mr. Dermott was born at Weymouth and received his early education at the High School, Nofffontein Orange Free State, and later at the Dover County School for Boys. His apprenticeship was served in the Marine Department of the Southern Railway, and at the time of his death he was in the employ of Messrs. Lamport & Holt, Liverpool, as a junior engineer.

JAMES DIACK (Member 8418) lost his life at sea by enemy action during the latter part of 1941 or early 1942. Born in 1881, Mr. Diack served his apprenticeship with Messrs. Clyne Mitchell & Co., of Aberdeen. In 1900 he entered the service of The Elder Dempster Line and in 1905 was promoted to the position of chief engineer. In 1913 he transferred to the service of Messrs. R. Chapman & Sons, who promoted him to the position of superintendent engineer in 1920, in which capacity he was still serving in 1939. Later Mr. Diack returned to the sea.

GORDON CECIL DRING (Graduate 8999) lost his life at sea by enemy action during September, 1942. Mr. Dring was born in 1918 and served his apprenticeship at the Sunderland Works of The North Eastern Marine Engineering Co. The completion of his apprenticeship almost coincided with the outbreak of war, and he entered the Merchant Navy as a junior engineer. He very quickly obtained his Second-Class Board of Trade certificate and had every prospect of a promising career before him.

W. E. FARENEN (Past-Chairman of Council and Member 555). (See portrait and obituary in January, 1943, TRANSACTIONS).

DOUGLAS FERGUSON (Member 4014) lost his life at sea by enemy action during November, 1941. Mr. Ferguson served his apprenticeship with Messrs. J. F. Low & Co., Ltd., Monifieth Foundry, and is believed to have served continuously at sea since 1910.

JOHN MASSIE FINLAYSON (Member 8494) died in South Africa about the early part of 1942. Mr. Finlayson was born in 1897 and served his apprenticeship in the Royal Navy. In 1922 he was appointed by Messrs. Thesen & Co., of Cape Town, to take charge of a fleet of vessels, a post which he relinquished in 1927 to become assistant superintendent engineer for Messrs. Irvin & Johnson, of Cape Town. Three years later he rejoined Messrs. Thesen & Co. as engineering manager, a post which he retained until 1934, when he became chief engineer to Messrs. J. & A. Buchanan, in complete charge of power plants and factories. In 1936 he was appointed ship and engineer surveyor to Lloyd's Register of Shipping, Durban, a post which he retained until his death.

S. FRESHWATER (Member 5766) lost his life at sea by enemy action during September, 1941. Born in London in 1904, Mr. Freshwater served his apprenticeship with Messrs. Henry Blanchards, Ltd., of Grimsby. In 1925 he entered the service of The General Steam Navigation Co. as a junior engineer and except for the periods when he was obtaining his Board of Trade certificates he remained continuously in this Company's employ until his death. Latterly he had held the rank of 2nd engineer.

ROBERT WILLIAM GAMMON (Member 2712) lost his life at sea by enemy action during August, 1942. Mr. Gammon was born at Dover in 1884, the son of farming people who during his early life moved to London, where he was educated. Although financial circumstances necessitated his commencing work at the early age of 13, his natural abilities, including a flair for mathematics, were not to be suppressed, and after an apprenticeship which he served with Messrs. Edwards Electrical Co., of Bow Common, and Messrs. Yarrow & Co., of Blackwall, he commenced his sea career in 1907 with the Norfolk and North American Steam Shipping Co. and quickly obtained his First-Class Board of Trade certificate. In 1913 he joined The Anglo-American Oil Co. and he served as chief engineer on tankers throughout the last war. On two occasions during this period his ship was torpedoed off Ireland, but he escaped unharmed. From 1918 until 1933 he was chief engineer on vessels belonging to Messrs. Lane & MacAndrews, and served in the s.s. "Le Coq" for many years until the Company was finally dissolved. In 1933 he entered the service of the Socony Vacuum Oil Company, in whose employ he remained until his death. During his career, he maintained, he had crossed the Atlantic nearly a thousand times. Mr.

Gammon was an ardent admirer of the Chinese people, who he considered were excellent seamen.

HENRY JAMES GARRETT (Member 7605) lost his life at sea by enemy action during November, 1942. Mr. Garrett was born in London in 1888 and was educated at Peter Symond's School, Winchester, and Glasgow Technical College. From 1903 to 1909 he served his apprenticeship with The Fairfield Shipbuilding and Engineering Co., of Govan, and after a short period of service as a journeyman he joined The Orient Steam Navigation Co. as a junior engineer. He remained with this Company until 1940 when, having been second engineer for 22 years and there being no prospect of promotion, he accepted a post as chief engineer with The General Steam Navigation Co. Later in this year he accepted a post as chief engineer in the service of Messrs. Tankers, Ltd., in whose employ he was at the time of his death. During the last war Mr. Garrett's ship was torpedoed and he had many exciting escapes, including the occasion when H.M.S. "Sydney" was escorting a convoy and destroyed the famous "Emden". During the present war, too, Mr. Garrett was in a number of ports raided by the Luftwaffe, but escaped injury. He leaves a widow and one son.

J. HAMILTON GIBSON (Vice-President and Member 2761). (See portrait and obituary in the July, 1942, TRANSACTIONS, p. 81).

ADAM GIRWOOD (Member 501) died suddenly at his home at Edinburgh on the 17th January, 1943. Mr. Girdwood, who was one of the oldest surviving Members of The Institute, was born at Edinburgh in 1867, and spent his early life in Jamaica. He returned to Edinburgh and served his apprenticeship with Messrs. S. & H. Morton & Co., of Leith, after which he immediately became a junior engineer at sea. Mr. Girdwood served in tramp steamers in most parts of the world and throughout the last war held a commission in the Royal Naval Reserve. After the armistice he joined the service of Messrs. C. Gibson & Co., of Leith, and served in their steamers until he retired. After his retirement he took a great interest in the Marine Engineers Association, of which he held the office of President for one year. He was also President of the Leith branch of the Association for several years. He leaves many friends in marine engineering circles who will feel a keen sense of loss at his death.

WALLACE GIVENS (Associate 8115) lost his life at sea by enemy action during March, 1942. Born in 1914, Mr. Givens served his apprenticeship at The Middle Docks & Engineering Co., South Shields, and on its completion joined the Prince Line as a junior engineer. Later he transferred to the service of The Eagle Oil & Shipping Co., Ltd. He leaves a widow.

EDWIN GOODSON (Member 6015) lost his life at sea by enemy action in November, 1942, during the North African operations. Mr. Goodson was born at Liverpool in 1897 and was educated at the Arnot Street School and the Technical School in that city. His apprenticeship was served with Messrs. Cammell, Laird & Co., Ltd., immediately after which he served in the R.A.F. from June, 1918, until December, 1919. The following year he entered the service of the P. & O. Company as a junior engineer and remained continuously in this Company's service until the time of his death. In July of last year he was commended by the Company for his share in a repair, carried out at sea under hazardous conditions, which enabled his vessel to continue her voyage in convoy. Mr. Goodson on several occasions submitted contributions for publication in the TRANSACTIONS, his last, entitled "A New Pump Suction Strainer", being published in the February, 1942, issue. He leaves a widow.

THOMAS GRIEVE (Member 5880) died at Cardiff, following an operation, on the 19th January, 1943. Born in Dunfermline in 1876, Mr. Grieve served his apprenticeship with Messrs. Hay & Robertson of that town. As a young man he was later employed as an engineer in Clydeside dockyards. Over forty years ago he entered the service of Messrs. W. J. Tatem & Co., Ltd., as a seagoing engineer, and at the early age of 25 years he was appointed chief engineer of one of the Company's largest ships. In 1924 he was promoted the Company's superintendent marine engineer. During his occupancy of that position, he supervised the building of a complete new fleet of steamers. His services were greatly appreciated by the Company. When Lord Glanely, head of the Company, died last year, he made legacies to many of the employees, Mr. Grieve being bequeathed a sum of £4,000. Mr. Grieve had great faith in the "products" of his home town, and was instrumental in starting many boys on a marine engineering career. In his youth, Mr. Grieve was well known in Scottish football, both as a player and on the administra-

tive side of the game. He was a competent referee, and at the age of 20 he was honoured by being invited to referee a First Division match between Hibernians and Rangers. He was secretary of a Dunfermline junior football team, which made history in the game. A keen supporter of the Cardiff Caledonian Society, and a member of other bodies, he had many friends in the Welsh seaport who will miss his cheery personality.

GEORGE W. GUNN (Member 6249), presumed to have lost his life at sea by enemy action towards the end of 1942. Mr. Gunn was born at Sunderland in 1888 and educated at the Hylton Road School in that town. From 1905/11 he served his apprenticeship with Messrs. John Wigham & Son of Sunderland, in whose employ he remained until 1916 when he entered the service of Messrs. Wm. Doxford, Sons & Co. He left this Company in 1919 to commence his sea career with Messrs. Common Bros. by whom he was still employed at the time of his death. He had for many years held the position of chief engineer. In a recent issue of the "London Gazette", it was announced that Mr. Gunn had been awarded the Distinguished Service Cross.

MARCUS GUNN (Member 6795) lost his life at sea by enemy action during June, 1942. Mr. Gunn was born at Kirkwall, Orkney, in 1892, and was educated at the borough school there and later at Robert Gordons' College, Aberdeen and Glasgow Technical College. His apprenticeship was served with Messrs. Wm. Beardmore & Co., Ltd. Throughout the last war he served at sea, mainly in the Atlantic, and he twice survived the sinking of his ships by the enemy. At the end of the last war he volunteered for service in the South Russian campaign, where he served for almost two years. For the next eight years he served on various "Bay" ships, and for two of these years he was chief engineer of the "Jervis Bay". He was then employed for several years ashore in Australia, during which period he designed and patented a pulveriser and burner suitable for the use of local coals. In 1934 he joined The Broken Hill Prop. Co., Ltd., and supervised the building of some of their new vessels on the Clyde. He returned to Australia in 1936 as guarantee chief engineer for Messrs. D. Rowan & Co., Ltd., in the s.s. "Iron King", and he later acted in a similar capacity in another vessel of which he was chief engineer at the time of his death. In this latter vessel a marine adaptation of his pulveriser had just been fitted for trial. The reports of the survivors of the incident in which he lost his life indicate that his meritorious conduct was instrumental in saving a number of lives. Mr. Gunn leaves a widow.

WILLIAM VICTOR HALL (Member 3174) died about the early part of April, 1942. Mr. Hall was born at Keller, Co. Durham, in 1889, but spent the early part of his life in South Africa. He was educated at the High School at Pretoria and the Technical College, Sunderland, on his return to this country. After serving his apprenticeship with Messrs. John Lynn & Co., of Sunderland, he was for some years at sea in the Furness Withy Line. In 1915 he was appointed assistant to Mr. John McLaren, the well-known consultant, and apart from two years war service as engineer sub-lieutenant in the Royal Navy, he remained with Mr. McLaren until 1930. He then joined the Car & General Insurance Co., in whose service he was employed as senior surveyor of boilers and machinery at the time of his death.

FRANK EDWARD HARDCASTLE (Associate Member 4587) died in Bombay, 7th May, 1942. He was born at Whalley Range, Manchester, in July, 1861, and went to sea at an early age, the first years being spent in sailing ships. During the next twenty years his experience included service with the Royal Navy, mainly in Eastern waters, with the Royal Indian Marine, Messrs. Cowasjee Dinshaw Bros. of Aden, and the Mogul Line. He first settled in Bombay in 1898 where he practised as a marine surveyor, consulting engineer and assessor, being subsequently appointed surveyor to the Bureau Veritas and Norske Veritas Registers of Shipping. Later he became chairman of several companies established at Bombay with branches in India and Ceylon as well as Europe. For several years he held an appointment with the Government of India in connection with the Board of Trade Examinations in India. He was involved in the fighting of the South African and Ashanti wars and served with Kitchener at Khartoum. For over twenty years Mr. Hardcastle was the Honorary Consul for Norway at Bombay; there also he was a Justice of the Peace and Honorary Presidency Magistrate. He was a Member of the Institution of Naval Architects and a Fellow of the Royal Geographical Society.

JOHN BELL HEATH (Associate 9259) died suddenly on the 11th October, 1942, at Liverpool. Mr. Heath was born at Liverpool in

1906 and was educated at the Bootle Technical School. His apprenticeship was served with Messrs. Harland & Wolff, Ltd., Bootle, immediately after the completion of which he entered the service of Messrs. Alfred Holt & Co., Ltd. In 1937 a breakdown in health compelled him to leave this Company and to give up his sea career, but in 1939 he resumed employment as an Examiner for the Chief Inspector of Mechanization (Tanks), a post he continued to fill until his death, which was unexpected.

