INSTITUTE of MARINE ENGINEERS

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SESSION 1937.



Vol. XLIX Part 13.

President : STEPHEN J. PIGOTT, Esq., D.Sc.

Annual Dinner.

The forty-second Annual Dinner was held on Friday, February 25th, 1938, at the Connaught Rooms, and was attended by 720 members and guests.

Dr. Stephen J. Pigott, the President, was in the Chair, and the many distinguished guests included His Excellency Baron E. de Cartier de Marchienne (the Belgian Ambassador), The Rt. Hon. Earl Howe, P.C. (Past President), The Rt. Hon. Lord Stonehaven, P.C., G.C.M.G., D.S.O., LL.D. (President, The Institution of Naval Architects), J. W. Dulanty, Esq., C.B., C.B.E. (The High Commissioner for Ireland), Alderman Col. Sir T. Vansittart Bowater, Bt., M.P., Lord Plender of Sundridge, G.B.E., LL.D., Capt. Sir Robert Burton Chadwick, Bt. (Master, The Honourable Company of Master Mariners), Sir John E. Thornycroft, K.B.E., Sir Charles Barrie, K.B.E., D.L., J.P., M.P., Commander Sir Charles W. Craven, O.B.E., R.N. (ret.) (Past President), The Hon. Sir Hal Colebatch, C.M.G. (Agent-General for Western Australia), Sir S. V. Goodall, W.C.D.E. (D.F. (Director of Neural Construction) K.C.B., O.B.E. (Director of Naval Construction), Robertson F. Gibb, Esq. (Chairman, Union Castle Line), Sir W. Lacon Threlford, Kt., M.B.E., R.D. (Deputy Master, The Worshipful Company of Shipwrights), Eng. Vice-Admiral Sir G. Preece, K.C.B. (Engineer-in-Chief of the Fleet), F. C. Pyman, Esq. (President, The Shipbuilding Employers' Federation), Sir Charles J. O. Sanders,

K.B.E. (Hon. Vice-President, The Institution of Naval Architects), Sir John Pakeman, Kt., C.B.E., C.C., F. E. Rebbeck, Esq., D.L., J.P. (Past President), Sir E. Julian Foley, C.B. (Under-Secretary, Mercantile Marine Department, Board of Trade, President-Elect. The Institute of Marine Engineers). Sir William Crawford Currie, Kt. (Deputy Chairman, P. & O.S.N. Co.), Frank E. Fehr, Esq., C.B.E. (Chairman, Baltic Mercantile and Shipping Exchange, Ltd.), Colin Smith, Esq., M.V.O., O.B.E. (Registrar of the Privy Council), Count Michalowski (First Secretary of the Polish Em-bassy), Alfred T. Roach, Esq., LL.B. (Town Clerk), F. Whittingham, Esq., J.P., Professor C. J. Hawkes, M.Sc. (President, The North East Coast Institution of Engineers and Shipbuilders), Archibald Galloway, Esq., J.P. (Member of the Port of London Authority), Dr. William Cullen (President, The Institution of Chemical Engineers), W. T. Williams, Esq., O.B.E., B.Sc., Wh.Ex. (Engineer Surveyor-in-Chief, Mercantile Marine Depart-ment, Board of Trade), J. R. Robertson, Esq. (General Manager, British Tanker Co., Ltd.), F. G. Dunlop, Esq. (Director, Messrs. Harland & Wolff, Ltd.), C. J. Cowan, Esq. (Chairman, New Zealand Shipping Co., Ltd.), S. F. Dorey, Esq., D.Sc., Wh.Ex. (Chief Engineer Surveyor, Lloyd's Reg'ster of Shipping), Captain Russell Willson, U.S.N. (American Naval Attaché), Captain L. Siemens (German Naval Attaché), G. S. Baker, Esq., D.Sc.,

O.B.E. (Superintendent, The William Froude Laboratory, The National Physical Laboratory), Alderman F. S. Alexander, Major G. H. M. Vine, C.C. (Chief Commoner), F. Rowland, Esq., Leslie C. B. Bowker, Esq., O.B.E., M.C. (City Remembrancer), Captain Natal Arnaud (Brazilian Naval Attaché), Eng. Rear-Admiral A. G. Crousaz, C.B. (Deputy Engineer-in-Chief of the Fleet), Harold Fortescue Flannery, Esq., M.B.E., B.A. (President, Society of Consulting Marine Engineers and Ship Blake Paymaster-Commander Surveyors, J. Harrold, I.S.O., O.B.E., R.N.R. (Registrar-General of Shipping and Seamen), Malcolm K. Scott, Esq. (Secretary, Lloyd's Register of Shipping), F. Hugh Smith, Esq. (Master, The Worshipful Company of Carpenters), Dr. W. J. Galt, M.A., M.B., B.Ch. (Hon. Medical Officer, The Institute of Marine Engineers Guild of Benevolence), W. E. Archer, Esq. (Hon. Solicitor to The Institute of Marine Engineers), J. D. C. Stone, Esq., Victor Wilkins, Esq., Eng. Capt. J. J. C. Brand, C.B.E., R.A.N. (ret.), S. T. Pigott, Esq., J. Paley Yorke, Esq., OB.E., M.Sc. (Principal, L.C.C. School of Engineering and Navigation), G. V. Boys, Esq., M.A. (Secretary, The Institution of Naval Architects), D. Bramah, Esq., C.B.E. (General Secretary, Marine Engineers Association), J. L. Douthwaite, Esq. (The Librarian, Guildhall), W. R. Spence, Esq. (General Secretary, The National Union of Seamen), and R. K. Munro, Esq. (Secretary, Society of Consulting Marine Engineers and Ship Surveyors).

During the evening music was rendered by The Royal Artillery Band (by permission of the Officers, Royal Artillery), conducted by Lieut. O. W. Geary, M.B.E., A.R.C.M., Director of Music, R.A., and the speeches were interspersed with songs and duets by Miss Sylvia Welling and Mr. Webster Booth, and a most amusing performance by Cardini ("The Suave Deceiver"), a very clever illusionist.

The Loyal Toasts having been proposed by the President and duly honoured, Mr. Robertson F. Gibb proposed the toast of "The Shipbuilding and Marine Engineering Industries". He said that the advent of the marine engineer was chiefly responsible for the great progress which had been made in ocean transport. His work was a tremendous advantage for, largely due to his efforts, we had greater speed, greater tonnage and greater safety in the ship of to-day. The ocean carrier had progressed through many phases, but Mr. Gibb thought that not the least important of these was the internal combustion engine. So far as the Union-Castle Company-of which Mr. Gibb is chairman-was concerned, they had found the Diesel engine the most economical and most efficient method of propulsion for their trade. It was rather significant, he thought, that of the total world tonnage launched last year, 1,511,000 tons should be motorships and only a little over 1,000,000 tons steamships.

Mr. Gibb referred to the increased cost of building new ships. He said :

"Owing to the national emergency we are faced with greatly increased prices if we wish to add to our fleet. I do not blame shipbuilders and marine engineers, nor do I subscribe to some of the criticisms which have been made in certain quarters and which have been adequately dealt with by Sir Charles Craven. It may be very many years before we get back to those times when shipping was a fairly economic proposition to the shipowner, but I have no solution to offer for the present difficulties".

Mr. Gibb understood that many shipbuilders were engaged in building aeroplanes. Shipowners did not look upon the aeroplane as a rival or a competitor, but as something with which they ought to co-operate, for all forms of transport were beneficial to those engaged in the work of carrying goods and passengers to all parts of the world.

Sir Charles Craven, who is a past President of The Institute, in reply, referred to the criticisms which have been made respecting rationalisation in the shipbuilding industry. He thought it was unfair to compare the price of the present-day ship with that of a few years ago. If shipbuilders had continued to conduct their affairs as they were doing in those post-War years, said Sir Charles, the shipowner wishing to build to-day would not have been able to find a single yard solvent. Sir Charles continued :

"To be quite frank, we were building ships at a terrible loss, and we were going too far in the interests of our shareholders. We lived on our losses too long, and I think we can be proud of the fact that ten years ago bitter competitors in the shipbuilding industry met around a table and decided that this ridiculous state of affairs should not go on indefinitely. The shipowner has his conferences. He has also had a certain amount of State assistance. The steel industry has had the protection of tariffs; and although it is now in a more prosperous condition its prices are controlled by the Government, and there is no inflation. We, as shipbuilders, have had no Government assistance, and I think it is to our credit that we made an effort to put the industry on an economic basis"

This was an age of co-operation, said Sir Charles; and he hoped to see more "give and take" between the great industries of this country between the marine engineer, the shipbuilder, and the owner of ships. In conclusion, he said : "We profoundly believe that there can be no great fall in the price of ships for some time. I am sure that never again will you see the ship-building industry back in the condition in which it found itself in the awful days of three or four years ago".

The toast of "The Dominions Overseas and the Merchant Navy" was proposed by **Sir Charles Barrie**, **M.P.**, who said that the forthcoming Glasgow Exhibition would help both Britain and the Overseas Dominions to assess the extent and potentialities of the Empire. He expressed the opinion that if a few of the millions which had been spent at Geneva in forming the League of Nations had been used



THE ANNUAL DINNER.



to form a development fund for a League of Empire, it might possibly have produced, so far as we Britishers were concerned, a better dividend.

Sir Hal Colebatch, in reply, said: Whilst warmly appreciating the compliment you have paid me in asking me to respond to this Toast, I cannot refrain from expressing my regret-which I know you will share-that circumstances prevented the High Commissioner for Australia (Mr. Bruce) from discharging this duty. There could be no more apt combination of ideas than is expressed in the toast: "His Majesty's Dominions Overseas and the Mercantile Navy". Without the Mercantile Navy there could have been no overseas dominions. It was the co-operation in years gone by of the merchant adventurers and the men who went down to the sea in ships that carried the trade and commerce of England to the four corners of the globe and placed the wide bounds of our Empire in the sunrise and the sunset.

Nor could there be a more fitting occasion for such a toast than the present-at least so far as Australia is concerned. You are all aware that this year there is being celebrated throughout the Commonwealth the 150th Anniversary of the landing of Captain Phillip in Sydney Cove, the establishment of the great colony of New South Wales, and the birth of Sydney-to-day the second largest, and without exception the most beautiful city in the British Empire. It is less well known that this year we in Western Australia are celebrating in our modest fashion an event that took place just a hundred years before Captain Phillip landed on the East Coast of Australia. It was early in January, 1688-250 years ago-that William Dampier, pirate and buccaneer, afterwards a captain in His Majesty's Navy, landed on the North-West coast of Western Australia, and this year in Roebuck Baynamed after the first British battleship that ever sailed in Australian waters, and of which Dampier was in command-we are erecting a memorial to this great Englishman, one of the boldest and most skilful navigators of his time. It is not without interest to recall that it was on his return voyage from Australia that Dampier rescued from the lonely island of Juan de Fernandez, Alexander Selkirk, the recital of whose adventures and privations furnished the ground work for Defoe's immortal story of Robinson Crusoe. In the little Somerset village of East Coker, near Yeovil, there is still preserved the picturesque house in which Dampier was born.