FREDERICK S. HOGG (Member 5710) lost his life at sea by enemy action during February, 1942. Mr. Hogg served his apprenticeship with Messrs. Richardsons, Westgarth & Co., Sunderland, and is believed to have served continuously at sea since 1912.

PETER ALBERT HOLLIDAY (Member 6067) died at Birmingham, 18th February, 1943. Mr. Holliday was born at Stockport on 1st December, 1884, and educated at Christ Church School, Accrington and at Elborow Boys' School, Rugby. His apprenticeship was served in the drawing office of Messrs. Willans & Robinson, Ltd., Rugby, during which period he continued his technical education. He became section leader in the drawing office, and under Mr. Peache (of the Peache Central Valve Engine) he was in charge of the first Diesel engine design undertaken by the firm. For a short period in 1906 he was with Mather & Platt, but returned to Willans & Robinson to continue Diesel engine design. In 1910 he joined the British Westinghouse Co. at Trafford Park. From 1912 to February, 1943, he was with Messrs. Belliss & Morcom, Ltd., of Birmingham, where he originated their Diesel engine section. It was during his employment with this firm that his chief work was developed, and he was at one time a pioneer in the field of high-speed Diesel development of both air and solid injection types. During the 1914/18 war he was chiefly concerned in the production of submarine engines under licence from Messrs. Vickers. In February, 1943, Mr. Holliday had recovered sufficiently from the effects of a serious illness to return to his work, but he died suddenly on 18th February, leaving a widow, and a son and daughter. Mr. Holliday will be remembered by his many friends not only as an able technician but as a man of great personal charm.

JAMES GILMOUR HUNTER (Member 7756) lost his life at sea by enemy action during April, 1941. Mr. Hunter was born in 1900 and served his apprenticeship from 1917-22 in the works of Messrs. G. & J. Weir, Ltd., of Cathcart. After a year on the office staff of this firm on the completion of his apprenticeship, Mr. Hunter entered the service of the British India Steam Navigation Co. and it is believed that he followed a seafaring career during the remainder of his life.

MARTIN HUTCHISON (Member 7457) lost his life at sea by enemy action during September, 1941. Mr. Hutchison was born at Birkenhead in 1905 and educated at the Cloughton Higher Grade School in that town. On the completion of his apprenticeship with Messrs. Cammell, Laird & Co., Ltd., in 1926 he joined the Ellerman & Papayanni Lines as 4th engineer. He left this Company in 1931 to take up a post as 2nd engineer in the s.s. "Arundale", and was shipwrecked off Ceuta in 1933. In that year he rejoined the Ellerman Line as 3rd engineer in the s.s. "Fabian". In 1935 he took up employment with Messrs. Lever Bros., but joined the British Tanker Co. in 1937, again returning to the Ellerman Line in 1938. In June, 1939, he entered the service of the Air Ministry, from which he resigned in 1940 to join Messrs. W. Goodyear & Son, Ltd. In 1941 he resigned and tried to join the Royal Navy, but was directed to the Merchant Shipping Pool, who claimed his services and by whom he was employed at the time of his death.

PETER INGLIS (Member 2736) died at Quebec on the 1st July, 1942, aged 57 years. Mr. Inglis was born at Renfrew and was educated there and at Durban to where his parents moved in his early life. He returned to Renfrew to serve his apprenticeship with Messrs. Wm. Simons & Co., Ltd., after which he entered the service of the Natal Harbour Department. He then served for three years with Messrs. Bullard, King & Co., whom he left to rejoin Messrs. Wm. Simons & Co. in 1909. He was then employed in various parts of the world by this Company until, in 1919, on the completion of work carried out by Messrs. Simons on behalf of Messrs. Canadian Vickers, Ltd., he accepted an offer to join the latter Company's staff as assistant superintendent. He later became superintendent. In 1930 he joined The Morton Engineering & Drydock Co., of Quebec, and two years later became works superintendent with Messrs. G. T. Davie & Sons, Lauzon Levis, P. Quebec, a position which he still held at the time of his death. Mr. Inglis was well known in Montreal and Quebec, and was a member of

the Quebec Curling Club, President of the Quebec St. Andrews Society, a Past-President of the Montreal Renfrewshire Association and a prominent freemason. He was present at the last International Meeting of Naval Architects and Marine Engineers in New York a few years ago, when he met many old friends. He is survived by a widow and one daughter.

AUBREY BRIDGE JACKMAN, Jun'r. (Member 5205) lost his life at sea by enemy action during October, 1941. Mr. Jackman was born at Greenock in 1890 and educated at the Greenock Academy and the James Watt Technical School. His apprenticeship was served with Messrs. Scotts' Shipbuilding & Engineering Co., of Greenock, and in 1914 he commenced his sea career. In 1920, having obtained his Board of Trade certificates, he joined the Eagle Oil & Shipping Co. as 3rd engineer. His promotion was rapid and by 1923 he was appointed one of this Company's chief engineers, a capacity in which he was still serving at the time of his death. In 1917 Mr. Jackman, who had already survived a torpedo attack during the present war, was serving as a junior engineer on a vessel which was torpedoed off the Eddystone lighthouse. By a most remarkable coincidence his father, then a chief engineer in a Cunard steamer, suffered the same fate at the same spot two hours later. Both fortunately survived that occurrence.

ALFRED JASPER (Member 8322) died suddenly on the 22nd March, 1943. Mr. Jasper was born at Little Wenlock, Shropshire, in 1884, but his early life was spent at Barrow-in-Furness, where he was educated, first at St. James School and subsequently at Barrow Technical College. His apprenticeship was served at The Hemitite Steel and Iron Works, Barrow, and at the age of 21 he started his seagoing career in tramp steamers, gaining his First-Class Board of Trade Certificate after three years' service. In 1913 Mr. Jasper joined the British and Argentine Steam Navigation Co. and he served in this and associated companies during the remainder of his life. The year 1924 saw his first appointment as chief engineer in a steamship, and for the past nine years he had sailed as chief engineer in the Company's motor vessels. He was proceeding on leave before taking over their newest Diesel ship when he collapsed and died on Scotstoun station. Mr. Jasper, who leaves a widow and one daughter, was exceptionally popular with his colleagues on the Company's staff.

DOUGLAS JOHN WESTMACOTT JEATT (Member 6046), presumed to have lost his life at sea by enemy action during February, 1942, was born in 1893 at Anneton, Isle of Wight, where his father was schoolmaster. He was educated at Sandown Secondary School and served an engineering apprenticeship at the works of J. Samuel White & Co., Ltd., of Cowes. He was released from service with the Hants Royal Engineers Territorials at the commencement of the 1914 war in order to go to sea. In May, 1917, he joined the Royal Mail Line and sailed in the ships of this company until his death. Mr. Jeatt was twice torpedoed during the last war, the second time when nearing England after having been a prisoner on the German raider "Moeine". He leaves a widow and a young daughter.

WILLIAM JOHNSTON, O.B.E. (Member 4632) lost his life at sea by enemy action about November, 1942, aged 61 years. Mr. Johnston was a native of Arbroath and served his apprenticeship at the works of Messrs. Alex. Shanks & Sons in that town. He afterwards went to sea, and after a short time with the Moor Line he entered the service of the Orient Steam Navigation Co., with which he rose to the position of senior chief engineer. Mr. Johnston served in the last war as engineer lieutenant-commander in the Royal Naval Reserve, and during the present war he had also rendered distinguished service, being awarded the O.B.E. in the Birthday Honours in June, 1942. It is reported that but for his great devotion to duty in the incident which caused his death, he might have been saved.

ERNEST WILLIAM JONES (Member 6162) died at Edgware, Middlesex, on the 29th March, 1942, as a result of complications which followed an operation. Born in 1900, Mr. Jones served his apprenticeship with Messrs. W. H. Allen, Sons, & Co., Ltd., of Bedford. He then served for five years as an engineer officer with The Orient Steam Navigation Co., followed by two years' service with Messrs. Bibby Bros. in a similar capacity. During this period he gained an Extra-First Class Board of Trade Certificate. For the past thirteen years Mr. Jones was chief engineer of the Hotel Services of the London, Midland & Scottish Railway, a post in which his experience and outstanding abilities were afforded full scope. He leaves a widow and two young children.

KARL OTTO KELLER (Member 6112) died at Sunderland on 22nd July, 1942, aged 65 years. Mr. Keller, a pioneer in the development of the marine oil engine, was born in Switzerland and served his apprenticeship with Messrs. Kundig-Honegger of Zurich. He came to England as a young man and joined Messrs. Doxford & Sons some 30 years ago as a gas engine expert. He experimented for three years in possibilities of gas engines for marine propulsion, and when these investigations were given up he took an appointment with Messrs. John I. Thornycroft & Co., Ltd., at Basingstoke. He returned to Messrs. Doxford as chief draughtsman and designer in 1911 and at once began his development of what soon became known as the Doxford opposed-piston type of oil engine. He was responsible for many of the inventions and technical processes associated with this engine, and his eminence in this field of marine engineering was unquestioned. Mr. Keller became manager of the engine works in 1919, and was appointed a director of the firm in 1928. Many other firms in Britain and the Sun Shipbuilding and Dry Dock Co., Ltd., in the United States, hold licences to build Doxford engines. The total indicated horse-power installed in motorships since the Doxford design was first brought into use is about 2,000,000. Mr. Keller was a member of the council of the North East Coast Institution of Engineers and Shipbuilders, and four years ago was president of the North East Coast branch of the Institution of Mechanical Engineers. He had on several occasions read papers on technical aspects of oil engines. Among the societies he addressed were the North East Coast Institution and the Liverpool Engineering Society. Mr. Keller leaves a widow but no family.

THOMAS EDWARD KLUGE (Member 2019) died at Swansea on the 14th January, 1943. Mr. Kluge, the son of a windjammer captain, was born in 1873 and served his apprenticeship with Messrs. H. S. Edwards & Son, of South Shields. The next twenty-odd years of his life were spent in the service of The Prince Line, and for many years of this period, in the early part of which he obtained an Extra-First Class Board of Trade Certificate, he served as chief engineer. During the last war he was engaged on convoy work and later superintended the construction of some of The Prince Line ships. Subsequently he was appointed surveyor for a northern marine insurance corporation and later was employed by the United States Government as the representative of the American Shipping Board in Spain. Here he opened the office and travelled a great deal in the country on shipping control work. A breakdown in health necessitated his return to England. Mr. Kluge then became associated with the Swansea branch of the Royal National Lifeboat Institution, of which he was honorary secretary at the time of his death. His work in this post was one of pride and enthusiasm, and for it he even did street collections on flag days. He was a keen churchman and was president of the Church Men's Club, an officer of Swansea Sea Cadets and an ardent supporter of the Glamorgan county cricket matches.

DAVID KOSSICK (Member 7586) killed by enemy action while serving in a police launch during the battle of Hong Kong. Mr. Kossick was born at South Shields in 1896, in which town he was educated, and served his apprenticeship at the North Eastern Marine Engineering Co. from 1912-17. In 1919 he entered the service of The Blue Funnel Line, with which Company he remained until 1933. During this period he obtained an Extra-First Class Board of Trade Certificate and had risen to the position of 2nd engineer. In 1934 he was appointed an engineer and ship surveyor under the Government of Hong Kong, and he was still serving in the Far East at the time of his death. Mr. Kossick had theatrical talents which he displayed in organizing many concerts at Hong Kong for the entertainment of the troops and for other objects. His wife, who is safe in this country, has also suffered the loss of her only son, who was serving in the R.A.F.

KENNETH C. LAWSON (Member 5780) has been reported missing, presumed killed, as a result of enemy action at sea during November, 1942. He was born at Barrow-in-Furness in 1903 and educated at the secondary school there, later serving his apprenticeship with Messrs. Vickers, Ltd. Between 1924 and 1934 he was mainly engaged as an engineer at sea, when he obtained a position as surveyor with the British Engine Boiler Insurance Co., Ltd., which he held until the outbreak of war. He then became Deputy Commander of the Auxiliary Fire Service in Oldham but left in April, 1940, to rejoin the Merchant Navy. In March, 1941, he obtained a commission in the Royal Navy and served as Temporary Lieut. Engr., R.N.R. on H.M.S. "Pretoria Castle" and later as the senior engineer on the small aircraft carrier H.M.S. "Avenger".

JOHN WILLIAM LEICESTER (Member 6649) died suddenly on the 22nd December, 1942, while carrying out his duties as a surveyor to Lloyd's Register of Shipping. Mr. Leicester was born at Northwich in 1893 and he was educated at Northwich and at the Manchester College of Technology. On the completion of his apprenticeship, which he served with Messrs. W. J. Yarwood & Sons, Ltd., Northwich, he entered the service of Messrs. Alfred Holt & Co. Five years later, in 1919, the Company appointed him assistant superintendent at Hong Kong, a post which he held until 1922, when he joined Lloyd's Register of Shipping as a ship and engineer surveyor. During 20 years' service Mr. Leicester represented the Society in Liverpool, Genoa, and for the last five years as senior surveyor in the Manchester district. Mr. Leicester had been in ill health for some time. He leaves a widow, son and daughter.

JAMES WEIR MCKENDRICK (Member 7044) reported died 13th April, 1942. Mr. McKendrick was born in 1902 and served his apprenticeship with Messrs. Mavor & Coulson, Ltd., of Glasgow. In 1925 he commenced his sea service as a junior engineer and in 1940 was a chief engineer in the service of Messrs. H. Hogarth & Son.

ARCHIBALD BONAR MANSON (Member 5967) lost his life at sea by enemy action during the latter half of 1942. Mr. Manson served his apprenticeship with Messrs. Neale & West, Ltd., of Cardiff, and in 1914 joined the Royal Engineers. On demobilization in 1919 he became a junior engineer at sea and some years later was appointed a 2nd engineer in the service of The Hain S.S. Co., Ltd. He is believed to have followed his sea career until the time of his death.

JOHN STUART MARGITSON (Member 7690), officially reported to have lost his life at sea by enemy action during the latter part of 1942 or the early part of 1943. Mr. Margitson was born in 1898 and commenced his sea career in 1916. He rose to be chief engineer in the service of Messrs. Shaw, Savill & Albion Co. Mr. Margitson was a member of the Marine Engineers Association.

WINDSOR MARTIN (Member 6238) lost his life at sea by enemy action during December, 1940. Mr. Martin was born at Heol-Las, near Llansamlet, Swansea, in 1902, and was educated at Llansamlet and Birchgrove, Swansea. He served his apprenticeship with The Swansea Vale Spelter Co. and in 1924 joined The British Tanker Co. as 4th engineer. After a short period with The British Mannesmann Tube Co. he returned to The British Tanker Co., with whom he remained until about 1930, when he had obtained his Board of Trade certificates. He then served with various companies, including Messrs. J. Langdon Rees, Ltd., as 2nd engineer, and Messrs. C. T. Bowring & Co., Ltd. He rejoined the latter Company shortly after the beginning of the war and was in their service at the time of his death. He leaves a widow.

ALBERT E. MORLEY (Member 4511) died on 13th February, 1943, at his home in Chippenham. He was born in Leeds on 15th March, 1879, and served his apprenticeship with the Hunslet Engine Co. in that town. In 1900 he joined the Royal Navy and retired in 1922 with the rank of Chief E.R.A. In 1922 he was appointed Superintendent of the brake test shop with the Westinghouse Brake Co., Ltd., which post he held until his death.

NEVILLE RICHARD GRAHAM MUIRHEAD (Student 9254) killed at Norwich by enemy action during June, 1942. Mr. Muirhead was born in 1924 and having obtained his school certificate was serving his apprenticeship with Messrs. Laurence, Scott & Electromotors, of Norwich. At the time of his death Mr. Muirhead was fire watching at a secondary school, which suffered a direct hit from a high explosive bomb. Mr. Muirhead's parents are in India and his brother is abroad in the R.A.F.

THOMAS GARNER PATERSON (Member 5326) died at Sydney, Australia, after a long illness, on 12th September, 1942. Mr. Paterson served his apprenticeship with Messrs. John Jones & Sons, of Liverpool, and subsequently served for 11 years at sea in the service of The Union Castle Mail S.S. Co. and The Pacific S.N. Co. After one year's service on the technical staff of the Liverpool Committee of Munitions of War, Mr. Paterson accepted an appointment as consulting engineer with Messrs. Carmichael & Clarke, of Hong Kong, in whose employ he remained for five years. In 1925 he entered the service of Messrs. Anderson & Ashe, Hong Kong, as a consulting engineer, and he remained in that part of the East until ill health compelled him to move to Australia, some time prior to the Japanese occupation of Hong Kong.

THOMAS AITKEN PORTEOUS (Member 7157) drowned at sea by enemy action during March, 1942. Mr. Porteous was born in 1892 and served his apprenticeship with Messrs. Bertrams, Ltd., of Edinburgh. He commenced his sea service in 1922 and was for many years in the service of The Eagle Oil & Shipping Co., Ltd., latterly in the capacity of chief engineer.

ARTHUR W. PRATT (Member 4319) died at his home at South Harrow on the 2nd July, 1942. Mr. Pratt was born within the sound of Bow Bells in 1863, and was educated at the Kensington School of Arts. He served his apprenticeship with Mr. John Hayes, consulting civil and marine engineer and eventually established himself as a consultant. Throughout his life Mr. Pratt was keenly devoted to literature.

T. R. PRINGLE (Member 3185) died at St. Andrews on the 6th June, 1942. Mr. Pringle was born in 1884 and served his apprenticeship with Messrs. William Balfour & Sons, Pittenweem, Fifeshire. In 1907 he commenced his sea career with The China Navigation Co., from whose service he retired in 1937. Since the war heart trouble had kept Mr. Pringle largely inactive, though he put in as many hours service with the Observer Corps as his health permitted.

ALEXANDER SELLAR REID (Member 4958) lost his life at sea by enemy action during February, 1942. Mr. Reid was born at Banchory-Devenick, Deeside, in 1893, and was educated at Errol Public School, Perthshire, and the Central School, Fraserburgh. During his apprenticeship, which he served with Messrs. Dunsmuir & Jackson, he attended Glasgow Technical College. He then joined the Donaldson Line as a junior engineer, and was still in this Company's employ at the time of his death. During the last war Mr. Reid had the experience of his ship being torpedoed on more than one occasion. When peace came in 1918 Mr. Reid was appointed by the Company to supervise new construction and was stationed in Scotland for some years. He then served in the first Diesel-engined vessel constructed under his care to enable him to qualify for a motor endorsement. Later he supervised the construction of further new tonnage and was appointed first engineer of a new Diesel vessel. Some years later he was again appointed resident superintendent for a new vessel built on the Clyde. When this vessel was commissioned he was appointed 1st engineer. During the present war he was appointed to supervise a large repair to a vessel severely damaged by enemy action, and on completion he took over the work of superintending the fitting out of a vessel in the Clyde area. Mr. Reid, who was highly esteemed by his employers and of modest and reserved disposition, was appointed first engineer of the latter vessel, in which he had served for a number of voyages at the time of his death.

DOUGLAS MUIR ROBERTSON, Com'r. (E.), R.N.R. (Member 9101) presumed killed on active service during the latter part of 1942. Commander Robertson was born in 1900 and served his apprenticeship partly with Messrs. D. Rowan & Co., Ltd., of Glasgow, partly in H.M. Tank Corps during the last war, and finally with Messrs. Hawthorns & Co., Ltd., of Leith. From 1922 to 1927 he was at sea in the service of the City Line and the Bank Line, and in 1928 he served in H.M.S. "Tiger" and H.M.S. "Barham" as an engineer lieutenant. From then until 1939 he was a draughtsman with the Liverpool Corporation Electric Supply Department. Since the outbreak of hostilities, Commander Robertson had been serving in H.M. Navy. He leaves a widow.

ARTHUR ALBERT ROBSON (Member 5479) lost his life by enemy action in Far Eastern waters about the early part of 1942. Mr. Robson was born at Glasgow in 1883 and was educated at the Bellahouston Academy, Glasgow. On the completion of his apprenticeship in 1905, this having been served with Messrs. Muir & Houston, Ltd., he was appointed 3rd engineer of Messrs. Stewart & Gray's s.s. "Invergyle". Two years later he joined the s.s. "River Clyde" (of Dardanelles expedition fame in the last war), but left her in San Francisco to enter the service of The Standard Oil Co. In 1912 he transferred his service to The Robert Dollar Co., sailing as 2nd engineer in their s.s. "Stanley Dollar". Returning home in 1914 he obtained his First-Class Board of Trade certificate and was appointed a junior engineer by The Eagle Oil Transport Co. In 1915 the s.s. "San Melito" in which he was serving was chased and heavily shelled by a German submarine and but for the heroism of the engine-room staff, who opened out the engines to a speed never before attained, the vessel would probably have been lost. In 1917 he was appointed 2nd engineer by The Anglo-Saxon Petroleum Co. and served in their tankers on the Eastern trade. In 1920 he transferred his service to The British Tanker Co., by whom a few years later he was promoted to chief engineer. In 1936 he was

transferred from this Company to the Royal Fleet Auxiliary, in which service he was employed as chief engineer in several tankers. He was still employed in this capacity at the time of his death.

ANGUS ROSS (Associate 9053) lost his life at sea by enemy action during February, 1942. Mr. Ross was born in 1909 at Tarbat, Fearn, Ross-shire, and was educated at Geanies' School, Fearn, Tain Royal Academy, and Robert Gordon's Colleges, Aberdeen. After serving his apprenticeship with Messrs. Hall, Russell & Co., Ltd., Aberdeen, he entered the service of The Royal Mail Lines, Ltd. In 1937 he transferred to the City Line, which Company he left in 1939 to take up an appointment with H.M. Office of Works in Renfrewshire. In 1940 he became an engineer surveyor with Messrs. Insurance Engineers, Ltd., and in January, 1942, he was recalled for service in the Merchant Navy, being appointed a junior second engineer in the Donaldson Line.

GEORGE SLOGGETT (Member 338) died at Cardiff on 2nd December, 1942, aged 76 years. Mr. Sloggett was born at Cremyll, Mount-Edgcumbe, and in 1877 became a draughtsman to the Cardiff Junction Dry Dock & Engineering Co.; later he served as chief draughtsman for 17 years to The Tyneside Engineering Co. After a partnership as a consultant, he undertook ship surveyor's work at the East Dock, Cardiff, until he was appointed consulting engineer and marine superintendent to the Cambrian Steam Navigation Co. and other companies. These connections ended on the sale of the ships to foreign owners in 1924-25. During the last war he was frequently in France attending to vessels carrying munitions. He was one of the pioneer motorists of South Wales and for some years vice-president of the South Wales Automobile Club. In 1928 he was president of the Cardiff Cornish Society, and was prominently associated with many other Cornish and Welsh cultural associations. In 1935, Mr. Sloggett was admitted to the Freedom and Livery of the Worshipful Company of Shipwrights, and in the same year admitted a freeman of the City of London. In recent years he spent an increasing portion of his time at his Padstow home, which was known to Cornishmen far and wide for its architectural interest and remarkable collection of antiques and *objets d'art* which Mr. Sloggett housed there. In 1941 it was largely destroyed by enemy action.

FRANCISCO VIDAL (Member 3276) died at Las Palmas about May, 1941. Mr. Vidal served his apprenticeship with the Cia Transatlantica, Cadiz, and Messrs. Denny Bros. of Dumbarton. He then spent some 15 years at sea, during which he rose to the position of chief engineer, and subsequently he became superintendent engineer to the Interinsular Mail S.S. Co., Grand Canary.

ROBERT ARTHUR WAREHAM (Member 7932) believed to have lost his life at sea by enemy action prior to May, 1942. Mr. Wareham was born in 1900 and on the completion of his apprenticeship he commenced his sea career. At one time he was in the service of the Yeoward Line.

ROBERT WHYTOCK (Member 8617) died in a nursing home at Fulham on 11th January, 1943. He was born in Falkirk in 1887 and educated at the Falkirk High School. After serving an apprenticeship with John Brown & Co., Ltd., of Clydebank, from 1904-9 he joined the Orient Steam Navigation Co., Ltd., as a junior engineer. He served with this company for 37 years and held the position of chief engineer, his last ship being the "Ormonde". Mr. Whytock sailed with the Company's ships throughout the 1914-18 war and was torpedoed whilst serving on the "Omrah". He leaves a widow and two sons.

CHARLES WOOD (Member 8039) is presumed to have lost his life at sea by enemy action during December, 1942. He was born at Hull in 1889 and educated there; his apprenticeship was served at Messrs. Amos & Smith's Neptune Engineering Works at Hull from 1903-10. In 1911 he joined the Booth Line as junior seagoing engineer, and thereafter gained wide experience in various classes of ships, serving throughout the last war. He was present on the hospital ship, the s.s. "Britannic" when it was sunk in the Aegean Sea in 1916. Mr. Wood is survived by a widow, and his son is now a junior engineer in the Shaw Savill & Albion Line.