Eminently fitting also is it that this toast should have been proposed by Sir Charles Barrie, a member of the House of Commons for the great and rapidly growing seaport of Southampton. There is scarcely an industry of imperial importance in this country with which Sir Charles is not in some way associated; he is shipowner, merchant, banker, railway and insurance magnate, an authority on cable and wireless and postal communication, whilst the Navy, Army and Air Force all owe something to his activities.

Think for a moment, too, of the part his district of Southampton has played in extending the influence and broadening the wealth of England. It was from Southampton that the Pilgrim Fathers first set sail, and our State of Western Australia was in the first instance largely peopled by Southampton folk. Our principal port of Fremantle is named after Admiral Fremantle whose family is associated with Freemantle near Southampton, and my own home town of Northam takes its name from the Southampton suburb, and through it flows the river Avon, named after the Southampton river.

But all this is of the past. What of the future? One thing is sure, and that is that the fortunes of the Dominions overseas and the Mercantile Navy are linked together and cannot be separated. The prosperity and the continued development of the overseas dominions is a condition precedent not merely to the expansion but to the continued healthy activity of the Mercantile Navy. There was a period in which British manufacturers enjoyed something approaching a monopoly of the world's business; that period has passed with the rapid progress of industry in other countries, and the British manufacturer now finds himself on a keenly competitive basis; and so with our shipping. Other countries are building and manning ships and bidding for the world's trade, and the well-being of all of them depends on the increase and expansion of that trade.

It may be questioned if any other movement could contribute so quickly and so substantially to the betterment of the lot of the marine engineers and the merchant navy as the revival of a real whole-hearted endeavour to turn to their best account the resources of the overseas dominions. It is not my part to touch on controversial political topics. We know that several powerful totalitarian states are clamouring for colonies, for places in the sun, and we have to ask ourselves-do we sufficiently value the overseas possessions that we have, do we fully appreciate the advantages they confer upon this country and the obligations they impose? Let me make to you this suggestion. During the past eight years of industrial depression, with widespread unemployment, and much part-time work, what factor has contributed most to the maintenance of order and good-will and a reasonable contentment through the community? I venture to say that it is the abundance, the cheapness and the good quality of essential foods and clothing drawn largely from the overseas dominions, where most of the basic requirements of life can be produed much more cheaply than in the home land. Ot Australia, at all events, it can be said that far less than half its natural resources have been tapped, that its population-now almost stationary-is less than a quarter of the total it is capable of carrying on the highest standard of comfort that the world knows.

There is accumulated capital in this country that, if accompanied by the vision and enterprise that characterised the empire builders of old, could vitalise again the colonising and pioneering spirit of the race and re-establish a flow of migrants more enduring than any Government schemes are likely to inspire.

We in Australia have our part to play. We are beginning to awake to the danger of our emptiness in a world rapidly becoming overcrowded. An understanding of world realities is broadening our view, and intensifying our imperial attachment. Something must be done and done quickly. Perhaps the forthcoming Imperial Conference may strike a new note of more complete co-operation. As an Australian I could wish that every obstacle against the entry into our country of British capital and British people and British goods might be removed until every acre of our island continent is developed to something like its maximum capacity, and as an Englishman it would be my desire that no obstruction should be placed in the way of the import of dominion products until every man, woman and child in these islands have all they need to eat and to drink and to wear. I believe it is in the development of such ideals that we shall find the greatest strength and security of His Majesty's Dominions Overseas and the soundest hope for the expansion and prosperity of the Mercantile Navy and of the

Institute of Marine Engineers. The Toast of "The Institute of Marine Engineers" was proposed by the **Rt. Hon. Lord Stonehaven,** who, as President of the Institution of Naval Architects, referred to the good relations existing between the two organisations, and commented on the steady growth of The Institute of Marine Engineers which now had a roll of over 4,000 members. This was all the more creditable as membership of British technical organisations was, unlike some others, voluntary.

Dr. Stephen J. Pigott, the President, in reply, said : The marine engineer is not wanting in appreciation of his true worth, in pride in his profession and in sense of the value of the work of our Institute. Accordingly, the all too brief eulogy given by Lord Stonehaven in his usual gracious manner has greatly pleased all our members. We listened eagerly to his every word; we sat erect and held our heads high, and I fancied I heard one say to another "Wha's like us?"

The marine engineer is of necessity the modern "Jack of all Trades", and I am confident that no other branch of the engineering profession requires such wide knowledge of applied science as is necessary to the marine engineer. In some degree he must have knowledge of each other branch of engineering. He must know the fundamental chemistry of the various materials used in the construction of machinery. It has been said that his familiarity with liquids is often greater than necessary. Some knowledge of metallurgy and much of physical properties of materials and fluids is essential. Within the experience of our older members the lighting of vessels by electricity was an innovation. To-day electricity plays an ever increasing part in the domestic services and propulsion of vessels. Even the problems usual to a civil engineer are now met with in the design of machinery and ship equipment, and the engineer must deal with problems of rivers, harbours and dry-docks.

Essentially the marine engineer is a mechanical engineer who has specialised in design, construction and handling of machinery for ship propulsion. In partnership with the naval architect the marine engineer, however, finds his natural sphere of activity, and our Institute therefore welcomes at all times close co-operation with Lord Stonehaven's Institution. It has been said facetiously that the sweetest dream of the naval architect is the outboard engine, thus leaving the entire ship for passengers and cargo. I am confident that the sweetest dream of our guest, Sir Reginald Henderson, is that both hull and machinery would be so unobtrusive as to leave 100 per cent. of the specified displacement available for armour and armament.

Our schooling provides technical foundation for professional development. Our occupation increases our knowledge but narrows our activities. It remains with our Institute to keep us abreast of scientific progress. On occasion we are even afforded vision beyond the dreams of Jules Verne.

To Lord Stonehaven we are deeply indebted for his attending our dinner and for his generous toast of our Institute. We are delighted that His Excellency Baron de Cartier de Marchienne, the Belgian Ambassador, has graced our gathering. It is a great compliment to us that Sir Reginald Henderson has attended, and without his guns! We regret that Alderman Sir George Truscott has been prevented by illness from being our guest this evening; we are, however, honoured by the presence of Alderman Sir Vansittart Bowater, also the Town Clerk and other members of the City Corporation. We are equally indebted to each and every guest, and we are confident that we may assume that our appreciation has justified any sacrifice you will have made in attending. I now ask that our members will rise and join in singing : "For They are Jolly Good Fellows".

The large company of members present having enthusiastically responded to the President's request, **Mr. Alfred Robertson, C.C.,** Honorary Treasurer of The Institute, proposed the toast of "The President". He said : For many years past, it has been an established custom for the health of our President to be proposed by one of his most intimate friends or acquaintances outside the membership of the Institute. On this occasion, at the express wish of Mr. Pigott, this practice has been changed and I, as a member of your Council, have been asked to discharge this most enjoyable task. Needless to say I deem it a very great honour and on behalf of the Council of the Institute of Marine Engineers thank him for his kindly thought and consideration in introducing this change of policy. I trust our President will forgive me if I make some few references to his past history of which he may well be proud.

Mr. Pigott spent the first 28 years of his life in America. The American Naval Attaché who is with us this evening will excuse my quoting an eminent Scottish physician, Dr. Clouston, who speaking of Americans said "You Americans wear too much expression on your faces, you are living like an army with all its reserves in action". This must have been perfectly true of our President, as at that early age he had already become an expert on impulse turbines.

About this time Messrs. John Brown & Co., Ltd., were interested in the introduction of the Curtis turbine into this country and pressed its merits on the Admiralty. They were recognised and it was arranged that a turbine of the Curtis type with some modifications should be constructed and tested under Admiralty surveillance, thereafter to be known as the Brown-Curtis turbine, the cost of this turbine and of the tests being borne entirely by Clydebank. It was thought desirable to have available for the construction and tests, the services of an expert from the Curtis establishment in America, and Mr. Pigott was selected. His worth was revealed during this service and he has ever since been recognised as an expert in all types of marine turbines. During the trials referred to his demonstration convinced the Admiralty that a rival type, shown to be reliable for Admiralty service, would prove of great value in stimulating competition and that this competition would, as in other cases, lead to the improvement of all the different types involved. This view has been amply justified. The Brown-Curtis turbine has since been extensively used in our Navy and has proved its value. For its introduction and steady progress in the Admiralty service I am assured, on no less an authority than that of one of our Past Presidents. Eng. Vice-Admiral Sir George Goodwin (for several years Engineer-in-Chief of the Fleet) the credit in the technical aspect goes to Mr. Pigott.

As a matter of interest, before Mr. Pigott came to this country, Messrs. John Brown & Co., Ltd., built and engined the s.s. "Atlanta" with Curtis turbines for the old North British Railway Company, now incorporated in the L.M. & S. Railway. It was only last year that this vessel was sold to the Blackpool Steam Navigation Co. for service as a pleasure steamer during the summer months.

Time forbids my giving you further particulars concerning the technical abilities and attainments of our President, some of which include his responsibility for the design of the propelling machinery of the "Queen Mary" and at the present time of her sister ship, the "Queen Elizabeth". Clearly Mr. Pigott did not use all his reserves of energy in his youth in America—he has served this country well and truly now for thirty years and is still bubbling

over with energy and vitality. His merits have been deservedly recognised by Messrs. John Brown & Co. in the eminent position he now holds.

Mr. President, you have no doubt heard it said during your residence in Scotland that "the noblest prospect a Scotsman ever sees is the high road that leads him to England". We are glad you traversed this road to become President of The Institute of Marine Engineers. We consider ourselves highly honoured to have had such an efficient, able and energetic President.

In his Presidential Address last September, Mr. Pigott made a survey of the development of marine engineering during the last sixty years, a period covered almost by his own lifetime. This address was a valuable addition to our TRANSAC-TIONS and was very much appreciated by all our members. He has presided at one of the ordinary meetings at The Institute. He gave the Annual Conversazione a very fine fillip last November which, due to his intensive interest, proved to be the largest gathering of its kind The Institute has ever had. The function this evening has not been without his influence, from a numerical point of view; it is the largest ever held, apart from our two meetings at the Guildhall in 1930 and 1937. Unfortunately for us we have only recently discovered that he possesses a fine bass voice-that he once belonged to and sang in a celebrated choir in New York. We have been sadly remiss in not having asked him to give us of his talent in this I understand that he still sings well. respect. Another and perhaps even more interesting achievement is that he plays a good game of golf, having a handicap of 12. The pity is that as Convener of the Social Events Committee I have only just heard of his prowess in this connection. I can, however, assure him of a very hearty welcome if he will only enter for The Institute Golf Competition next July. To see his name inscribed as the winner of the John Weir Golf Trophy in 1938 I can assure him would give universal satisfaction; furthermore, it might be the means of enticing other Glasgow celebrities in the marine engineering fraternity to travel with him and compete.

May I, Mr. President, on behalf of the whole of the members, as represented by those assembled here this evening, say how pleased we are with the way in which you have presided over us, and close by offering to you our cordial greetings and continued good wishes for your future health and prosperity. (Loud and prolonged applause, followed by a spontaneous rendering of "For he's jolly good fellow").

Dr. Pigott, in reply, expressed his deep appreciation of Mr. Robertson's remarks and of the manner in which his proposal of the toast had been received.

The proceedings being concluded, at the invitation of the President many of the members and guests adjourned to the Balmoral Room, where the next hour was spent in informal conversation and reunions.