RICHARD EDWARD WITTY (Associate 8657) reported missing, officially supposed drowned. Mr. Witty was born in 1912 and was educated at Hull Grammar School. On the completion of his apprenticeship in 1933, this having been served with Messrs. Amos & Smith, of Hull, he joined the Anglo-Saxon Petroleum Co., Ltd., as a junior engineer. In 1939 he gained a steam-endorsement of his First-Class Board of Trade Motor Certificate. Mr. Witty married in November, 1940, and a son was born in April, 1942.

TABLE A.

	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.			31st Dec., 1942.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Receipts from Subscriptions	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	6,271	1	0
Entrance Fees...	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	237	15	0
Advertisements ...	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	1,576	16	4
Total Income ...	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	9,034	17	2
General Ex. A/c.	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	3,396	9	3
Rent, Rates and Taxes	477	15	8	470	4	6	484	10	3	519	2	1	536	2	1	542	18	2	565	17	1	661	16	7	705	11	8	712	14	6
House A/c. ...	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	492	0	0
Repairs and Redecorations	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	7	18	6
Transactions ...	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	2,433	8	3
Sundry Creditors	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	449	5	9
Capital A/c. ...	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	33,066	4	2
Balance on Revenue A/c.	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	589	10	0

SARDINIA HOUSE,
LINCOLN'S INN FIELDS,
LONDON, W.C.2.
10th February, 1943.

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

Gentlemen,

We have to report that we have examined and checked the Accounts of your Institute for the year ended 31st December, 1942, and we set out below our observations.

(1) The Revenue Account shows a surplus of £589 10s., compared with £1,202 8s. 11d. last year, a decrease of £612 18s. 11d.

(2) The Gross Revenue was £9,034 17s. 2d., an increase of £78 15s. 5d., made up as follows:—

	£	s.	d.	Decrease.	Increase.		
	£	s.	d.	£	s.	d.	
Subscriptions ...	244	0	9	—	—		
Entrance Fees ...	—	—	—	59	0	0	
Examination Fees ...	5	5	0	—	—		
Advertisements ...	—	—	—	118	7	4	
Rent Receivable ...	—	—	—	128	2	10	
Interest ...	—	—	—	20	10	11	
Contributions towards Expenses for use of Hall and Library	—	—	—	—	1	10	0
Sundry Sales...	—	—	—	—	0	10	1
	£249	5	9	328	1	2	
Deduct Decreases ...	—	—	—	249	5	9	
Increase as above ...	—	—	—	£78	15	5	

(3) Expenditure charged to Revenue Account amounted to £8,445 7s. 2d., an increase of £691 14s. 4d., made up as follows:—

	£	s.	d.	Decrease.	Increase.	
	£	s.	d.	£	s.	d.
General Expenses ...	—	—	—	155	0	8
Rent, Rates, etc. ...	—	—	—	7	2	10
House Account ...	—	—	—	120	0	6
Repairs ...	81	7	6	—	—	
Air Raid Precautions ...	205	4	6	—	—	
Insurance ...	65	16	3	—	—	
Transactions ...	356	18	9	—	—	
Transactions (Bound Volumes)...	—	—	—	40	7	6
Library and Reading Room Account	—	—	—	0	10	6
Reserve for Repair and Renewal of Premises ...	—	—	—	1,000	0	0
Depreciation ...	—	—	—	56	19	9
Parsons Memorial Lecture ...	—	—	—	28	3	10
Heat Engines Prizes ...	—	—	—	1	3	3
Extra First Class Certificate Medal	3	7	6	—	—	
Junior Silver Medal and Premium	5	0	0	—	—	
	£717	14	6	1,409	8	10
Deduct Decreases ...	—	—	—	717	14	6
Increase as above ...	—	—	—	£691	14	4

In view of the probability that after the war the City Premises will require a considerable outlay in respect of Repairs and Renewals, the sum of £1,000 has been set aside to form a Reserve Fund for this purpose.

(4) The Increase in Expenditure of £691 14s. 4d., less the increase in Revenue of £78 15s. 5d., accounts for the decrease in Surplus Revenue.

(5) "The Running and Maintenance of Marine Machinery".

In accordance with the Council Minute of 3rd July, 1933, £75 16s. 8d. has been paid to the Guild of Benevolence. Further Sales, less Expenses during the year amount to £171 17s. 10d.

(6) "Electricity Applied to Marine Engineering".

Sales during the year amounted to £172 18s. 1d. so that after deducting the balance of the cost of publication, viz. £41 16s. 1d., and expenses incurred in the year, £91 0s. 7d. remains available for transfer to the Guild of Benevolence in accordance with the Council Minute of 30th March, 1942.

(7) Investments.

The Market Value at 31st December, 1942, of the Institute's free Investments standing in the books at £18,343 7s. 2d. was £18,560. During the year £834 3% Savings Bonds "A" 1955/65 and £1,000 3% Savings Bonds "B" 1955/65 were purchased at par.

(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.

THE INSTITUTE OF MARINE ENGINEERS GUILD OF BENEVOLENCE—Ninth Annual General Meeting.

The Ninth Annual General Meeting of The Institute of Marine Engineers Guild of Benevolence was held in the Library of The Institute on Wednesday, 14th April, 1943, at 2 p.m. Mr. James Carnaghan, Chairman of the General and Executive Committees, was in the chair. The President of The Institute, Engineer Vice-Admiral Sir George Preece, was among the 17 members and officers present.

The Chairman, in his opening remarks, tendered the Committee's sincere thanks to The Institute of Marine Engineers for continued financial support in the form of donations from the Social Events and Publications Accounts. They were also grateful to those members who had been instrumental by their personal efforts in stimulating the interest of a number of firms and individuals in the work of the Guild. He again appealed for the support of those members of The Institute who had not yet become members of the Guild. In the hope of exciting their interest he cited one of several cases in which the Committee had been able to render assistance, namely that of the widow and two daughters, aged eight and four years, of a late Member of The Institute. During his lifetime he had held what one would consider an assured position, but was cut off in the prime of life. In order that the widow might take a full time situation it was advisable to place the children in a boarding school, but this was impossible without outside assistance. Although the actual resources of the widow rendered her ineligible for relief from the Guild, the Committee had granted the necessary assistance for the education of the children, who had now been suitably placed.

As a matter of interest, the Chairman quoted the following extract from a letter recently received from a Member of The Institute stationed in Palestine who, in applying for Life Membership of the Guild, wrote: "In peace time it is only natural that little attention is paid to the Guild. When war broke out in 1939, although I volunteered for National Service in response to the Government's appeal, I found myself in what is called a 'reserved' or 'protected' occupation. However, in 1940 I was captured and interned during the Iraq rebellion and, on being released, realised how lucky I had been. Previously as engineer-in-charge of a border station I had charge of the evacuation of all the women and children from Iraq to Palestine, amongst them, my fiancée and her family. Most of these people went to South Africa. Just recently I was granted leave to visit Durban and was able to get married. It was on this journey to Durban and back to Suez that I renewed my acquaintance with the 'cloth' from which I had been so long separated. It was brought home to me how lucky I was to be able to make the journey and complete my happiness and return to the comparative comfort of the desert. The enclosed draft for £10 10s. then, is a form of thanksgiving and appreciation of those who made the journey possible and who, in the not too distant future, will return my wife to me".

The Chairman read another quotation, of a different nature, from a Member of The Institute and Life Member of the Guild, who said: "As a thank offering to our brave brother Marine Engineers who still have to and do face the beastly hun with his 'pig-boat', I would like to double my fee for Life Membership of the Guild. I think that perhaps there are quite a large number of Life Members who would follow this example if it entered their heads".

If those Members of The Institute, the Chairman added, who had not become members of the Guild could realise how grateful the recipients were for the Committee's grants, he felt certain that they would no longer hesitate to join and thus assist in giving ready assistance to all deserving marine engineers and their dependants who through the force of adverse circumstances find themselves in need of help.

The Secretary then read the Annual Report (see p. xxiv).

The Honorary Treasurer next presented the official Auditors' Report on the Accounts (see p. xxvii) and his own report thereon as follows:—

"Mr. Chairman and Gentlemen,

Those members who were present at the Annual General Meeting of The Institute will remember that I made special reference to the contributions which have been received from the King George's Fund for Sailors and which necessitated the presentation of our accounts in a special form to comply with their requirements, provided we wished to continue to receive contributions from this source.

Our accounts have therefore been rearranged to meet the requirements of the King George's Fund for Sailors but if these had been presented to you without your having the benefit of comparison with our accounts drawn up in the same form as in previous years, you would have found them very confusing and probably not at all understandable.

Under these circumstances it has been decided to have the Accounts prepared in both forms, i.e.,

(a) our old style,

(b) in conformity with the King George's Fund for Sailors' requirements.

This is the reason why you have two Balance Sheets and Revenue Accounts before you to-day to enable you to make a comparison between the two forms of accounting. In future years the accounts will be presented annually in accordance with the King George's Fund for Sailors' requirements. I will now endeavour to point out the differences in the two sets of Accounts. King George's Fund for Sailors insist that all contributions, donations and bequests be treated as Revenue unless specifically stated by the donors that they wish their monies to be placed to Capital Account. Our practice in the past (and it has been left to the General Committee mainly to determine) has been to place all special donations and bequests to Capital Account, our reason for adopting this policy being a long term one, viz., to build up as large a capital sum as possible and thereby increase the strength of the Fund for future requirements, as according to our Rules only the interest from invested capital funds can be distributed by way of relief.

You will notice according to our own form of Balance Sheet that the Capital Account has been increased from £22,329 1s. 10d. to £23,869 6s. 5d. In the King George's Fund for Sailors Balance Sheet it has only been increased from £22,329 1s. 10d. to £22,507 10s. 10d. due to the fact that two items which you see under "assets" in our Balance Sheet, viz., £15 3% Defence Bonds and £1,100 3% Savings Bonds are treated as revenue and transferred to the Revenue funds. This is the main item of difference, although there is another and that is shown in the amount standing to our credit in the Post Office Savings Bank.

Under our own Balance Sheet we have £879 3s., whereas under the new accounting system we have only £632 8s. 5d., the difference of £246 14s. 7d. being transferred to the Post Office Savings Bank item in Revenue funds.

A further noticeable point is that our Accountants have followed the usual accountancy practice in the Revenue Account by showing all expenditure on the left hand side of the account and receipts on the right hand side. King George's Fund system is the reverse, and shows income on the left with expenditure on the right.

We consider that our excess of income over expenditure for the past year is only £610 9s. 8d., whereas by the new method now adopted, by the transference of capital items to income, the balance of income over expenditure amounts to the large sum of £1,972 4s. 3d.

It is imperative that I should point out and make quite clear to you that although the cash now received is being treated in the manner previously outlined, we are entitled to (and in fact have) invested as much of this revenue money as possible in order to increase our interest in dividends, but the monies are all kept in revenue funds, the reason being that investments under revenue funds can at any moment be used for grants in relief if demands on our funds so require.

Naturally, in future, we shall adopt the policy of asking donors to specify particularly that their contributions shall be placed to either the Capital or Revenue Account, as the General Committee consider that in spite of the different accounting system we should still continue to build up as large a Capital Account as is possible.

In comparing our finances with the previous year, you will note that the amount distributed by way of benefit is £940 8s. 6d., as compared with £843 12s. 9d. in the previous year.

Our excess revenue over income on our old basis of accounting is £610 9s. 8d., as against £553 4s. 7d.

During the year, £1,100 has been invested in 3% Savings Bonds and £15 in 3% Defence Bonds.

The amount standing to our credit in the Post Office Savings Bank the previous year was £489 3s. on Capital Account, as against £632 8s. 5d. for the year under review.

The total cash at bank in capital and revenue in 1941 was £523 11s. 8d., against £609 1s. in 1942.

You will gather from the above that there is a substantial improvement in our accounts in every direction. What may be termed the really strong improvement in our accounts as compared with those of last year is undoubtedly due to the magnificent way in which we have been supported by numerous friends. You will find a complete list of Donors for the year under review from the 1st January to 31st December, 1942, the principal contributions shown therein being one of £500, and others of £250, £105 and £100, as well as the contribution from King George's Fund for Sailors of

£400 and the assistance given from The Institute's Social Events Account of £150, not forgetting the contribution of £75 16s. 8d. received from the profit made by The Institute on the "Running and Maintenance of Marine Machinery" Handbook. Our Chairman referred to monies received from the sale of "Electricity Applied to Marine Engineering"; nothing, however, is included in the accounts before you, but there will be an amount of £91 0s. 7d. for 1943 plus £171 17s. 10d. from the "Running and Maintenance of Marine Machinery" Handbook, a total of £262 18s. 5d. which I am sure you will agree is a very handsome contribution.

We tender our very hearty thanks to all those who during the past year have helped us so munificently, and we hope other friends will be spurred to help us still further during the current year.

May I also make a plea to our own members to join the Guild without delay. The subscription is only quite nominal, but if all the members of The Institute were members of the Guild, it would immediately place the Guild Funds in an enormously strong position, fully able to cope with a very greatly extended demand for grants in aid and which I feel sure is bound to take place in the future, if not for the time being.

One other reference, and that is to the amounts received from Ground Rents. These are shown in the Revenue Account, but this year we have shown the gross amount received, viz., £429 7s. 6d., as well as the costs of collection of £7 4s. 8d., and our proportion of War Damage Contribution on all our properties amounting to £16 12s. 9d., leaving a nett return from Ground Rents of £405 10s. 1d. These investments show us nearly a 4% return, which is practically 30% over what we can obtain in gilt edged investments at the present moment".

Mr. J. Calderwood (Chairman of Council), in formally proposing the adoption of the Report and Accounts, expressed the view that there were still many marine engineering firms who did not know of the Guild's existence and who might be induced to contribute to the capital fund. He was somewhat surprised that there had not been claims for relief, but no doubt the calls on the fund would increase shortly as a result of the war.

Mr. A. H. Mather (Vice-President), in seconding Mr. Calderwood's motion, said that he had only appreciation and no criticism to offer on the Report and Accounts. A specially gratifying feature was the income the Guild had received by way of profits on the sale of the books published by The Institute. He questioned whether the repayment of Income Tax could be relied upon indefinitely, in view of the increasing needs of the Chancellor of the Exchequer.

The adoption of the Report and Accounts was carried unanimously.

Mr. T. A. Crompton (Member), referring to the statement in the Report with reference to the work done by the Chairman during the past year, said that Mr. Carnaghan obviously had the full confidence of the General Committee and he (Mr. Crompton) was also quite sure that that confidence was shared by the members of the Guild. He therefore proposed that Mr. Carnaghan be re-elected as Chairman for the ensuing year.

The proposal was seconded by Mr. A. F. C. Timpson and carried unanimously. Mr. Carnaghan suitably acknowledged this further expression of the Committee's and the members' approval of his chairmanship.

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

Vice-President: Mr. R. S. Kennedy (re-election).

Members of Council: Messrs. A. F. C. Timpson (re-election) and J. Calderwood (new election).

Members of the Guild: Messrs. T. A. Crompton (re-election) and H. J. Wheadon (transfer from Member of Council).

Honorary Auditors: Messrs. W. D. Heck and A. F. C. Timpson.

Honorary Solicitor: Mr. W. E. Archer.

Honorary Medical Officer: Dr. W. J. Galt, M.A., M.B., B.Ch.

No other nominations were forthcoming and the foregoing nominees were unanimously elected.

The Chairman referred to the condition, already explained by the Honorary Treasurer, on which the grant had been allocated to the Guild by King George's Fund for Sailors, and the consequent obligation to place all donations to Revenue Account except those specifically donated as capital. He accordingly proposed, on behalf of the General Committee, that the following wording be inserted as an additional item in the list of sources of Income laid down in Rule 7, and that the present item (c) become item (d):

Monies received from Companies, Corporations or other sources if so stipulated by the donors.

It was the Committee's intention in future to ask all donors to indicate one or the other Account for the allocation of their donations, in order to comply with the requirement of the King George's Fund for Sailors.

The above proposal was seconded by Mr. T. A. Crompton and carried unanimously.

Mr. R. Morton (Member) said that it gave him great pleasure to express, on behalf of the Members, their appreciation of the work done by the General and Executive Committees and the Officers during the past year. Their services stood out in a stronger light when one considered the conditions under which they were working to-day and their very limited leisure. The best form of appreciation would be more help from the Members. He did not mean help in the administrative work but help in the form of increased membership and subscription income.

The Guild was a scheme by which they helped each other, and while all members hoped that they themselves would never need help there was always the possibility that one or other of them might meet with adversity and need the help of the Guild. That consideration alone should move every member of The Institute to join the Guild. He anticipated that there would be many cases for a number of years to come where the families of the sea-going branch of The Institute membership would be deprived of the standard of education and maintenance of life to which they would have been justly entitled under happier conditions. He did not think this was an occasion to expound on the sad facts which they all knew, but the country owed an almost irredeemable debt to the Merchant Navy and to the engineers. There was nobody in a better position to understand what had gone into the making of that debt than the shore members, and they should be among the foremost in repaying it.

It had occurred to him to suggest the desirability of the establishment of a school where children of marine engineers, in common with children of other professional classes, would obtain the education and standard in life which they would have had if their fathers had been able to continue in the profession without forfeiting their lives or health for their country. Possibly the Committee had considered this idea, which would involve considerable funds, but even if they were to continue dispensing relief on the present basis alone they undoubtedly needed more help. He put forward the following suggestions for the consideration of the Committee and the present members: (1) that each member should endeavour to induce at least one other member of The Institute to enrol in the Guild, with the ultimate aim of increasing the proportion to 100 per cent.; (2) that the minimum membership subscription be increased from 10s. 6d. to £1 1s.; (3) that assuming the above increase was adopted, members should make that increase retrospective for the war years, during which they had enjoyed the security which had been due largely to the engineering branch of the Merchant Navy.

Proposals 2 and 3 should be carried out in the strictest confidence because not everyone would be able to comply with them. There were many calls on members' financial resources, and it would not be fair to impose these alterations as a strict ruling.

Whether these suggestions were brought into force or not, he was sure that the Committee would continue to administer the funds with the efficiency which they had exercised hitherto, and he had great pleasure in proposing a hearty vote of thanks to the General and Executive Committees and Officers.

The proposal was carried unanimously.

The Chairman, responding on behalf of the General and Executive Committees and the Officers of the Guild, thanked Mr. Morton for his kind remarks and suggestions, which would be duly considered by the Committee. He also thanked the members for their expression of appreciation.

The Committee could not, without possessing enormous basic funds, establish a school of their own. There were many existing schools with which the Committee kept in touch, and whenever possible they arranged for the placing of children in a suitable school, as for instance in the case he had mentioned in his opening remarks.

He desired personally to thank the Honorary Treasurer, the Secretary and one of his staff, Mrs. J. P. Watson, for the efficient manner in which they had carried out their duties throughout the session.

He tendered his thanks to the members of the General and Executive Committees for their loyal assistance. Although there had been no actual meetings of the Executive Committee during the past session owing to war emergency, the members had attended the meetings of the General Committee and had kept themselves informed of the work of the Guild which he had carried out on their behalf. In this connection Mr. T. A. Crompton had rendered particularly valuable assistance on several occasions.

Mr. A. H. Mather, referring to Mr. Morton's remarks, drew attention to the scheme recently inaugurated at Cheltenham College for the education of children of officers of the Merchant Navy, particulars of which had been published in the TRANSACTIONS.

The meeting ended at 2.45 p.m.

Ninth Annual Report of the General Committee.

17th March, 1943.

The Committee are again pleased to report that it has been possible during the past year to assist every applicant qualified for relief in accordance with the Guild Rules, notwithstanding that the number of recipients of relief and the total amount of the grants exceeded those of the preceding year.

The Committee tender their sincere thanks to the Members and Donors named in the following pages, who have so generously supported the Guild during the past year. The donations include further substantial amounts received from firms in the marine engineering and allied industries, for which the Committee are particularly grateful. Further grants from King George's Fund for Sailors are also gratefully acknowledged.

The Committee's renewed thanks are extended to the Liverpool Marine Engineers and Naval Architects' Guild, the Marine Engineers' Association Benevolent Fund and the Royal Alfred Aged Merchant Seamen's Institution for having participated in grants of relief to several applicants.

Meetings of the Committees.

Since the date of the preceding Report the General and Executive Committees have held four joint meetings. The Committee are again indebted to the Chairman, Mr. Carnaghan, who has ably executed the delegated functions of the Executive Committee in dealing with fresh applications throughout the year. In all cases his decisions have been approved and confirmed by the General Committee at their subsequent meetings.

Applications for Relief.

A summary of the cases dealt with between 1st January and 31st December, 1942, is given on page xxix.

Relief granted to these applicants involved an expenditure of £943 14s. 6d. In 29 of the cases the relief has been continued from the preceding year.

Membership.

16 Life Members and 21 Subscribing Members have been en-

rolled during the year.

Allowing for losses by death and resignation the net result of these changes shows a total membership at the date of this report of 152 Life Members and 354 Subscribing Members.

149 of the Subscribing Members have covenanted to continue their subscriptions for seven years; this enables the Guild to claim repayment of Income Tax on these subscriptions. Subscribing Members who have not yet covenanted are urged to do so at an early date. At the present rate of Income Tax the adoption of this scheme effects a very appreciable addition to the income available for distribution as relief. Particulars of the scheme and forms of Covenant are obtainable on application to the Secretary.

Qualifications for Relief.

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

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

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

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

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

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

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

JAMES CARNAGHAN,
Chairman of the General Committee.

B. C. CURLING,
Secretary.

LIST OF DONORS TO THE INSTITUTE OF MARINE ENGINEERS GUILD OF BENEVOLENCE. From 1st January to 31st December, 1942.

	£	s.	d.		£	s.	d.
Institute of Marine Engineers (Social Events Account)	150	0	0	Mather & Platt, Ltd.	10	10	0
Institute of Marine Engineers (Publications Account) . . .	75	16	8	Lt.-Col. H. Gordon-Luhrs, C.M.G.	1	1	0
King George's Fund for Sailors	400	0	0	Watts, Fincham, Ltd.	2	2	0
Cunard White Star	40	0	0	A. F. C. Timpson	1	1	0
P. A. N. Simpson	17	6		A. Logan	10	6	
J. Snell	10	0		W. E. G. Wallace	8	0	
S. W. C. Fleming	18	0		S. G. Colinese	1	10	0
F. R. C. Cookson	10	6		R. A. Collacott	3	3	0
F. Turnbull	10	6		James Pollock Sons & Co.	5	5	0
W. A. Tait	15	6		H. McLean	2	8	0
R. B. Wight	10	0		J. C. Heriot	19	0	
W. J. Middleton	1	1	0	Blundells & T. Albert Crompton & Co., Ltd.	10	10	0
E. J. Booty	10	6		T. W. Longmuir	1	1	0
J. M. Kay	10	0		John Murray & Pilot Press	25	0	0
G. R. Hutchinson	12	6		C. Limpwright Wren	1	1	0
H. Barr	10	0		Dr. S. F. Dorey	10	0	0
J. W. Ramsay	2	16	0	Petters, Ltd.	21	0	0
W. Dunster	5	0	0	Rubery, Owen & Messier, Ltd.	10	10	0
S. G. Christensen	17	6		John Thompson (Wolverhampton) Ltd.	21	0	0
Mountstuart Dry Docks	100	0	0	Superheater Company, Ltd.	15	15	0
L. T. G. Soulsby	5	0	0	Heenan & Froude, Ltd.	10	10	0
W. Mellor	1	1	0	Darwins, Ltd.	10	10	0
Clarke, Chapman & Co., Ltd.	500	0	0	E. F. Butler	10	6	
J. G. Kincaid & Co.	105	0	0	Z. Kuske	1	0	0
Vickers-Armstrongs, Ltd.	250	0	0	Folland Aircraft, Ltd.	10	10	0
N. Mumford	3	3	0	E. F. Spanner	10	0	0
Lloyd's Register of Shipping	26	5	0	W. A. Tait	4	6	
J. Hastie & Co.	105	0	0	P. A. M. Simpson	5	18	0
D. B. Skinner	2	2	0	Anonymous	5	0	0
A. P. Quarrell	1	1	6				

Donations Received from 1st January, 1943, to date of publication of this Report.

	£	s.	d.		£	s.	d.
J. D. Middleton	10	6		M. J. Booty	10	6	
J. Calderwood	2	0	0	J. T. Train	10	0	
W. F. Spanner	1	0	0	W. O. Alton	5	5	0
J. W. Bruce	10	6		H. Barr	10	0	
R. P. Wallis	1	1	0	G. R. Hutchinson	15	0	
J. K. Thomas	1	0		G. Ormiston	5	5	0
R. H. Gough	1	1	0	W. Mellor	1	1	0
J. H. Galloway	10	6		J. Snell	10	6	
S. W. C. Fleming	10	6		F. Turnbull	10	0	
T. Dodds	10	6		F. Wood	1	1	0
Anonymous	10	0		F. W. Youldon (Collecting Box)	1	10	0
Anonymous	1	1	0	Lloyd's Register of Shipping	26	5	0
T. R. Cookson	10	6		Eng. Vice-Admiral Sir George Preece, K.C.B.	5	5	0

LIST OF MEMBERS AT DATE OF PUBLICATION OF THIS REPORT.