INDEX.

Papers and Discussions, Annual Report and Institute Notes.

Issue.

Page.

Issue. Page.

ABELL,

ABELL, SIR WESTCOTT. Report of			"Deductions from Observations on		
Junior Section lecture on "Trend of			Diesel Engine Cylinders". Sir Archi-		
Development in the Design and Con-			bald Denny Award Essay by W. G.	Annil	70
Machinery"	Feb	26	DE MALCIAIVE P and A C HAPDY	April,	10
Accounts	April '38	ZU	Paper on "Transatlantic Liner of the		
Annual Conversazione	Dec	260	Future"	Ian 1938	265
Annual Dinner	April 1938	287	Discussion	Jan., 1938	276
Annual General Meeting	April 1938	vii	Authors' Reply	Jan., 1938	282
Annual Golf Competition, Seventh	July	151	"Designing for Economy in Ship Pro-	5,	
Annual Report	April, 1938	viii	pulsion". Paper by J. F. C. Conn	Feb.	1
Associate Membership Examination			Discussion	Feb.	16
Papers	July	141	Author's Reply	Feb.	20
Autumn Golf Meeting	Oct.	187	"Different Types of War Vessels". Re-		
D D C C C I I I I I I			port on Junior Section lecture by	A	0.2
BAKER, Dr. G. S. Contribution to dis-			"Different Trace of Wer Vessele"	April	83
cussion on de Maigiaive and Hardy's	Lon 1020	276	Essent Types of war vessels.		
BASEPE A C Contribution to discus-	Jan., 1956	270	Whayman's lecture	Inly	135
sion on Metz and Fricson's paper	Dec	250	Dinner Annual	April 1938	287
BATTLE. The late A. E.—portrait and	Dec.	200	DOBBIE A. K. Essay on Dr. Dorey's		
obituary	Feb. facing	25	Junior Section lecture "Special Ma-		
Вескетт, F. O.:-	, ,		terials in Engine Construction"	July	140
Contribution to discussion on S.			DODDS, T. Contribution to discussion on		
McEwen's paper	April	75	S. McEwen's paper	April	76
Contribution to discussion on Metz	-		DOREY, Dr. S. F. Report on lecture to		
and Ericson's paper	Dec.	253	Junior Section on "Special Materials	M 1	
BELSEY, W. J. :-			in Engine Construction	March	04
Contribution to discussion on G. 1.	Non	225	Dorey's lecture on "Special Materials in		
Contribution to discussion on de Mal-	NOV.	223	Dobbie on	Inly	140
glaive and Hardy's paper	Ian 1938	276		July	110
Benevolence Annual General Meeting	Jun, 1700	2,0			
of Guild of	April, 1938	xli	Education Group. Discussion on "A		
BENNETT, G. J. Contribution to discus-			Draft Syllabus for 1st and 2nd Class		
sion on G. T. Marriner's paper	March	55	Certificate Examinations	June	132
BENNIE, G. Contribution to discussion			Education Group. Lecture on "The		
on de Malglaive and Hardy's paper	Jan., 1938	281	Qualifications of the Engineering	Manah	62
BURN, W. S. Report of Junior section			Education Croup	Dec	264
Engine"	Dec	264	Election of Members	(See seho	rate
Engine	Dec.	204	Election of Members	index)	in are
CARLTON the late Thomas-portrait and			"Electro-Magnetic Slip Couplings for		
obituary	March facin	1g 29	Use with Geared Diesel Engines for		
Channel Trip (Junior Section)	Aug.	169	Ship Propulsion". Paper by G. L. E.		
CHRISTIANSON, W. A. Contribution to			Metz and N. Ericson	Dec.	237
discussion on W. A. White's paper	May	96	Discussion	Dec.	248
"Compressors and Blowers for Marine			Authors Reply	Dec.	254
and Industrial Use". Report of			ELLIS, R. E.:-		
ham	Dec	264	Shoosmith's paper	Nov.	224
"Condenser Tube Corrosion - Some	Dec.	204	Contribution to discussion on Metz		
Trends of Recent Research" Paper			and Ericson's paper	Dec.	252
by R. May	Sept.	171	Engineering and Marine Exhibition.		
CONN, J. F. C. Paper on "Designing for	See Barro		Visit to	Oct.	188
Economy in Ship Propulsion"	Feb.	1	Engineering Institute of Canada-Illu-		
Discussion	Feb.	16	minated Address	June	132
Author's Reply	Peb.	20	ERICSON, N. and G. L. E. METZ. Paper		
Conversazione, Annual	Dec.	209	Lee with Coared Discol Engines for		
George VI and Queen Elizabeth	Tune	132	Ship Propulsion"	Dec	237
Correspondence—Letter from A F	June	102	Discussion	Dec.	248
Evans on "Ignition Delay in Diesel			Authors' Reply	Dec.	254
Engines"	Oct.	185	Evans, A. F.:-		
CURRIE, J. H. Lecture to Education			Correspondence on Ignition Delay in	0	
Group on "Qualifications of the En-			Diesel Engines	Oct.	185
gineering Teacher"	March	63	Contribution to Discussion on G. T.	Nov	222
DEAN E S Contribution to discussion			Contribution to discussion on Metz	NOV.	223
on de Malglaive and Hardy's paper	Ian 1038	278	and Ericson's paper	Dec.	253
on de maignare and maray o paper	Jun, 1700		and Entreport puper in the in		

	Issue.	Page.		Issue.	Page.
Examination Papers. Associate Mem-			Contribution to discussion on Metz		
bership	July	141	and Ericson's paper	Dec.	249
Examination Papers. Student	Aug.	161	JONES, D. Essay on Admiral Whay-		
"Exhaust Steam Engineering". Paper			man's Junior Section lecture "Different		
by E. W. Green	June	105	Types of War Vessels"	July	135
Exhaust Steam Engineering. Report			JUNIOR SECTION :		
on Junior Section lecture by E. W.	M	104	Channel Trip	Aug.	169
Green	May	104	Report on lecture by Sir Westcott		
Film Display (Junior Section)	Fab	27	Abell on Trend of Development in		
"Future of the Diesel Engine" Report	reb.	21	Design and Construction of Ships	E.L	24
on Junior Section lecture by W S			Report on lecture by Dr. Derey on	reb.	20
Burn	Dec	264	"Special Materials for Engine Con		
	Dec.	201	struction"	March	64
GIBSON I HAMILTON Contribution to			Report on lecture by Admiral Whay-	march	. 04
discussion on W. A. White's paper	May	98	man on "Different Types of War		
GOLDSWORTHY. E. C.:-	intug	10	Vessels"	April	83
Paper on "Voith-Schneider Propul-			Report on lecture by E. W. Green on		00
sion"	Aug.	157	"Exhaust Steam Engineering"	May	104
Contribution to discussion on de Mal-			Report on lecture by G. T. Marriner		
glaive and Hardy's paper	Jan., 1938	279	on "Mechanical Stoking of Marine		
Golf Meeting, Autumn	Oct.	187	Boilers"	Nov.	235
Golf Competition, Seventh Annual	July	151	Report on lecture by W. S. Burn on	D	
GREEN, EDWARD W.:-			The Future of the Diesel Engine"	Dec.	264
Paper on "Exhaust Steam Engineer-	T	105	"Compression and Diamon		
	June	105	Marine and Industrial Hea"	Dee	264
"Exhaust Steep Engineering"	Man	104	marine and industrial Use	Dec.	204
CRECCON MAJOR W Contribution to	May	104	KENT S N Contribution to discussion		
discussion on G. T. Marriner's paper	March	52	on Metz and Fricson's paper	Dec	. 250
Guild of Benevolence Annual General	March	54	KING GEORGE VI and OUFEN FLIZABETH	May	250
Meeting of	April 1938	xli	Coronation of	Time	132
Guild of Benevolence. The Council's		min	Kylsant of Carmarthen The late Rt.	June	152
Coronation Year Appeal	Tune	130	Hon, Lord-portrait and obituary	Tune	facina 105
	2				
HAMPSHIRE, C. I.:-			Library. Additions to	(See	separate
Contribution to discussion on J. F. C.				In	(dex)
Conn's paper	Feb.	19	"Læffler Boiler Installation in the s.s.		
Contribution to discussion on de Mal-			'Conte Rosso'". Paper by S.		
glaive and Hardy's paper	Jan., 1938	280	McEwen	April	65
Presentation of Collection of Ship			Discussion	April	73
Models	Jan., 1938	286	Author's Reply	April	76
HARDY, A. C. :-			Loyal Address to Their Majesties King	M-	
Contribution to discussion on S.	A	72	George VI and Queen Elizabeth	May J	acing 104
Paper (with P DE MALCIAIVE) on	April	15	Malana I. Contribution to discussion	June	132
"Transatlantic Liner of the Future"	Tan 1038	265	on W A White's paper	Man	06
Discussion	Jan., 1938	276	MCEWEN S Paper on "Loeffler Boiler	May	90
Authors' Reply	Jan., 1938	282	Installation in the ss 'Conte Rosso'"	April	65
HALL, C. M. Contribution to discussion	. ,		Discussion	April	73
on Metz and Ericson's paper	Dec.	251	Author's Reply	April	76
HENDRIE, R. A. Contribution to discus-			MACKAY, W. G. Sir Archibald Denny		
sion on G. T. Shoosmith's paper	Nov.	225	Award Essay "Deductions from Ob-		
HETHERINGTON, H. J. Contribution to		-	servations on Diesel Engine Cylinders"	April	78
discussion on S. McEwen's paper	April	/6	MCLAREN, WM. Contribution to discus-		-
HUNTER, F. A. Contribution to discus-	Nor	222	sion on G. T. Marriner's paper	March	56
sion on G. I. Shoosmith's paper	NOV.	222	MARKHAM, E. Report on Junior Section		
sion on W A White's paper	May	05	for Marine and Industrial Lie?"	Dee	264
Ignition Delay in Diesel Engines—Cor-	May	15	MAPPINED G T :	Dec.	204
respondence from A. F. Evans	Oct.	185	Paper on "Mechanical Stokers for		
Illuminated Address—The Engineering		100	Marine Boilers"	March	29
Institute of Canada	June	132	Discussion	March	49
			Author's Reply	March	57
IAFFREY, J. A. Contribution to discus-			Report on Junior Section lecture		
sion on Metz and Ericson's paper	Dec.	251	"Mechanical Stoking of Marine		
JAKEMAN, R. G. Contribution to discus-			Boilers"	Nov.	235
sion on Metz and Ericson's paper	Dec.	251	MARRINER, W. W. Contribution to dis-		
JAQUES, C. L. Contribution to discus-			cussion on de Malglaive and Hardy's	Ten 10	20 270
sion on S. McEwen's paper	April	15	May D Paper on "Condensor Tube	Jan., 19.	38 2/8
JOHNSTON, F.:-		.er - 6	MAY, K. Paper on Condenser 100e		
Contribution to discussion on G. 1.	Nov	222	Research"	Sent	171
Shooshintin's paper		222		Sept.	1/1

Page.