Life Members.

<p>Adie, P. I. Alexander, Claud Allen, H. G., M.A. Allen, Norman G. Allen, Sir R. W., C.B.E., D.L. Allen, Rupert S. Allen, W. K. G. Andrew, George Armstrong, Hugh Arthurson, M. Austin, J.</p> <p>Bailey, W. H. Balmer, H. S. Bathgate, J. S. Bedford, G. E. Berlie, R. S. Blair, D. E. Blevin, W. N. Blight, James Bramah, David, C.B.E. Brettell, W. G. Bruce, W. J. Willett, O.B.E., R.D., M.Eng., Eng. Capt. R.N.R.(ret.) Buchanan, H. D.</p> <p>Carswell, D. B. Christie, J. G. Clarke, R. T. Clough, E. Coates, W. Collins, W. H. Conoley, C. W. Corry, R. Cowan, R. S. Craven, Sir Charles W., Bart., Com'r., R.N.(ret.) Crichton, A. E. Crompton, T. A. Crompton, T. M. Crookston, D. D.</p> <p>Davidson, A. E., Major- Gen., C.B., D.S.O. Davis, Gordon, Lt.(E.), R.N.V.R.</p>	<p>Dougan, A. S. Drossi, H. H. R. Drysdale, Ian</p> <p>Easthope, R. J. Evans, Frank S. Everard, A. M.</p> <p>Farmer, J. D., O.B.E. Foley, Sir E. Julian, C.B. Froggatt, L.</p> <p>Gamage, L. C. Gillies, R. M. Goldup, D. R. Goodsir, D. Gordon, S. G. Grant, Sir Allan J., J.P. Grant, W. C. Green, R. H. Greenfield, Eric Gummer, R. H.</p> <p>Hamley, F. J. Handley, C. Hardy, J., O.B.E. Henderson, J. M. Hindmarch, T. Hoare, H. J. Holly, R. J. W Hood, R. Houlder, M. C. Houston, W. C. Hulbert, W. Hume, Crawford W. Hunter, Sir Summers Hutchinson, G. R.</p> <p>Imrie, W.</p> <p>Johnson, John Johnson, P. B., B.A.</p> <p>Kedzlie, J. E. Kennedy, R. S. Kent, S. N. Kincaid, Randal G. Kuske, Z.</p>	<p>Lamb, John Levick, R. S. H. Lowrie, J. C.</p> <p>Marshall, J. S. Clayton Martin, C. E. Mather, A. H. Mellor, W. Mitchell, P. G. Mylne Moore, C. K. Moseley, O. H. G. K.</p> <p>Macdonald, T. MacKay, A. M. McIver, J. P. McLaren, John McLaughlin, Wm. McLellan, T.</p> <p>Neill, John, B.Sc. Nelson, C. B. Nelson, W. L. Nicol, J.</p> <p>Ormiston, George Owen, G. H. L.</p> <p>Parker, A. H. Paxman, E. P., M.A. Peacock, James Petter, R. C., Capt. Pickering, G. Pickthall, F. J. Platford, A. N., Lieut.(E.), R.N.V.R. Plows, G. B. Porn, M. Pounder, C. C. Preece, Sir G., Eng., Vice- Admiral, K.C.B. Preston, J. J. Prentice, C.</p> <p>Ramsay, J. W. Rebbeck, Sir F. E., D.L., J.P. Richmond, Sir J. R., K.B.E., C.B.E. Riddell, A. R.</p>	<p>Riddell, T. C. Ritchie, F. G. Roberts, W. H. Rowcliffe, C. R. Rowell, H. B. Robin Rutherford, H.</p> <p>Sclater, J. B. Silley, B. L., B.A. Silley, G. F. Silley, H. A. J. Smeaton, Robt., O.B.E. Soukup, C. Soulsby, L. T. G. Steele, W. R., Eng. Com'r. R.D., R.N.R. Stein, Norman Stephenson, B. Swancoat, N. H.</p> <p>Tait, W. H. Taylor, G. Thompson, S. J., Col. D.S.O. Thompson, W. B. Thomson, E. A. Turnbull, G. M. Turnbull, R. R.</p> <p>Vincent, R., Eng. Com'r., R.I.N.(ret.)</p> <p>Wallis, R. Pendennis, Ph.D., Wh.Ex., M.Sc. Warwick, B., Captain Watson, Edgar White, W. F. Whiteford, A. L. Wight, H. D. Williams, C. A. N., D.S.O. Williams, H. D. Williamson, J. C. G. Wilson, G. H. Wilson, P. W. Woodeson, W. A.</p> <p>Youldon, F. W.</p>
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Subscribing Members.

<p>Aitchison, T. (T/Lt.(E), R.N.R.) Aitken-Quack, E. Aldcroft, J. A. Annal, John Arnold, H. Austin, G.</p>	<p>Balbirnie, R. Barker, F. E. Barlow, R. C. Baugh, E. F. J. Beckett, F. O. Bell, Frank P. Bennett, T. A., B.Sc.</p>	<p>Bergner, A. E. Bernard, H. Bjorck, C. E. Bloomfield, W. J. Booth, W. H. Botcherby, W. C. Bowie, S., B.Sc.</p>	<p>Boyes, F. M. Boyle, A. H., D.S.C. Brady, H. W. Braidwood, T. Brookes, F. G. Brown, E. Brown, W. G.</p>
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 Lang, W. Veysey
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 Wh.Sc.
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 McLaren, W.
 McNeill, S.
 McNiven, J. L.
 McWilliam, R.

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 Nicholson, H. J., Com'r.
 (E.), R.N.
 Nicholson, J. S.
 Nickels, S. S.

 O'Riordan, G. F., B.Sc.
 Other, E., Eng. Lt. Com'r.,
 R.N.R.

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 Palmer, R. P.
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 Parry, E. U.
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 Pattie, John
 Paul, A.
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 Pilmour, W. H.
 Pinkney, R. B.

 Pounder, G. D.
 Pugh, F. H., Eng. Com'r.,
 R.N.(ret.)

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 Rainie, R., M.C.
 Ramsay, C. G.
 Rea, P. K.
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 Redman, J. H.
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 (E.), O.B.E., R.N.
 Rielly, J. B.
 Ritchie, Charles
 Lieut.(E.), R.N.R.
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 Roberts, E. A., Major, R.E.
 Roberts, J. E.
 Robertson, A. C.C.
 Robinson, E.
 Robinson, J. C. S.
 Robinson, J. G.
 Robinson, M.
 Rogers, J. J.
 Rourke, W.
 Russell, Henry
 Rutter, J. E.
 Ryland, E. T.

 Sands, F.
 Saunders, K. A.
 Scanes, J. J.
 Scobie, J. K.
 Scott, A.
 Scott, George
 Scott, H. B.
 Scott, H.
 Scullard, G. T. B.
 Searles, H. S.
 Seaton, W. T.
 Shaw, David
 Shingler, S. A.
 Simmonds, M.
 Sims, P. J. S.
 Sinclair, F. T.
 Smith, F. W.
 Smith, S. A., M.Sc.
 Smith, W.
 Snoswell, B.
 Spanner, E. F.
 Speck, George
 Speechly, C. C.
 Stanbridge, C. H.
 Step, A. G.
 Stephens, E. R.
 Steven, W. L.
 Stevens, E. A.
 Stevenson, A. M.
 Strachan, R. R.
 Straughan, J. W. S.
 Suddes, T. E.
 Swanson, J. M.

 Taylor, A.
 Taylor, F.
 Taylor, H. L.
 Telfer, T., B.Sc.
 Tennant, W.
 Thomas, J.
 Thompson, F.
 Thompson, G., M.Eng.
 Thompson, N. E.
 Thomson, John
 Timpson, A. F. C., M.B.E.
 Timpson, F. W.
 Traill, A. P., Wh.Sc.
 Train, G. R.
 Tunnell, H. G.
 Tweedy, W. N.

 Unthank, G. R.

Varian, A. H.	Warwick, F.	Wheadon, H. J.	Wilson, A. J.
Vose, Henry J.	Watson, A. H. Scott	Whiteley, C. W.	Wilson, R. T.
Vose, W. A.	Watson, G. Ridley, B.Sc.	Whitelock, J. K.	Wilson, T. S.
Waddle, W.	Watson, James	Whyte, W.	Winch, H. H.
Wadley, H. U.	Watson, W. L.	Whyte, W.	Windrim, K.
Walker, A. J.	Watt, Alex.	Williams, C.	Wren, C. W. Limpwright
Walker, C. A.	Way, C. T.	Williams, W. T., O.B.E., B.Sc., Wh.Ex.	Wright, R. M.
Walker, H. D.	Westall, W. F.	Williamson, A. S.	Young, E. C.
Walker, J. C., Sq./Ldr., R.A.F.	Wetherall, R. H.	Williamson, E.	Youngs, R. C.
Walsh, F. C.	Whayman, W. M., Eng. Rear-Admiral, C.B., C.B.E.	Williamson, W. H.	
		Wilson, A. H.	Zulver, C.

PARTICULARS OF CASES ASSISTED BY THE GUILD,
from the 1st January to the 31st December, 1942.

Case No.	Age.	Qualification.	Amount of Relief Granted. £ s. d.	Case No.	Age.	Qualification.	Amount of Relief Granted. £ s. d.
1	88	Member of The Institute (now deceased)	11 5 0	97	71	Widow	28 10 0
1	64	Widow of Member of The Institute	44 10 0	98	75	Marine Engineer	13 10 0
3	75	Member of The Institute	82 17 6	101	76	Marine Engineer	33 0 0
6 & 7	59 & 61	Daughters of Marine Engineer	26 10 0	103	44	Widow	38 10 0
8	62	Widow	33 0 0	104	77	Marine Engineer	26 10 0
19	86	Widow	26 10 0	106	50	Widow of former Member of The Institute	35 0 0
34	73	Marine Engineer	26 10 0	107	56	Widow	14 16 0
46	65	Widow	3 0 0	109	60	Widow	26 10 0
47	62	Widow	10 18 0	114	69	Marine Engineer	33 0 0
48	46	Widow	33 0 0	117	42	Widow	33 0 0
51	63	Widow of former Member of The Institute	26 10 0	118	61	Daughter of Marine Engineer...	1 0 0
53	65	Widow	26 10 0	119	50	Widow of former Member of The Institute	13 0 0
58	65	Widow	15 10 0	120	53	Marine Engineer	18 10 0
72	63	Widow	26 10 0	121	68	Widow	20 10 0
74	62	Widow	10 0 0	44	66	Widow	9 6 0
77	51	Widow	26 10 0	122	56	Widow	2 0 0
79	78	Widow	26 10 0	20	78	Marine Engineer	7 10 0
80	63	Sister of deceased Member of The Institute	24 10 0	123	42	Widow of former Member of The Institute	25 5 0
85	69	Widow	13 10 0				
88	77	Member of The Institute	40 12 0				
96	67	Widow of former Member of The Institute	29 15 0				
							£943 14 6

BENEVOLENT FUND.

GUILD OF BENEVOLENCE.

	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.	31st Dec., 1942.
Revenue:—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Interest on Investments...	85 9 4	108 14 8	339 17 2	360 2 0	378 12 4	391 9 10	396 14 10	407 13 4	371 2 9	413 8 6
Ground Rents... ..			180 18 5	352 3 1	352 3 0	352 2 10	352 2 10	352 2 10	387 2 10	405 10 1
Members Subscriptions ...			163 12 3	160 4 8	196 7 1	248 4 1	245 7 3	249 19 3	277 9 10	266 3 10
Donations	71 8 9	102 9 2	140 16 4	106 2 9	191 2 2	93 11 8	225 18 9	214 0 11	417 18 11	542 9 5
Total Receipts	176 8 8	228 1 0	825 4 2	978 12 6	1,118 4 7	1,085 8 5	1,220 3 8	1,223 16 4	1,453 14 4	1,627 11 10
" " (without donations)	104 19 11	136 12 4	684 7 10	872 9 9	927 2 5	1,021 8 4	994 4 11	1,009 15 5	1,035 15 5	1,085 2 5
Expenditure	120 7 0	104 15 1	539 19 7	864 19 1	944 4 5	1,115 0 0	1,187 18 5	994 13 10	900 9 9	1,017 2 2
Investments (Capital) ...	2,645 17 8	8,052 19 5	17,318 14 4	19,701 5 4	20,019 15 9	20,171 11 9	20,315 17 9	20,259 8 0	21,780 3 9	22,892 3 4
Income Tax recoverable ...	19 10 7	16 17 2	27 7 3	40 16 4	52 8 6	49 7 1	60 4 2	106 2 3	263 6 4	398 11 0
Cash and Deposits A/c ...	9 11 2	6,459 6 7	1,923 9 3	44 8 3	10 10 0	178 5 0	283 8 2	585 16 4	1,020 6 8	1,515 6 7

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

Institute Luncheon.

A record gathering of 497 members and guests assembled for the Luncheon in the Grand Hall which followed the Annual General Meeting at the Connaught Rooms, Great Queen Street, London, W.C.2 on Friday, March 12th, 1943.

The President, Engineer Vice-Admiral Sir George Preece, K.C.B., was in the chair, supported by a number of eminent guests, including His Excellency Baron E. de Cartier de Marchienne (Belgian Ambassador), His Excellency Count E. Raczyński (Polish Ambassador), His Excellency Senhor Dr. J. J. Moniz de Aragao, C.B.E. (Brazilian Ambassador), His Excellency Senor Don Manuel Bianchi Gundian (Chilian Ambassador), His Excellency Senor Dr. Don Miguel Carcano (Argentine Ambassador), His Excellency Jonkheer Dr. Michiels van Verduynen (Netherlands Ambassador), His Excellency Erik A. Colban (Norwegian Ambassador), His Excellency Th. Aghnides (Greek Ambassador), The Rt. Hon. A. V. Alexander, P.C., C.H., M.P. (First Lord of the Admiralty), W. J. Jordan, Esq. (High Commissioner for New Zealand), J. W. Dulanty, Esq., C.B., C.B.E. (High Commissioner for Eire), Admiral of the Fleet Lord Chatfield, P.C., G.C.B., O.M., K.C.M.G., C.V.O., D.C.L., The Rt. Hon. Lord Mottistone, P.C., C.B., C.M.G., D.S.O., The Rt. Hon. Lord Marchwood, K.C.V.O., J.P. (Master, the Honourable Company of Master Mariners), The Rt. Hon. Lord Rotherwick (Chairman, Clan Line Steamers Ltd.), Eng. Vice-Admiral Sir Harold A. Brown, G.B.E., K.C.B. (Senior Supply Officer, Ministry of Supply), Com'r. Sir Charles W. Craven, Bt., O.B.E., R.N. (Controller General, Ministry of Aircraft Production and Past-President, I.Mar.E.), Admiral of the Fleet Sir A. Dudley P. R. Pound, Princ.A.D.C., G.C.B., G.C.V.O. (First Sea Lord), Vice-Admiral Sir William J. Whitworth, K.C.B., D.S.C. (Second Sea Lord), Eng. Vice-Admiral Sir R. W. Skelton, K.C.B., C.B.E., D.S.O. (late Engineer-in-Chief of the Fleet), Vice-Admiral Sir W. P. Wake-Walker K.C.B. (Third Sea Lord), Sir Stanley V. Goodall, K.C.B., O.B.E. (Director of Naval Construction), Sir Cyril Hurcomb, K.C.B. (Director-General, Ministry of War Transport), Major J. M. Henderson (Acting Agent-General for Northern Ireland), Sir Amos L. Ayre, K.B.E. (Director of Merchant Shipbuilding and Repairs), Sir John E. Thornycroft, K.B.E. (President, Institution of Civil Engineers), Sir Richard W. Allen, Kt., C.B.E., D.L., J.P., Sir Alexander Ramsay, Kt., O.B.E. (Director, Engineering and Allied Employers National Federation), Sir William Reavell, Kt., Eng. Vice-Admiral F. R. G. Turner, C.B., O.B.E. (Engineer-in-Chief of the Fleet), Captain T. A. Solberg (U.S.A. Naval Representative), Vice-Admiral A. Muselier (Free French Navy), Engineer-in-Chief A. Borgir (Free French Navy), Prof. F. C. Lea, D.Sc. (President, Institution of Mechanical Engineers), Col. S. J. Thompson, D.S.O. (Past-President, Institution of Mechanical Engineers), Alderman Sir Frank S. Alexander, J.P. (Chairman, Baltic Mercantile and Shipping Exchange), Basil Sanderson, Esq. (Chairman, The Shipping Federation, Ltd.), P. G. Mylne Mitchell, Esq. (Managing Director, Royal Mail Lines Ltd.), Eng. Rear-Admiral W. R. Parnall, C.B., Eng. Rear-Admiral W. J. Deans, C.B., Eng. Rear-Admiral T. H. Warde, C.B., Eng. Rear-Admiral E. Williamson, M. A. J. Janssens (Belgian Merchant Navy), Captain L. Droguet (Free French Merchant Navy), Captain J. Fafoutakis (Greek Merchant Navy), M. A. Lovgrin (Norwegian Merchant Navy), Captain J. Dabkowski (Polish Merchant Navy), W. G. D. Holloway, Esq. (General Secretary, Marine Engineers Association), G. V. Boys, Esq., M.A. (Secretary, Institution of Naval Architects), J. D. C. Stone, Esq., A.C.A. (Messrs. West & Drake), Victor Wilkins, Esq., F.R.I.B.A., W. Archer, Esq. (Hon. Solicitor, Institute of Marine Engineers), Capt. D. S. Tennant (Officers' (Merchant Navy) Federation Ltd.).

Invitations to the Luncheon were also accepted by the Rt. Hon. Lord Leathers, C.H. (Minister of War Transport), Admiral of the Fleet the Earl of Cork and Orrery, G.C.B., G.C.V.O., Sir Reginald Hill, K.B.E., C.B. (Deputy Director-General, Ministry of War Transport), Sir Westcott S. Abell, K.B.E. (Past-President, I.Mar.E.), Sir E. Julian Foley, C.B. (Past-President, I.Mar.E.), Sir Stephen J. Pigott, J.P., D.Sc. (Past-President, I.Mar.E.), Eng. Capt. P. I. Koslov (Russian Naval Representative), Col. S. J. Thompson, D.S.O., and Mr. J. Mentink (Netherlands Merchant Navy), all of whom at the last moment were unable to attend.

The Loyal Toasts having been duly rendered, **The Rt. Hon. A. V. Alexander, P.C., C.H., M.P.** (First Lord of the Admiralty), proposing the toast of The Institute of Marine Engineers, said: Mr. President, your Excellencies, My Lords, and gentlemen, I have a confession to make. Having to undertake this very important duty I commended to dictate a speech this morning, when the First Sea

Lord, who is here to-day, came to me with urgent operational matters, and he left me at five minutes past one, and so I have to speak unprepared.

First of all let me say that I was here last year at the luncheon of your great Institute, and listened with very great attention and interest to the remarkable survey that Admiral the Earl of Cork and Orrery gave of the origin and the work of your Institute, and I think it would be in those circumstances unreasonable to repeat that remarkably fine tribute to The Institute which he then paid.

I should like, however, to say with what pleasure it is that I move the toast this year, because it is the year in which you have called to the high office of your Presidential chair Engineer Vice-Admiral Sir George Preece, who has had such a long and distinguished career in the Royal Navy. In his capacity as Engineer-in-Chief he has had much to do with the success of the engineering side of the Navy during the present war (applause).

Of course very often staffs of the Admiralty come under the lash of public criticism, but I must say that the record of results in this branch of engineering is a very great tribute indeed to those who have served, as Sir George Preece has served, in that connection. I do not think anybody really appreciates, for example, the extraordinary journeys which have been carried out by some of His Majesty's ships in this war. I have picked out one or two examples of our records. Here is a battleship. From the beginning of the war, until 1942, she steamed 102,614 miles. It is sometimes said that battleships are only the Kings and Queens of chessmen on the board, but anyway that is the record of one battleship. Another one steamed, in about 34 months, up to the end of June, 1942, 95,400 miles. An aircraft carrier, up to the 30th June last year, had steamed 117,000 miles. A cruiser, up to the same date, had steamed 198,000 miles, and although she was in dock a bit afterwards for repairs, she has already increased this to 233,000 miles.

I take the case of four destroyers. The first, up to 30th June last year, had steamed 172,000 miles, the second 168,900 miles, the third, 167,700 miles, and the fourth 163,600 miles.

Well, Gentlemen, when I think of records like that in all the conditions of the present war, because it includes the periods of repairs, damage, boiler cleaning, and overhauls, there must be something pretty good about the engineering staff of the Admiralty which Sir George Preece so ably led when he was there, and there must be something very fine about the designs and the workmanship of the men who produce the engines (applause).

There must also be something good about the daily maintenance in the engine rooms of the ships at sea to-day, which we are apt too often to overlook when we mention the life of the men at sea. It is often one of the most dangerous positions of all, and therefore I am glad to have the opportunity of proposing this toast to-day, when Sir George becomes your President. I hope that the close association and good relationship which the Admiralty has always maintained with your important Institute will be further cemented and strengthened, and I believe that that will be so.

Of course, occasionally one who holds the kind of position which I now occupy, comes under a little examination, and not least by members of The Institute. I have no doubt that such occasions arise from time to time with regard to decisions I may have to promulgate on behalf of the Board of the Admiralty. Thinking of these things the other day, I remembered four lines from the poet John Greenleaf Whittier which impressed themselves upon my mind, although it is his hymns I like more than anything else. He said this on one occasion:—

Some blamed him, some believed him good,
The truth lay doubtless 'twixt the two,
He reconciled as best he could
Old faith and fancies new.

And there are occasions when I have to sit in a sort of final judgment seat on proposals submitted to me. I have to take a good deal of sound advice from those who have not only old faith but much experience, and at the same time give a completely fair hearing to new ideas which may be submitted. I think I do my best to see that that is done, and I believe, under the continuing development of our association under the Presidency of Admiral Preece, we shall make things even more harmonious and better still.

There is another thing I should like to mention, something about the more or less controversial aspects of things which you are interested in, which come up for discussion to-day. In view of the very long statements and debates which have taken place in both Houses of Parliament on the speed of merchant ships, I am not going to give you a technical dissertation on the subject. What I

am going to say, however, is that any suggestion that either the Admiralty or the merchant shipbuilding industry as directed jointly to-day by the Ministry of War Transport and the Admiralty—any suggestion or idea that they are not mindful of the need for developing power and speed is hardly true by the actual facts, and I think it is right on the present occasion to pay tribute to what has really been done in that connection.

As far as surface vessels are concerned—that is corvettes and larger vessels—the marine engineers of the United Kingdom have added to the fleet a total of 7,353,150 shaft horse power between September, 1939, and September, 1942. That is not a bad performance, and in regard to the merchant fleet, we have added to the shaft horse power in the same period and up to December last something like 2,000,000 horse power.

It is our intention, having regard first to the need for saving ships which exist, by having a sufficient quantity of powerful and sufficiently fast escorts, to use all the remaining slips and labour which are available to build as many fast cargo ships as possible, and the ratio has been increasing steadily, certainly during the whole time I have been at the Admiralty. I need not perhaps say any more about that subject to-day.

Let me, however, pay a general tribute to the marine engineer who goes to sea in this dreadful and most dangerous war at sea. The ships have to be kept running, and running the whole time, and those whose duties lie down in the depths of these large and spacious ships have far from a good time when the ships go into dangerous action. It is amazing to all of us how well the marine engineers have stood up to the task.

From time to time ideas come to our minds that here and there improvements could be secured. Very often, however, the improvement is not something which the engineer alone can secure. One thing is certain. A straggler from a convoy is to-day one of the greatest menaces to the individual ship of that convoy, and anything that can be done to keep each ship in the convoy at correct speed is a very good thing indeed, and I can assure you that anything that The Institute of Marine Engineers can do to improve the operational efficiency will be very much valued. The personnel who help the engineer in the merchant ship are also very much to be thanked and encouraged. We often forget the poor stokers. But there they are, and they work hard like the engineer. We have of course to do all we possibly can to eliminate anything which aids the enemy, such as making too much smoke in the convoy. I am glad to be able to say that we are very rapidly effecting improvements in cleaning and in the consumption of fuel in the furnaces, which are very much reducing smoke, and I am quite sure also that a deepening and widening of the attention which is paid to actual methods of firing will assist very greatly in reducing that particular aid to reconnaissance by the enemy to discover where the convoy is. This is a very useful piece of progress.