	Issue.	Pa
"Mechanical Stokers for Marine		
Boilers". Paper by G. T. Marriner	March	
Discussion	March	
Author's Reply	March	
"Mechanical Stoking of Marine Boilers".		
Report on Junior Section lecture by		
G. T. Marriner	Nov.	-
MERRYLEES, H. Contribution to discus-		
sion on J. F. C. Conn's paper	Feb.	
METZ, G. L. E., and N. ERICSON. Paper		
"Electro-Magnetic Slip Couplings for		
use with Gearea Diesel Engines for Ship Propulsion"	Dee	
Discussion	Dec.	
Authors' Repla	Dec.	
MEXETRE A E Contribution to discus-	Dec.	
sion on G. T. Shoosmith's paper	Nov	
Models by C. I. Hampshire, Presenta-		
tion of Collection of Ship	Jan., 1938	
Obituary and portrait-the late Mr.		
A. E. Battle	Feb. fa	cing
Obituary and portrait-the late Mr.		
Thomas Carlton	March fa	cing
Obituary and portrait—the late Rt. Hon.	*	
Lord Kylsant of Carmarthen	June fac	ing
Obituary and portrait—the late Eng.	Esh f	i
Com r. D. A. Stewart-Lee	red. J	acin
Deserve Free Deve Appropria W. D.		
PARNALL, ENG. KEAR-ADMIRAL W. K. :		
MaEwon's paper	April	
Contribution to discussion on de Mal-	April	
alaive and Hardy's paper	Ian 1938	
PAXMAN E Contribution to discussion	Jun., 1900	
on G. T. Shoosmith's paper	Nov.	
PIGOTT, S. I.:-		
Portrait and biography	Oct. fac	ing
Presidential Address	Oct.	
Presentation of Collection of Ship		
Models by C. J. Hampshire	Jan., 1938	
Presidential Address by S. J. Pigott	Oct.	
President—Portrait and biography	Oct. fac	ing
"Qualifications of the Engineering		
Education Croup	March	
OUTLOH A T Contribution to discus-	March	
sion on I F C Conn's paper	Feb	
sion on j. r. e. com s paper	1 00.	
REID. I.:-		
Contribution to discussion on S.		
McEwen's paper	April	
Contribution to discussion on W. A.		
White's paper	May	
RIDDELL, A. M. Contribution to discus-		
sion on G. T. Shoosmith's paper	Nov.	
RIDINGS, A. Contribution to discussion	Marah	
on G. I. Marriner's paper	March	
SAUNDERS C W :-		
Contribution to discussion on G. T.		
Shoosmith's paper	Nov.	
Contribution to discussion on Metz		
and Ericson's paper	Dec.	
Seventh Annual Golf Competition	July	
SHARP, C. Contribution to discussion on	T	
de Malglaive and Hardy's paper	Jan., 1938	5
ShoosMITH, G. I. Paper on Some		
Probalsion"	Nov	
Discussion	Nov.	
Author's Reply	Nov	

1	Page.		Issue.	Page.
		Sir Archibald Denny Award Essay "De-		
1	29	ductions from Observations on Diesel	A	70
1	49	SMITH S A Contribution to discussion	April	18
1	57	on J. F. C. Conn's paper	Feb.	17
		"Some Operating Results of Diesel-		
	235	Electric Propulsion". Paper by G. T.	N	101
	10	Discussion	Nov.	218
	17	Author's Reply	Nov.	227
		"Special Materials for Engine Construc-		
	007	tion". Report on Junior Section lec-		
	23/	"Special Materials for Engine Construct	March	04
	254	tion" Essay by A. K. Dobbie on Dr.		
		Dorey's Junior Section lecture	July	140
	.220	SQUIRRELL, F. Contribution to discus-		
0.20	206	sion on G. T. Marriner's paper	March	56
1938	280	sion on G T Marriner's paper	March	57
		STEWART-LEE, THE LATE ENGR. COM'R.,	march	57
faci	ng 25	D.Aportrait and obituary	Feb.	facing 1
	- 20	Student Examination Papers	Aug.	161
n faci	ng 29	TAMOR Dr. I.I. Contribution to dis-		
facin	a 105	cussion on I. F. C. Conn's paper	·Feb.	16
		THOMAS, T. R. Contribution to discus-		
fac	ing 1	sion on J. F. C. Conn's paper	Feb.	20
		THOMSON, A. Contribution to discussion	Ian 103	8 270
		TOBIN T C Contribution to discussion	Jan., 195	0 219
	73	on de Malglaive and Hardy's paper	Jan., 193	8 277
		TOSTEVIN, ENG. CAPT. H. B. Contribu-		
1938	276	tion to discussion on W. A. White's	Mari	07
	222	TOWNEND W T Contribution to dis-	May	97
	222	cussion on G. T. Marriner's paper	March	49
facin	a 179	"Transatlantic Liner of the Future".		
	179	Paper by P. de Malglaive and A. C.	T 102	0.005
	201	Hardy	Jan., 193	8 205
1938	286	Authors' Reply	Jan., 193	8 282
facin	a 179	"Trend of Development in the Design	,,	
,	3	and Construction of Ships and Their		
		Propelling Machinery". Report on		
	(2)	Abell	Feb	26
h	63	Aben	100.	20
	18	Visit to the Engineering and Marine		
		Exhibition	Oct.	188
		"Vouth-Schneider Propulsion". Paper	A	157
	74	by E. C. Goldsworthy	Aug.	157
	/4	WALLIS R PENDENNIS, Contribution to		
	98	discussion on G. T. Marriner's paper	March	55
		WARNE, E. G. Contribution to discus-		
	224	sion on de Malglaive and Hardy's	Ton 103	Q 270
h	55	WATSON G O'	Jan., 195	0 219
	55	Contribution to discussion on G. T.		
		Shoosmith's paper	Nov.	218
	220	Contribution to discussion on Metz	Dee	240
	220	WATSON G R :	Dec.	248
	252	Contribution to discussion on W. A.		
	151	White's paper	May	95
1020	270	Contribution to discussion on Metz	Dee	050
1938	2/8	WHAYMAN ENC READ-ADMIDAL W M.	Dec.	253
		Contribution to discussion on I. F. C.		
	191	Conn's paper	Feb.	17
	218	Contribution to discussion on G. T.	Mant	
	221	marriner's paper	March	5/

Contribution to discussion on S. McEwen's paper McEwen's paper Report on Junior Section lecture "Different Types of War Vessels"... Whayman's Junior Section Lecture "Different Types of War Vessels". Essay by W. Jones on Admiral ... WHEADON, J. H. Contribution to discus-sion on Metz and Ericson's paper ...

1ssue.	rage						issue.	rage.
		WHITE, W. A. P.	aper	on "T	he W	hite		and and a
April	75	Combined Steam	Êngin	ie"			May	85
		Discussion					May	95
April	83	Author's Reply					May	99
		"White Combined S	team	Engine	e". P	aper		
		by W. A. White					May	85
July	135	Discussion					May	95
		Author's Reply					May	99
Dec.	249							

- INDEX.

Additions to the Library

Iss

riduitit	113 10	the Library.		
Issue.	Page.		Issue.	Page.
		No 742-1937 Fuel Oil for Burners		
Ian 1038	285	(Petroleum and Shale Oils) includ-		
Jan., 1900	200	ing Methods of Test	Ang	167
		No. 729-1037 Method for Testing the	riug.	107
Tuno	132	Zine Costing on Calvanised Articles		
June	152	other then Wire	A	167
		No. 740 1027 Underford Communication	Aug.	107
т	1.21	No. 749-1957. Underfeed Screw Type	C .	177
June	131	Stokers	Sept.	1//
	21	No. 88-1937. Electric Fuses up to 800	0	
Feb.	24	Amperes and 250 Volts to Earth	Oct.	189
Nov.	233	No. 735-1937. Sampling and Analysis		
Dec.	262	of Coal and Coke for Performance		
		and Efficiency Tests on Industrial		
Nov.	233	Plant	Oct.	189
		No. C.E.(EL) 4693. Dimensions of		
Dec.	262	Insulated Annealed Copper Conduc-		
		tors for Electric Power and Light		
Inly	153	(Corrigendum)	Oct	180
Jury	100	No CE(ME) 4173 Multitubular	Oct.	102
		Horizontal Boilers (Dryback and		
Tuno	131	Waste Heat) (Corrigendum)	Oat	100
June	151	No CE (ME) 2002 Longenhing and	Oct.	189
E.L	22	NO. C.E.(ME) 5962. Lancashire and	0.	100
FeD.	22	Cornish Bollers (Corrigendum)	Oct.	189
Jan., 1938	285	No. 240-1937. Method and Tables for		
		Brinell Hardness Testing	Nov.	232
Feb.	24	No. 752-1937. Test Code for Accept-		
March	61	ance Tests for Steam Turbines	Nov.	232
		No. 754-1937. System for the Direc-		
March	61	tion of Rotation of Machine Tool		
		Handwheels and Levers relative to		
July	153	Movement Produced	Dec.	262
		No. 759-1937. Valves. Gauges and		
		Similar Fittings for Land Boiler		
March	61	Installations	Ian 1038	284
and on		Brown's Flags of All Nations	Dec.	262
Dec	262	Brown's Nautical Almanac 1938	Oct.	100
Ian 1038	283	brown's reaction runnanae, 1756	Oct.	190
Jan., 1956	200	Calculation of Convective Heat Flow		
		by Still	A	160
E.L	22	Coloring to McRoboon	Aug.	108
red.	22	Calculus, by McKelvey	Oct.	190
11 1	1.	Centenary of the Screw Propeller	Oct.	188
March	61	Combustion Appliance Makers' Associa-		
		tion publications	Jan., 1938	283
March	61	Co-operation in Technical Education	March	61
		Copper and Bronze Welding, by Kilburn	Feb.	22
		Creep of Non-Ferrous Metals and		
March	61	Alloys: A Review of Published In-		
		formation, by Baker	A119.	168
April	82	Cunard White Star Liner "Oueen Mary"		100
		(Reprint from "Engineering")	May	103
April	82	(reeprint from Engineering)	may	100
ripin	02	Department of Scientific and Industrial		
		Personal Depart for 1025 36	Manah	67
April	02	Design and Cost Estimating of All	March	01
April	152	Transa of Marshart and D		
July	155	Shine by Veri	D	
		Snips, by Kari	Dec.	263
		Diesel Engine Design, by Purday	Feb.	26
Aug.	167	Diesel Engines, by Biggar	July	155

Alternating Current Electrical Engineering, by Kemp

- ing, by Kemp Alternating Current Measurements at Audio and Radio Frequencies, by Owen
- American Society of Naval Architects and Marine Engineers, Vol. 44 of Trans.
- Applied Chemistry for Engineers, by Ward ...
- Applied Thermodynamics, by Robinson ...
- Arc Welding Handbook, by Meller ... Art of Carburation in Theory and
- Practice, by Brewer Association Technique Maritime
- et Aeronautique, Bulletin No. 41 of ...
- A.S.T.M. Standards on Petroleum Products and Lubricants
- Bearing Metals and Alloys, by Bassett ... Blue Book-Electrical Trades Directory and Handbook
- Boiler Management, Maintenance and Inspection Amagement
- Inspection, by Armstrong and Lewis... Brass Pressings
- British Corporation Register of Ships for 1937 ...
- for 1937 British Corporation Rules for Classification of Shins and Machinery
- British Electrical and Allied Industries Research Association's 16th Annual
- Report British Engine Boiler and Electrical Insurance Co.'s Report for 1936 British Oxygen Co.'s publications ...
- Screws
- No. 720-1937. Calibration of Carburettor Jets for Petrol Engines Vapourising Liquid No. 724-1937.
- Pump Tests
- Method for the Determination of the Agglutinating Value of Coal ... No. 487-1937. Fusion Welded Steel
- Air Receivers No. 721-1937. Machine Cut Gears. C.
- Worm Gears No. 726-1937. Measurement of Air Flow and the Free Air Delivered by Compressors
- AI No. 739-1937. Machine Tool Elements No. 209-1937. Fuel Oils for Diesel Engines (Petroleum and Shale Oils) Ju
- including Methods of Test ...