There is another matter to which I should like to refer. Marine engineers in this respect are like every other branch of the seafaring profession. They are part of a great international brotherhood. You only need to take a list of the ships in one of the convoys which the Royal Navy has to escort, whether it be trade alone or whether it be such a vast convoy as that which went on the great operation for the invasion of North Africa, to discover that the ships in the convoy are of all nationalities. Officers, engineers, and seamen are of all nationalities, and it is a grand thing to have seen once more by experience in this war that there is a brotherhood of the sea. We are very proud indeed of it. We are proud of it in the merchant ships and we are proud of it in the auxiliary sections of the fleet at sea to-day, which are really provided by independent units of the nations which have been driven from their territory. There are men from Norway, Holland, Belgium, France, Poland, Greece, and Yugoslavia serving our common cause in both merchant ships and naval ships, all taking their place with us in fighting the common foe, for the freedom of humanity.

I like to feel that in every section of this international service there is to be found that same devotion to duty as was recorded in the thrilling story of the attack in the Indian Ocean by two powerful Japanese raiders on a Dutch tanker and a small Indian Navy minesweeper. After the master of the Dutch ship had refused to leave, the minesweeper joined in the fight, sank one of the raiders, and then the tanker was damaged and the boat's crew got away. The master had been killed. It was the second or third engineer of the Dutch ship who called for volunteers from the men in the boat to go back to the ship. They found they could just steer and they went back on board and steamed safely, although torpedoed, into Australia.

We need all the help and courage and technical efficiency of all the personnel of the Allied mercantile and naval fleets in this great

fight at sea, and I am certain we can rely upon them. Your Institute has always been a most valuable link in keeping this close contact and interest between the marine engineers of all the nations interested in the sea.

In conclusion I want to assure The Institute and its Council that whatever else Members of Parliament or journalists or public critics may say, we at the Admiralty are always anxious to consider fairly, impartially, and practically any new ideas which are capable of providing either for the better and more immediate prosecution of the war, or for definite and permanent improvements for the future. There are, of course, limitations under which we suffer for the time being. When you have to keep the nation alive in this advanced fortress in the United Nations campaign, there are times when propositions, however attractive, may have to be treated in the way in which you sometimes have to regard operations. They are carried through and remarked upon as being successful, but the patient dies. When we consider what immediate changes have to be made we have always to remember that our nation must keep going and must come through, whatever new experiments we try in the meantime. But with that reservation, there is no proposition or idea to which we should not give the utmost sympathetic consideration, and I hope to see grow from day to day that community of spirit and close co-operation which we have always sought to see between The Institute and the Admiralty, and I believe your new President will go a long way indeed to lead us into that desirable position. I beg to move the toast (loud applause).

The President, responding to the toast, said: Your Excellencies, my Lords, and Gentlemen, we have listened with great interest and pleasure to the toast of The Institute which has been so eloquently proposed by the First Lord. It was all perfectly sound except what he said about me. I can only say that years ago I was chosen to be captain of a football team. It was carefully explained to me that I was not the best footballer, and indeed I was not much of a footballer at all, but I could probably keep some of the somewhat conflicting elements happy. I like to think, looking back at my career, that I have done a great deal to bring up officers in the Navy as a team and generally in good heart and good humour, and that is all I can claim.

The fact that members of this distinguished gathering have made time to be present here to-day will not only be a source of satisfaction to those members who are present, but also to that far greater number dispersed as they are all the world over and throughout the seven seas. I feel sure that I shall be correctly interpreting the feelings of our fellow members when I say that we fully realize that this great assembly by its presence desires to pay a tribute not only to marine engineers, but to all those who go down to the sea in ships.

While I give place to none in my admiration of those heroes who perform almost incredible feats of valour, I honestly believe that I reserve the warmest corner of my heart for the man who, week after week, month after month, and year after year gets on cheerfully with his job, not only in danger, but often for considerable periods under most arduous conditions.

It is often said that it is worry that kills, and that hard work never did anyone any harm, but I venture to suggest that this is not entirely correct and needs qualification. I used to think it was true myself until during the last war, when acting under the orders of Lord Chatfield, who was then my Captain, and whom we are all very glad to welcome here to-day, I, accompanied by many others, took on board, burnt, and subsequently disposed of the residue of so much coal that I thought, and I am afraid I often said, that I never wished to see another lump of coal either in this world or the next. Although, as things have turned out, I was wrong about not wanting to see any more coal, at any rate in this world, that did express my sentiments at the time.

It needs a stout heart "to keep on keeping on" when subjected to long hours of physical strain and still more so if accompanied by mental strain, and I think all seagoing engineers appreciate the steadfastness and fortitude of their shipmates on deck, especially when exposed to the rigours of winter at sea.

Whatever other drawbacks it may possess, the engine room is generally warm and comfortable, even in the coldest weather; on deck it is neither.

And so those who stand very high in my respect are the men who, years ago, retired from the sea to enjoy the blessings of the land, and who, in response to their country's call, returned to the sea in various capacities. More particularly, perhaps because I knew some of them in their younger days, I have in mind those performing the duties of Commodores of our convoys. At their age the mere physical discomfort of their job must be very hard to bear,

and on this account alone, and quite apart from other considerations, such as responsibility and anxiety for the safety of their convoys, they command our highest admiration.

I remember that last year Lord Mottistone said that it was not a custom for Presidents to make long speeches on these occasions, whilst the Earl of Cork (whom I am sorry to say is not present to-day, and still more sorry that it is because he is indisposed), told those present that he was not going to embark upon anything controversial, and I shall attempt to follow those excellent principles. Quite apart from that, I have thought of the mythological story of Icarus who essayed flights in the old days. He got off the ground, but when he got too near the sun he became unstuck, and looking round I already feel rather near to the sun.

There are, however, one or two matters to which I would like to draw the attention of this influential audience. Lord Mottistone in his speech last year quoted the late Sir Richard Holt as saying that no ship takes the water without being obsolete. There is unfortunately a certain measure of truth in this statement, and this is bound to be the case so long as we have to wait for the results of trials of new ships before we dare make further advances in design; because a ship—or perhaps I had better limit myself to machinery as I am in the presence of the Director of Naval Construction—takes so long to build. Continuous research and experiment outside the ships themselves is required, and this is a costly business. There is, I venture to think, a tendency in this country to over-complacency in this matter of research and experiment, whilst at the same time the wholly contradictory and illogical attitude is too often taken up that anything invented outside this country must be superior to the home-produced article. That, I venture to think, is most illogical.

During a lecture recently delivered before the Institution of Mechanical Engineers, it was stated that a certain shipowner said he dared not install the latest machinery in his new ships because of the impossibility of obtaining sufficient engineers who were competent to run it. The question of the training of engineers is one that is receiving a great deal of attention at present, and this Institute has done and is doing most valuable work in this connection. What is equally important, however, is that the prospects of marine engineers shall be such as to attract a fair proportion of our able and ambitious young men into this branch of the profession, and to provide a fully satisfactory career therein (applause).

There is a most surprising number of engineers in this country who have obviously gone to sea to obtain experience, and incidentally Board of Trade Certificates, and having obtained them they seek more attractive positions ashore. This is unfortunate, because it means, only too often, that the experience which they have gained is lost to the service which provided them with it.

This is not the occasion to suggest solutions to the three problems to which I have referred. It is not a debate, and it would be unfair to make any suggestion because you cannot answer back—at least convention demands you shall not answer back. I am not going to suggest anything, but I do say that these are matters which demand early attention if this country is to maintain her rightful place amongst the maritime nations of the world.

Once more may I express my gratitude to the First Lord for the kind way in which he has proposed the toast of this Institute and for his very kind remarks about myself. I shall endeavour to keep The Institute on friendly and close terms with the Admiralty. I think I ought to be able to, as I know something about both sides. Once again I thank you for the kind way in which you have proposed the toast of The Institute, of which I am very proud to have been elected President, and I thank you, your Excellencies, my Lords, and Gentlemen for the cordial way in which you have received it (applause).

The Rt. Hon. Lord Mottistone, P.C., C.B., C.M.G., D.S.O. (Past-President), proposing the toast of "The Guests", said: Mr. President, your Excellencies, my Lords, and Gentlemen, one short year ago I was your President, and now I am dead—or, as it were, a voice from the tomb. If I were to give a speech worthy of the occasion, you would be here until the day after tomorrow morning, and so I trust that your Excellencies, the Admirals of the Fleet, and the other distinguished guests will forgive me if I am brief. It is a fact that we have an array of talent here today which in my experience—and this is not a short one—is almost unparalleled. We have the doyen of the Diplomatic Corps, Baron de Cartier de Marchienne. He will respond to this toast in one of those delightful speeches for which he is renowned. We have the representatives of almost every one of the great Allied nations. The Ambassador for Brazil is my neighbour on my right; then there is the Polish Ambassador, the Argentine Ambassador, the Chilean Ambassador, the Netherlands Ambassador, and a friend whom we remember from last year, the Norwegian Ambassador whose Navy is of such

immense value to us. There is the Greek Ambassador, and of course we have the man who made such a good speech today, as he did last year, and as he will do for years to come, the First Lord of the Admiralty, Mr. Alexander.

We also have with us some of the High Commissioners. An old friend of ours, Mr. Jordan, the High Commissioner for New Zealand, and another who was once on my staff, although he may have forgotten it, the High Commissioner for that great country, Eire.

I am quite sure that so long as he is where he is, Eire will be friendly to us—as no doubt to all other Powers. He is a good friend of this country anyway, in his official position.

Particularly glad are we to see Lord Marchwood of the Honourable Company of Master Mariners. Discussions we have had in the House of Lords ended in the complete agreement on the part of the Government to the proposition that awards for valour in the Merchant Navy and notably for the engine-room staffs should be on exactly the same scale for the Merchant Navy as for the Royal Navy. It is a grand thing to know that that is satisfactorily settled, and that recently His Majesty the King awarded the D.S.O. to a brave merchant seaman.

I am glad to think that during my term of office as President the bringing of the Merchant Navy into ever closer association with the Royal Navy took several steps forward. As you say, Mr. President, it is no time to make a controversial speech. The matter is not now one of controversy. We all want to see a happy and contented Merchant Navy worthily rewarded by the country for the extraordinary services it has rendered in this desperate war (applause).

I quoted earlier to a few of you the figures which appeared in today's "Times", that since the war began British ships with British marine engineers in charge of their machinery have carried over two-and-a-quarter million human beings, civil and military on their lawful occasions. It is a most astonishing figure, and I am calling the attention of our honoured guests to the fact that it is the British engineers who have carried that vast host on their lawful and warlike occasions.

I have been told that in that astonishing number of voyages never once has a British ship failed to start because of objection by a marine engineer to the danger of the trip—not once! That is a wonderful thing to be able to say, and long may it be so. We salute these brave men, and I am proud to be associated with them.

Much the same may be said of the other Navies who have helped us. We have representatives of these other Navies here today. I have a list here, and added to that list are two gentlemen whom we thought were unable to come but at the last moment were able to join us, Admiral Muselier and a colleague of yours, Mr. President, Engineer-in-Chief Borgir, of the French Navy.

We have here as many representatives of the Merchant Navies of our brave Allies as we have Ambassadors to represent them. To all of them, to you my dear First Lord, to every one of the Ambassadors, to the brave seamen who have come here today to represent their Merchant Navies, we express our grateful thanks for your presence, and we assure you that this comradeship of the sea, broken by the brutality of the Germans and their Allies, will be forged again one day when these evil spirits have been exorcised. With that spirit of the comradeship of the sea we bid you welcome, and we in truth will not fail to try to do our duty, as we have always done in the past. I give you the toast of "The Guests" (prolonged applause).

H. E. Baron E. de Cartier de Marchienne (The Belgian Ambassador), responding said: I have just listened to the voice from the tomb, and a very fine tomb it must be. I wish I had one half or one-tenth of his eloquence to answer this toast. We guests of The Institute of Marine Engineers are highly gratified and consider it a privilege to be asked to attend this function. We land-lubbers—is that a correct term (I accept it for myself) to apply to my fellow Ambassadors?—we admire everything of the sea—the ships, the officers in command, the engineers, and the crews. In wartime our gratitude is especially great because were it not for the engineers we would not be enjoying this wonderful repast, indeed we probably would not have had any repast at all in spite of the worthy efforts of Lord Woolton.

Speaking as a guest, I would like to compliment those who had to organize this function.

Then I want on behalf of my fellow guests to thank Lord Mottistone for his kind words. I know that my fellow guests would all wish me to be more eloquent, but I thank you very much and I feel sure I am expressing the desire of my fellow guests in wishing The Institute of Marine Engineers great success, as great success in the future as they have had in the past, and that is saying a lot. Thank you very much.

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Freight, Norman	Associate	July	79	Pounder, George Dick	*Member	April	40
				Preshaw, R. A.	*Member	March	25
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