	Issue.	Page.		Issue. Pa	ge.
Directory of Directors, 1937	Iune	130	Improvements in the Economy and		
D.O. Handbook, by Cartwright	Feb.	23	Output of Heavy Oil Engines, by		
Dynamics, Part II, by Ramsey	Feb.	25	Calderwood	May	103
			In Sail and Steam, by Making	Dec.	263
Effect of Impurities in Copper, by	0	100	Burstall	Feb.	25
Archbutt and Prytherch	Oct.	189	Institute of Metals :	1 00.	20
Matter by Houwink	Tuly	154	Vol. LIX of Journal	April	82
Electric Illumination, by O'Dea	Feb.	22	Vol. LX of Journal	Oct.	189
Electric Wiring Diagrams, by Maycock	May	104	of Transactions	Sent	178
Electrical Installation Rules and Tables	Sept.	178	Institution of Engineers and Ship-	Sept.	170
Floatrigity and Magnetism by Mitton	Oct.	189	builders in Scotland, Vol. 80 of		
Electricity and Magnetism: An Intro-	April	02	Transactions	July	153
duction to the Mathematical Theory,			Institution of Engineers-in-Charge, Vol.	Teslar	152
by Ramsey	March	62	Institution of Mechanical Engineers	July	155
Electricity and Magnetism for Degree	T. I.	155	Vol. 133 of Proceedings	Feb.	22
Flementary Engineering Science by	July	155	Vol. 134 of Proceedings	June	131
Morley and Hughes	Nov.	234	Vol. 135 of Proceedings	Nov.	232
Elements of Electricity, by Timbie	May	103	Institution of Naval Architects, Vol.	Nov	232
Engineering Science, Vol. I: Mechanics			Instructions as to Tonnage Measure-	1404.	202
and Hydrostatics, by Brown and Bruant	Sent	178	ments of Ships	Jan., 1938	284
Examples in Elementary Engineering.	Sept.	176	International Congress of Acetylene,		
by Portway	Nov.	234	Oxy-Acetylene Welding and Allied	Sant	177
Examples in Practical Mathematics-			Industries. Froceedings of the Arth	Sept.	1//
Third Year (Senior) Course, by	Tesler	154	Ellis	Jan., 1938	284
Examples in Thermodynamics Problems	July	134			
by Crawford	Oct.	189	Journal of Commerce Annual Review	Feb.	23
Experiment Results for a Series of			Junior Institution of Engineers. Vol.	Fab	22
Three-bladed Propellers in Open	T 1	152	ALVI of Journal	reb.	22
water	July	153	King's Regulations and A.I. Amend-		
Estimus Desistance of Lond and Lond			ments :		
Allovs by Waterhouse	A 110	167	(K.R.1/37)	March ·	61
F.B.I. Register of British Manufacturers	Aug.	167	(K.K.2/37)	May	130
Foundry Organisation and Management,			(K.R.4 and 5/37)	Aug.	167
by Gillespie	Oct.	190	(K.R.6/37)	Sept.	177
(Iron & Steel Institute and British			(K.R.7/37)	Nov.	231
Iron & Steel Federation)	Feb.	22			
Fusion Welding of Pressure Vessels, by			Electricity by Pidduck	Oct	180
Young	Feb.	22	Lessons and Problems in Electricity, by	000.	107
	-		Page	June	131
Gearing for Cranes, by Fiegehen	Dec.	202	List of Principal Acts of Parliament,		
of Electrical Power by Starr	Nov	234	Regulations, Orders, Instructions, etc.,	Mar	102
German Copper and Brass Welding		201	Liverpool Engineering Society Vol.	May	102
Practice	Oct.	188	LVIII of Transactions	Sept.	177
German Patent Position of Arc Welding	New	222	Lloyd's Book of Ports and Shipping		
Germanischer Llovd—Bericht über das	NOV.	255	Places	Aug.	10/
Jahr 1936	Tune	131	Lloyd's Register of British and Foreign	NOV.	2.52
Guide to Current Official Statistics of			Shipping, 1870	June	131
U.K., 1936	Sept.	177	Lloyd's Register of Shipping	Aug.	167
TT II I C D'II D'II I			Lloyd's' Register of Yachts, 1937	June	130
Handbook of British Retrigeration			Low Temperature Physics by Ruhemann	Dec	263
1938	Ian., 1938	284	Bow remperaturer hysics, by rememanin	2000.	200
Hardness of Metals, by Lea	Feb.	24	Machine Design, by Hyland and		
High Speed Diesel Engines, by Judge	Nov.	232	Kommers	Nov.	234
History of the Merchant Navy, by Moyse-Bartlett	May	102	Man and the Sea, by Rose	March	01
How to Patent and Commercialise your	may	103	Mechanical Power Transmission Hand-	Jan., 1938	202
Inventions, by Miller	Aug.	169	book, by Staniar	March	61
Hydraulics, by Daugherty	Dec.	262	Mechanics, by Osgood	Oct.	190
Hydraulics and Mechanics of Fluids, by	Dec	264	Memorandum on Electric Arc Welding	June	130
Hydraulics for Engineers, by Angus	Jan. 1939	204	Directory 1937	May	10
Hydro- and Aero-Dynamics, by Green	Aug.	168	Metallography, by Desch	Nov.	232

	Issue.	Page.	
Metallurgical Abstracts, Vol. 3 Modern Book of Engineering, by McCormick	Nov. Nov. May	231 232 103	Shipping World Year Book, 1937 Society of Engineers. Transactions of Some Notes on the Performance of Piston Rings in relation to Medium Society Depresent Province by Constant
Most Modelli Flocess of Gear Tooth Production (C. Churchill & Co., Ltd.) Motor Boat Manual Motor Ship Reference Book for 1937 Murro's Engineer's Annual 1938	June March Feb.	131 62 24	Standard Seamanship for the Merchant Service, by Riesenberg Steam Turbine Operation, by Kearton
Multio's Englieer's Annual, 1958	Jan., 1936	204	Steels for the User, by Kone
National Maritime Board Year Book for 1937	March June July March	61 131 153 61	Technical Drawing, Part II, by Chalmers Technical Electricity, by Phillips Textbook of Thermodynamics, by Epstein Textbook of Trigonometry, by Cowles
One Hundred Years in Steel, T. Firth & John Brown, Ltd Operation and Maintenance of Marine Diesel Engines, by Freeman	Jan., 1938 April	283 82	and Thompson Thermodynamic Properties of Steam Including Data for the Liquid and Solid Phases, by Keenan and Keyes Thermodynamics Applied to Heat En-
Patents and Trade Marks, by King Patents for Inventions, by Haddan Physical Chemistry, by MacDougall Principles of Heating Vanilating and	May July Feb.	103 154 25	gines, by Lewitt Theory of Lubrication, by Hersey Theory of the Properties of Metals and Alloys, by Mott and Jones
Air Conditioning, by Greene Principles of Quantum Mechanics, by Lande	April Aug.	82 168	Treatment of Chimney Gases at the New Battersea Power Station Treatment of Fuel and Lubricating Oil: Filtration and Renovation, by Beale
Projective Geometry, by Patterson	Dec.	263	, , , ,
"Queen Mary". Souvenir Number of "The Shipbuilder"	Feb.	22	Verbal Notes and Sketches, 13th edition, by Sothern Vertical Steam Engine (Instructions in
Refrigeration Engineering, by McIntyre	Aug.	168	Engineering Design, Vol. I), by Philpot
trons, by Eddington	Feb.	23	Very low temperatures—Book Three, by
Report of Fuel Research Board for year ended 31/3/37	Jan., 1938	283	Victorian Institute of Engineers, Pro- ceedings of
Chemistry	April	81	
"Secant Stroke" Engine, by Williams Ship Construction and Calculations, by	May	104	Welded Joints in Pressure Vessels, by Dorey
Nicol	June	130	Part II. by Aspinall

INDEX.

Election of Members

		Dicco	non of	i ivicindero.			
Name.	Grade (* Transfer).	Issue.	Page.	Name.	Grade (* Transfer).	Issue. P	age.
Abbott, Ernest Henry Adams, Arthur	Member	June	130	Bell. James Alexander Bell, John Turnbull	Member Member	Jan., 1938 March	283 60
William	Associate	Dec.	261	Bennett, Allan			
Adams, Eric D	Prob. Student	Feb.	21	Montgomerie	Associate	Feb.	21
Aitken, Alexander Allen, William	Member	March	60	Bickenson, Roy Bingham, Leslie	Prob. Student	Sept.	177
Kenneth Gwynne	Associate	Jan., 1938	283	Charles	*Associate	Jan., 1938	283
Anderson, John	Member	Oct.	188	Blacklock, William	Member	Oct.	188
Anderson, John Bell	Member	Feb.	21	Blackman Richard			
Andrews, George Frederick	Member	Sept.	177	Joseph Blofeld, Thomas	Member	April	81
				Guest	Member	March	60
Ballantyne, Robert Ewing Craig	Associate	April	81	Boase, Eric James John	Member	Feb.	21
Scott	Member	Oct	188	Booth, Eric George	Prob. Student	Sept.	177
Barker, Thomas	Associate	Sept.	177	Boothroyde, Frank Bowley, Leslie	Member	Jan., 1938	283
Barrie, William	Associate	Oct	188	George	Student	Sept.	177
Beavis, Jack Caplen	Associate	Nov.	231	Bowman, Joseph	Associate	May	102

Issue.

May

July

March

Jan., 1938

Jan., 1938 Sept.

Jan., 1938

Aug.

Nov.

Feb.

Feb.

April

March

Feb.

Dec.

Feb.

May

July

Dec.

Dec.

June

March

Page.

103

61

284

155

285 178

284

168

233

23

23

82

62

23

262

22

103

154

262

262

130

61

Name.	Grade (* Transfer).	Issue.
Boyce, Hugh MacAskill	Member	Marc
Bradbury, William Paul	Associate	Nov.
Brady, Hugh Woodhams Brandwood, William	Member Associate	July May
Bridges, Robert George	Associate	April
Brigden, William Ernest Gransby	Associate	June
Polson	Associate Member	Sept.
Somers Broadbridge George	Member	Feb.
Alan Bruce, David Bruce William	Member Member	Dec. Jan., 1
Edward	Member	Dec.
Buddle, Henry Noel	*Associate	Dec.
Buttery, Walter Keith	Prob. Student	Oct.
Callendar, Thomas Ormiston	Companion	April
Panos	Member	July
Thomas Richard-	Associate	lune
Campbell, Howard	*Mombon	June
Campbell. Robert	• Member	Jan.,
Lindsay Campbell, Robert	Member	April
Turnbull Carmichael James	Associate	May Feb
Carson, Henry	Associate	June
Cass, Frank Wallace	Member	Jan., 1
Chisholm, Norman Donald	Member	Sent
Chubb, Nigel Elford	Associate	Nov.
Clark, Ewbank	Member	Feb
Cockburn Robert	Member	Marci
Henderson Collacott, Ralph	Member	Nov.
Albert	Student	Dec.
Collins, David James	*Associate Student	May
Coombs, Douglas		May
Connor, William	Acceptinte	Sept.
Copland. Thomas	Associate	N.
Corsi Marino	Member	April
Couper, James	Member	ripm
Clifford Cowlin, Frederick	Member	Oct.
John Crawford. George	Associate Member Member	Nov. Dec.
Crosby, Junr.,	Associate Momban	Tuno
Crowther, Harry	Associate	Nov.
Crowther, Louis Earl	Member	April
Cruickshank, Charles	Member	Nov
John	Michibel	TYOV.

Grade (* Transfer).	Issue.	Page.	Name.	Grade (* Transfer).	Issue.	Page.
			Dann William			
Member	March	60	Henry	Associate	Oct	188
member	March	00	Davidson Allan	Member	Ian 1039	202
Associate	Nov	231	Davidson, Patrick	Member	Jan., 1950	205
Associate	NOV.	231	Davidson, Fattick	Associate	Dee	261
Mantan	to to	152	Dairympie	Associate	Dec.	201
Member	July	155	Davies, William	C 1	E 1	-
Associate	May	102	John	Student	Feb.	21
			Dean, Alexander	Member	March	60
Associate	April	81	Deckker, Basil			
		a service	Eardley Leon	Prob. Student	March	61
Associate	June	130	Diack, James	Member	April	81
			Dickerson, Thomas	Student	Sept.	177
Associate Member	Sept.	177	Donnelly, Edward	Member	Oct.	188
			Dowman, Albert			
Member	Feb.	21	Harry	Member	March	60
			Drysdale Mackenzie	*Member	Feb	22
Member	Dec	261	Duffin William	member	1 00.	22
Member	Inn 1038	283	Victor George	Associate	May	102
Member	Jan., 1990	200	Dulto Cocil	11550clate	May	102
Mamban	Dee	261	Alexander	Associate	Eab	21
Member	Dec.	201	Devel Enderich	Associate	reb.	21
Member	Nov.	201	Duval, Frederick	M 1	E.I	21
*Associate	Dec.	201	Charles	Member	FeD.	21
DI CIII	0.	100	Dwyer, John James	Associate	May	102
Prob. Student	Oct.	188	Fost Anthun			
			East, Arthur	*Mamban	Dee	261
			Stanley	Member	Dec.	201
			Edwards, F	Member	Nov.	231
Companion	April	81	Edwards, Stanley			
			Walter	Associate	July	153
Member	July	153	English, Philip			
	5 5		Salmon	Member	Jan., 1938	283
Associate	lune	130	Farrage, William	Member	April	81
	June	150	Finlayson, John			
*Member	Ian 1038	283	Massie	Member	Oct.	188
Member	Jan., 1950	200	Fisher John			
Mombon	April	01	Osmond Middle-			
Member	April	01	ton	Member *	Dec	261
Manhan	M	102	Eleming Frederick	member	Dec.	201
Member	May	102	John Victor	Associate	Nov	231
Associate	Feb.	21	Flowing Nichot	Associate	NOV.	251
Associate	June	130	Carlin Carlin	Manshan	Annil	01
			Carlin	Member	April	01
Member	Jan., 1938	283	Fleming, Samuel			
			William Calder-	24 1	T 1020	202
Member	Sept.	177	wood	Member	Jan., 1938	283
Associate	Nov.	231	Flindt, Ernest Ivor	Member	Nov.	231
Member	Feb	21	Foggin, Gilbert	Associate	May	102
Member	March	60	Forsyth, Reginald			
		~~	Gordon	Member	Tune	130

	Dann, William					
60	Henry	Associate		,	Oct.	188
231	Davidson, Allan Davidson, Patrick	Member			Jan., 1938	283
153	Dairympie Davies, William	Associate			Dec.	201
102	John	Student			Feb.	21
81	Dean, Alexander Deckker, Basil	Member			March	60
130	Eardley Leon Diack James	Prob. Stud Member	lent		March	61
150	Dickerson, Thomas	Student			Sept.	177
177	Donnelly, Edward	Member			Oct.	188
21	Harry	Member			March	60
261	Drysdale, Mackenzie	*Member			Feb.	22
283	Victor George	Associate			May	102
261	Duke, Cecil	Associate			Fab	21
231	Duval, Frederick	Associate			red.	21
261	Charles	Member			Feb.	21
188	Dwyer, John James	Associate			May	102
	East, Arthur	*Mombor			Dec	261
	Edwards, F	Member			Nov.	231
81	Edwards, Stanley	A			Lula	152
153	English, Philip	Associate			July	155
100	Salmon	Member			Jan., 1938	283
130	Farrage, William	Member			April	81
283	Massie	Member			Oct.	188
01	Fisher, John Osmond Middle-					
01	ton	Member			Dec.	261
102 21	John Victor	Associate			Nov.	231
130	Fleming, Nisbet	Member			April	81
283	Fleming, Samuel	Member			riprii	or
	William Calder-	Mombor			Lan 1039	283
231	Flindt, Ernest Ivor	Member			Nov.	231
21	Foggin, Gilbert	Associate			May	102
60	Gordon	Member			Tune	130
231	Freeman, George		-			
261	Robert Froggatt Thomas	Member			Мау	102
102	William	Associate			May	102
102	Galloway, James					
177	Hendry	Member			Jan., 1938	283
100	Cuff	Member			July	153
100	Gibbins, Robert	Mamban			Nov	221
231	Gibbon, John	member		•••	NOV.	201
01	Knight	Member			Dec.	261
188	Griffin	Associate			Jan., 1938	283
231	Glover, Charles Thomas	Member			April	81
261	Godfree, Frederick	*			N	221
130	Godfree, Reginald	Associate			NOV.	231
231	Bruce	Associate			Dec.	261
81	Grant	Member			March	60
231	Golightly, George	Member			May	102
-01	runnoun	Michibel			may	104

Page.

Name. Gordon, Frank ... Graham, James Gray, Charles ... AlastairMacgregor Green, Jonathan Edward Grenfell, Edward Gerald James ... Grieve, William Hadley, Richard Ernest Hall, Ernest Alfred Hall, Nicholas ... Hancock, Robert Joseph Reed Happy, Victor ... George ... Harris, Charles ... George Harrison, William ... Bell ... Harrow, Reginald Victor ... Harvey, Frank Richard Harvey, Oliver Thomas ... Hawkins, George ... Reginald ... Hay, Robert... Heck, William Dennis, Junr. Heggie, William ... Houston Helm, George Mewse ... Horton, William Ault ... Hoult, Aubrey Edmund ... Hunt, Walter Oswald ... Jackson, William Arthur Peters Job, David Morgan Jones, Alfred Edgar Jones, Griffith Fitzhowell Jones, William John Henton ... Kendall, Thomas Lethbridge ... Kerr, Gilbert Armstrong ... Kerr. James Leslie... Kidd, Harold ... King. Thomas John Kirkbright, George Edmund Lennon, Philip Michael Leishman, Henry ... Liebmann, Henry Donald ... Lowery, Charles

Gray

Lyons, John William

Edmund Calder ...

Macdonald, John

Member Member			Nov. July	231 153
Member			Jan., 1938	283
Member			April	81
Prob. Stude Associate	ent 	 	Sept. Nov.	177 231
Member Member Associate		 	Feb. March Dec.	$21 \\ 60 \\ 261$
Associate			Dec.	261
Prob. Stude	ent		Jan., 1938	283
Member			Feb.	21
Member			July	153
Member			Feb.	21
Member			Jan., 1938	283
Member	'		June	130
Associate Member		 	July Dec.	153 261
Associate			Nov.	231
Member			Nov.	231
Member			March	60
Member			Sept.	177
Member			Feb.	21
Member			April	81
Member Associate Member		 	May May Dec.	102 102 261
Member			Dec.	261
Member			Jan., 1938	283
Member			Feb.	21
Associate			May	102
Member			Feb. June	130
Member			Jan., 1938	283
Member			Jan., 1938	283
Member Associate		 	Jan., 1938 Sept.	283 177
Member		•••	Oct.	188
Member Associate			Dec. Feb.	261 21
Member			Dec.	261

Grade (* Transfer).

*

Issue.

Name.	Grade (* Transfer).	Issue.
Macintosh,		
Alexander	Companion	Jan., 1938
Mackie John	Associate	Jan., 1958 Sept
Macnaughtan,	11350clate	Sept.
William	Member	Sept.
McBride, Andrew	Member	July
Ernest Vork	Mombor	Annil
McIntyre John	Associate	April
McLaren, Donald	11550clate	ripin
Nelson	Member	Sept.
Malcolm, Andrew	Member	July
Clement	Member	April
Marriner William	Member	April
Wright	Member	Jan., 193
Martin, Archibald	Member	May
Meddins, George	Manshan	N
Milliken James	Member	NOV.
Crawford	Prob. Student	Sept.
Milner, Edward		
Ellison	Prob. Student	Sept.
Kidd	Member	Sent
Moore, Albert	Member	Sept.
Edward	Associate	Feb.
Morgan, William	Member	March
Mundie, James	Manhan	Maria
Murphy William	Associate	Oct
sicurpity, winnam	11550clate	oct.
Nelson, Alfred		-
Edward	Member	Sept.
Newhouse, Geoffrey	Associate	May
John	Member	April
Norledge, George		
Valentine	Member	Dec.
O'Dia Dia		
Foghan	*Member	Sent
Ogilvie, Stanley	incomportion in in	Depti
Thomas	Associate	Dec.
Oliver, James	*A secolate	Tumo
Ormiston Thomas	*Associate ·	June
Dickson	Member	Nov.
Palmer, Frank John	Member	Jan., 193
Lames	Associate	May
Paterson, David	11550clate	may
Wood	Associate	Dec.
Pearce, Ronald	D 1 C 1 4	C
Petch Kenneth	Prob. Student	Sept.
Charles	Associate	March
Piner, Bryan		
James	Associate	Sept.
Pitt, Kobert Walter	Associate	Nov.
George	Member	May
Pollock, William		-
Robert	Member	June
Porteous James	Member	Oct.
Arthur	Member	Dec.
Pratt, Henry	Member	Oct.
Price, David	Associate	Oct.
Prvde, James	Associate	Dec
Stretton	Associate	Dec.

Companion Member Associate	Jan., 1938 Jan., 1938 Sept.	283 283 177
Member Member	Sept. July	177 153
Member Associate	April April	81 81
Member Member	Sept. July	177 153
Member	April	81
Member Member	Jan., 1938 May	283 102
Member	Nov.	231
Prob. Student	Sept.	177
Prob. Student	Sept.	177
Member	Sept.	177
Associate Member	Feb. March	21 60
Member Associate	May Oct.	102 188
Member Associate	Sept. May	177 102
Member	April	81
Member	Dec.	261
Member	Sept.	177
Associate	Dec.	261
Associate	June	130
Member	Nov.	231
Member	Jan., 1938	283
Associate	May	102
Associate	Dec.	261
Prob. Student	Sept.	177
Associate	March	60
Associate Associate	Sept. Nov.	177 231
Member	May	102
Member Member	June Oct.	130 188
Member Member Associate	Dec. Oct. Oct.	261 188 188

261

Page.

Name.	Grade (* Transfer).	Issue.	Page.	Name.	Grade (* Transfer).	Issue. P	Page.
Pullen, Isaac				Stevenson, William			
Leonard	Member	Dec.	261	Brown	Member	May	102
Rawling Charles				Strang, James Wylie Studd William	Member	Sept.	1//
Llovd	Student	Sept	177	James Owen	Associate	April	81
Ray, William				Junes of on			
Frederick	*Associate	Nov.	231	Thomas, George		and in	
Reed, Robert	A	0.1	100	Ivor	Member	Feb.	21
Rees Charles Alan	Associate Prob Student	Oct. Sept	188	Thomas, John	Member	Nov.	102
Rees. Francis	1100. Student	Sept.	1//	Thompson, Walter	Member	May	102
Edmund	Member	Nov.	231	Hadden	Associate	Oct.	188
Rees, William	C. 1 .	C i		Titchmarsh, George			
Bertram	Student	Sept.	1//	Henry	Member	April	81
Hamilton	Member	Tuly	153	Tonkin, Bertram	Prob Student	Sept	177
Rickinson, Lewis		5 5		Trowell, James	1100. Drudent	Depti	
Raphael	Member	Nov.	231	Henry Atkin	Member	April	81
Kidley, Joseph William	Member	Oct	100	Tucker, John	** * *	Manak	61
Rischmiller, Charles	Miember	Oct.	100	Francis	*Associate	March	60
Albert	Associate	July	153	Turner, George	Member	March	00
Robb, James				William	*Associate	Sept.	177
Andrew Taylor	*Member	Feb.	22				
Farouhar	Member	Inne	130	Vick, Ernest	N/ 1	0.4	100
Robinson, Albert	includering in in	June	100	Edward	Member	Oct.	100
Eric	*Associate	Sept.	177	George	Associate	Feb.	21
Robinson, John	Manhan	E-1	21	Vincent, John	100001000		
Robinson John	Member	FeD.	21	Vernon	*Associate	Dec.	261
George	Associate	Dec.	261	Vivian, Albert	Member	FeD.	21
Roper, Francis				Christian	Associate	Iune	130
William	Member	Oct.	188	Christian	1155001400 111 111		
Albert	Member	March	60	Walford Bertie	Member	July	153
Russell, George	prember	March	00	Walker, Eric Joseph	Member	Nov.	231
Richmond	Member	June	130	Wallis, Robert		E.L	21
Russell-Roberts,		0.1	100	Pendennis	Member	Feb.	21
Edmund Godfrey	Associate	Oct.	188	Clifford	Student	Sept.	177
Edmund Godfrey	*Member	Nov.	231	Warren, William	Dingentin		
				Walter	Associate	Oct.	188
Sage, Arthur		G		Watson, George	Associato	March	60
Leonard	Associate	Sept.	177	Watson James	Associate	March	00
George	*Associate	Ian 1938	283	Robert	Associate Member	July	153
Scaife, Roy	Associate	Nov.	231	Watts, William			152
Scarffe, Raymond		-		Henry Reginald	Member	July	155
Freeland	Prob. Student	Sept.	177	West, Leonard John Wharton Albert	Member	Feb.	21
Lars	Member	March	60	Whitehead, Francis	member		
Shortt, Alfred	inclubering in in	in ar on	00	Anthony Aloysius	Associate	Jan., 1938	283
Frazier	Member	May	102	Willan, Cuthbert	Contraction	April	Q1
Smith, Arthur	Mombor	April	01	Williams David	Member	March	60
Smith, Clifford	Member	April	01	Williams, David	Member	and on	
William	Associate	Oct.	188	Kyffin	Member	Oct.	188
Smith, David				Williams, Hugh	N 1	Cast	177
Alexander Lyall	Member	Sept.	177	Williamson Henry	Member	Sept.	1//
George	*Associate	Sept	177	Carmichael	Associate	Oct.	188
Smith, James	Associate	May	102	Willis, Thomas John	Student	Sept.	177
Smith. James	D 1 C 1	0		Wilson, Frederick	Manha	Mar	102
Smith John Andrew	Prob. Student	Sept.	177	Wilson Robert Cecil	Associate	Tuly	153
Sperpoint, Harrie	Student	Sept.	1//	Wong, James	11550Clate	July	100
Thompson	*Associate	Nov.	231	Chang Ling	Member	Dec.	261
Speirs, John	Member	Oct.	188	W. D.I		0.	100
Herbert	Associate	Feb	21	Yates, Robert	Member	Oct.	188
incident		r cu.	21	roung, George	wiember	Oct.	100

INDEX.

Index to Abstracts of the Technical Press and Extracts.

	Issue.
A.C. Deck Crane Motors	Nov.
Abatement. Progress in Smoke	July
Abruption of Laminar Boundary Flow.	D
Accommodation of Ships' Crows	Dec.
Air Preheaters for Marine Boilers	Inly
Air Services. Transatlantic	Aug
Air Starting Motor. Rotary	Aug.
Aircraft Fuelling Launches. Engines	
for	Sept.
Airport. Genoa	Aug.
Airship Future of the	Sept.
"Albert Leo Schlageter" The Rhine	June
Passenger Motorship	June
All-diesel Installations for Small Craft	July
Alloy Cylinder Heads. Copper	Dec.
Alloy Steel for Shipbuilding. Low	Dec.
Alloy Steels. Application of Certain	Nov.
liner "Athos II"	Ian 10
Alternating Current Drive for Propul-	Jan., 17
sion and Auxiliary Machinery	Jan., 19
Alternating Current Installations. Marine	Dec.
Alternating-current Propulsion. Diesel-	~
electric	Oct.
American Geared Turbine Cargo Ship.	May
American Tanker Practice	Aur
Amidships The case for Propulsion	May.
Anti-Vibration Bolts	Aug.
Apparatus for Ascertaining the Coeffi-	0
cient of Utilization of Power of	
Welding Stations	Jan., 19
Application of Certain Alloy Steels	Nov.
huilding	Inne
Apprentice Ouestion	Dec.
Apprentices. Shipyard	July
"Apprentice-Parents'" Day at British	-
Thomson-Houston's Works	Sept.
Archaouloft Injection. Krupp Two-	Dec.
"Arundel Castle" Completion of the	Nov
Asea Electric Couplings. More Motor-	
ships with	Oct.
"Athos II". Alterations to obtain In-	
creased Power in Liner	Jan., 19
Atlantic Air Services. I rans	Aug.
the "Cairo" with	Tune
Auxiliaries. Götaverken Steam Turbo-	June
compressor System with Electrically-	
driven	May
Auxiliary Engines. Higher Speeds for	Oct.
B. & W. Two-stroke Single-acting	
Engine	Dec.
Back-pressure Turbines. Super-pressure	Oct.
Baffles for Marine Water-tube Boilers	April
Banana Carriers Four 17-knot Italian	Anril
Barge Dynamometer	Dec.
Bauer-Wach Installation. Improved	Sept.
Bearing Face. Conditioning of a	Oct.
Bearings of Fast Running Motors.	Tures
Loads on Moving Parts and	June
gines Lubrication of	Dec
Bearings. Miniature Ball	Aug.
	0

	Page		Issue.	Page.
	248	Behaviour of Fuel in Diesel Engines.		
	109	Experiments on	Aug.	156
		Bells. Large	Sept.	193
	262	Board of Trade Examinations	Feb.	22
	235		March	36
	108		April	56
	138		May	86
	159		June	106
	100		July	134
	188		Aug.	170
	167		Sept.	210
	194		Oct.	240
	92		Dec.	215
	00	D I DE I I I	Jan., 1938	301
	90	Boiler Ethciency. Improving	July	110
	115	Boiler Feed Water. De-aeration of	Sept.	181
	209	Boiler Installations. Cinder Recovery	C .	171
	201	Plant for	Sept.	1/1
	242	Boiler Installations. Velox	Sept.	190
20	202	Boller Maintenance and Repairs in	D	250
38	282	Daila Watan Daallama	Dec.	259
20	20.2	Boiler Water Problems	Dec.	208
38	293	Boilers. Air Preneaters for Marine	July	108
	202	Boilers. Battles for Marine Water-tube		10
	221	Boilers	April	48
	234	Boilers. Colloidal Treatment of Marine	March	24
	02	Boilers. Performances and Prospects		
	101	of Steam Installations with Coal-fired		121
	109	High-pressure	Aug.	130
	13	Boilers. Water Circulation in	Dec.	204
	104	Boilers. Water-tube	Nov.	249
		Bolts. Anti-Vibration	Aug.	164
20	200	Boundary Flow. Spot of Abruption of	D	2/2
38	280	Laminar	Dec.	202
	242	Bow Propulsion Vessel	Dec.	201
	0.1	British Mercantile Marine. Present		10
	91	Position of	April	40
	208	British Thomson Houston's Works.	C ·	172
	120	Apprentice-Parents Day at	Sept.	112
	170	Buchi System. Supercharging on the	April	45
	1/2	Burning of Oil Fuel Afloat. Factors in		210
20	260	Ethcient	Nov.	240
38	211			
	251	"Cairo" with Automatic Fuel Injection		
	222	Machinery of the	Inne	93
	222	Calculating Wave Resistance of Shins	June	10
20	202	New Method of	Dec	261
30	120	Calculation of Strength of Propellers	200.	
	130	Nomogram	Dec.	262
	02	Calculations for Natural Ventilation.		
	95	Unification of	Ian., 1938	283
		Canal. Vessels for Service on Moscow-	5,	
	65	Volga	Ian., 1938	278
	230	Carbonisation of Lubricating Oils	Oct.	212
	239	Cargo Carriers. Speed of	Nov.	250
		Cargo Ship. An American Geared		
		Turbine	May	62
	275	Cargo Ship "Athen". Single-screw		
	226	Motor	Feb.	3
	48	Cargo Steamship. Up-to-date	June	97
	164	Cargo Steamers. Boiler Maintenance		
	41	and Repairs in	Dec.	259
	267	Carriers. Four 17-knot Italian Banana	April	41
	177	Carrying Capacity and Speed. Design-		
	230	Form	Oct.	211
		Case for Propulsion Amidships	May	73
	88	Caspian. New Types of Tanker on the	Jan., 1938	280
		Cast Crankshafts	Tune	88
	256	Cast Iron	March	33
	164	Cast Iron. Heat-treating	Aug.	158

	Issue.	Page.		Issue.	Page.
Cast Iron Special	March	34	Corrosion. Recent Researches on Sea-		
Cast Iron Steam Pipes	Aug	167	water	May	59
Cast Iron Steam ripes	Aug.	101	Correction Resisting	Nov	242
Cast Irons. High Duty	June	104	Continue for Direct Engineer Elevible	Marah	22
Castings and their Engineering Interest.			Couplings for Diesel Engines. Flexible	March	25
Modern Non-Ferrous	Jan., 1938	211	Couplings for High Powers. (Silent-	-	001
Castings or Forgings	Oct.	215	bloc)	Oct.	221
Cathode Ray Indicator in Service	Dec.	264	Couplings for Use with Geared Diesel		
Chain and Sprocket Wheel Wooden	March	30	Engines for Ship Propulsion, Electro-		
Chaine Woldloss Steel	March	27	magnetic	Nov	244
Chains, weidless Steel	March	21	Couplings Conrod Diesel Machinery	1101.	211
Characteristics of Marine Engine In-	N	212	Couplings. Geared Dieser Machinery	Turne	102
stallations during Reversing	Nov.	242	with Electric	June	102
Characteristics of Screw Propellers	May	59	Couplings. More Motorships with Asea		
"Chien She". Twin-screw Dredger	April	54	Electric	Oct.	222
Chinese-built Tug with Kort Nozzle	Sept.	192	Couplings. Motorships with Electric	Sept.	209
Cinder Becovery Plant for Boiler In-	Dept.	1/1	Covent Garden New Fruit Research	~ opti	
the state of the s	Sant	171	Laboratory at	Luly	100
stallations	Sept.	2/1	C E iline Chine Hoteh	July	221
Circulation in Boilers. Water	Dec.	204	Cover Failures. Snips Hatch	Oct.	231
Clacks. Improvements in Safety Valve	May	75	Crane for Manchester Ship Canal. 250-		
Clvde. Dredging the	Oct.	235	ton Floating	Sept.	204
CMB's and TBD's	Dec.	27.4	Crane Motors, A.C. Deck	Nov.	248
Coal and Engine Fuel Economics			Cranes and Winches (Hoisting Machin-		
Corman	Sent	173	erv) for Shine	Nov	247
German	Mary	71	Crealschafts Cost	Luno	88
Coal and Steam	May	11	Cranksnants. Cast	June	107
Coal as a Marine Fuel	May	09	Creep-resisting Steel	Sept.	18/
Coal-fired High-pressure Boilers. Per-			Crews. Accommodation of Ships'	Oct.	235
formances and Prospects of Steam			Crossley-Premier Diesel. New	Aug.	160
Installations with	A 119	136	Cruiser "De Ruvter". Royal Nether-		
Coal in the Mercantile Marine Use of	March	34	lands' Navy's	Feb	16
Coal Oil from	Oct	225	Cruicing Liners Corman	April	38
Coal. On from	Oct.	235	Cruising Liners. German	Dec	262
Coast Guard Cutter. Tests of Pro-	-		Curvature on Friction. Influence of	Dec.	202
pelling Machinery of	Feb.	4	Cutter. Tests of Propelling Machinery		
Coasters. Freeboard and Lengthening			of Coastguard	Feb.	4
of Motor	Nov.	244	Cylinder Heads. Copper Alloy	Dec.	269
Coasters of Restricted Draught Motor	Dec	253	Cylinders and Piston Rings. Wear of	Dec.	257
Coefficient of Utilization of Power of	Dec.		of miders and Proton range		
Willing Stations	Ten 1020	200	De constien of Poilor Food Water	Sant	181
Welding Stations	Jan., 1958	200	De-aeration of Boner Feed Water	Sept.	240
Colloidal Treatment of Marine Bollers	March	24	Deck Crane Motors. A.C	NOV.	240
Combustion Gases. Removal of Sulphur			Deck Sheathing. Compositions for	July	110
from	Sept.	199	"Delius". Motorship	Aug.	147
Combustion Prevention. Spontaneous	Sept	193	Depth on Speed. Effect of Water	Oct	239
Completion of the "Arundel Castle"	Nov	251	"De Ruyter" Royal Netherlands' Navy's		
Complexity of an Engineer's Education		201	Cruicer	Feb	16
Complexity of an Engineer's Education.	0-4	212	Desime Effectionen in	reb.	171
Increasing	Oct.	212	Design. Emclency in	Sept.	1/1
Compositions for Deck Sheathing	July	110	Design—Form, Carrying Capacity and	-	
Condenser Departure. Interesting	Sept.	192	Speed	Oct.	211
Condenser Tube for Difficult Conditions	Sept.	175	Development of Sulzer Diesel Engine	Aug.	137
Condenser Tubes, Copper-Nickel	May	72	Device. Petter Safety	Dec.	267
Condensers Pressure Drop in	Tune	105	Dew Point	Oct	216
Conditioning of a Bearing Face	Oct	230	Diesel electric Alternating current Pro-	Oct.	510
Conditioning of a Dearing Face	Aug	146	Diesel-electric Alternating-current 110-	Ort	221
Cone-Electric Propulsion	Aug.	140	Di 11	Oct.	234
Considerations Affecting Design, Manu-			Diesel-electric and Direct Drive Com-	T 1000	
facture and Erection of Steam Mains			pared	Jan., 1938	297
for Modern Plants	May	78	Diesel-electric m.s. "Wuppertal"	July	120
Constant-speed Airscrew	Sept.	194	Diesel-electric Propulsion	Nov.	243
Consumption Lubricating Oil	Sept	208	Diesel-electric Propulsion	Ian 1038	283
Consumption Measurements on Tug	- opti		Diesel Electric Ship Propulsion	Sant	185
Down and	Dee	262	Diesel Electric Ship Propulsion	Sept.	105
Power and	Dec.	205	Diesel Engine. A New Dual-Iuel-	0	
Contact Corrosion	Dec.	212	burning	Oct.	217
Converted Vessel on Lake Zurich			Diesel Engine. Development of Sulzer	Aug.	137
(S.L.M. Winterthur-engined "Thal-			Diesel Engine. Forty Years' History of	Aug.	136
wil")	Oct.	221	Diesel Engine Foundations, Elastic	Dec	266
Copper Alloy Cylinder Heads	Dec	269	Diesel Engine Fuel	Oct	212
Copper-Nickel Condenser Tubes	May	72	Diesel Engine Fuel and the	Oct	222
Correction and Shipbuilding Technology	May		Diesel Engine. Notes on Defiting a	Luna	00
Sessial Steel in relation to	Dee	240	Diesel Engine. Woles on Kentung a	Sant	107
Special Steel in relation to	Dec.	200	Diesel Engine Valves	Sept.	18/
Corrosion as Influenced by Increased			Diesel-engined Ships. Two Japanese		
Temperature	Aug.	163	Geared	Jan., 1938	299
Corrosion. Contact	Dec.	272	Diesel Engines and Archaouloff Injec-	Dec.	260
Corrosion in Oil Engines. Prevention of	April	44	tion, Krupp Two-stroke	Jan., 1938	277
Corrosion in Sea-water	May	73	Diesel Engines Experiments on the		
Corrosion Intensity Effect of Mill	in a log		Rehaviour of Fuel in	Aug	156
Scale on	Anor	158	Diesel Engines Elevible Courtings for	March	22
Correction of Walded Tairts	Soot	204	Diesel Engines, Flexible Couplings for	Fat	25
Corrosion of weided joints	Sept.	200	Dieser Engines. Reversing Controls of	reb.	5

Page.

53 39

	Issue.	Page.		Issue.
Diesel Installations for Small Craft.			Emmet Mercury Vapour Process. Ship	
All	July	115	Propulsion by the	Nov.
Express Liners Application of	Ian., 1938	281	Engineer. Salary and Status of the	June
Diesel Machinery with Electric Coup-			Engineering Education. Next Step in	Oct.
lings. Geared	June	102	Engineering Mistakes	April
Diesels in 1937 Marine	Jan., 1938	285	Engineer's Education. Increasing Com-	ripm
Diesel Ships in Service. Geared	May	60	plexity of	Oct.
Difficult Conditions. Condenser Tube	Cont	175	Engineers for the Navy	June
Direct Drive Compared Diesel-electric	Sept,	175	Engines for Aircraft Fuelling Launches	Sept.
and	Jan., 1938	. 297	Engines. Ships'	April
Dopes for Lubricating Oils	Aug.	139	Engines. Vibrations on	April
Draught Forced	April Sept.	206	Sea-water	March
Draught. Motor Coasters of Restricted	Dec.	253	Evaporator Tubes. Scaling	Dec.
Dredger "Chien She". Twin-Screw	April	54	Examinations Marine Engineers'	Dec.
Drop in Condenser Pressures	Uct. June	235	Exhaust Gas. Making Use of	July
"Dry Ice" for Extracting Large Shafts	Oct.	235	Experiments on Two Ship Models.	
Dual-fuel-burning Diesel Engine. A	0.1	217	Launching	Aug.
"Duisberg" and "Rubrort" Seagoing	Oct.	217	in Diesel Engines	Aug.
Rhine Ships	Oct.	211	Experiment Tank Establishment. Pro-	8.
Dynamometer Barge	Dec.	267	posed Taylor	Nov.
Economics Corman Coal and Engine			Express Liners Application of Diesel	Dec.
Fuel	Sept.	173	Motor to Propulsion of	Jan., 1938
Education. Increasing Complexity of an	0	212	External forces on Hulls in Ice Fields	Dec.
Engineer's	Oct.	212	Face Conditioning of a Bearing	Oct
Effect of Mill Scale on Corrosion	0	227	Factors to be considered in Efficient	0
Intensity	Aug.	158	Burning of Oil Fuel Afloat	Nov.
Effect of Roughness of the Hull on	Luno	80	Failures. Ships' Hatch Cover	Oct.
Effect of Water Depth on Speed	Oct.	239	Fast Running Motors. Loads on the	Dec.
Effect of Welding on Shipbuilding	Aug.	140	Moving Parts and Bearings of	June
Efficiency. Improving Boiler	July	116	Fast Ships. New Hull Form for	Oct.
Efficiency Large Screws for	Aug.	164	"Fenella". Isle of Man Turbine	Sept.
Efficient Burning of Oil Fuel Afloat.			Steamers "Tynwald" and	June
Factors in	Nov.	246	Ferry "Stedingen". Vehicular	May
Electric (Alternating-current) Propul-	Dec.	200	Filters. Vacuum-operated	Dec.
sion Diesel	Oct.	234	Fireproofing Achieved by Rebuilding	April
Electric and Direct Drive Compared.	Ian 1038	207	Firet Harland-Elsinore Installation	Nov. April
Electric Arc Welding. Special Steel for	Jan., 1950	291	First Parsons Memorial Lecture	April
Ships in relation to	Dec.	261	Fishing Vessels with Kort Nozzles	Dec.
Electric Couplings. Geared Diesel	Inne	102	Fits. Force and Shrink	June
Electric Couplings. More Motorships	June	105	of Welded Plates with Sheared and	Feb.
with Asea	Oct.	222	Flexible Couplings for Diesel Engines	March
Electric Couplings. Motorships with	Sept. Sept	209	Canal 250-ton	Sent
Electric M.S. "Wuppertal". Diesel	July	120	Floating Whale-Oil Factory "Strombus"	April
Electric Propulsion. Cone	Aug.	146	Flow of Metals	Aug.
Electric Propulsion Diesel	Nov. Ian 1938	243	Forced Draught	June Sept
Electric Ship Propulsion Diesel	Sept.	185	Forces on Hulls in Icefields. External	Dec.
Electric Welding of Light Material for	T 1020	270	Forgings. Castings or	Oct
Construction of Motor Launches	Jan., 1938	218	Form Carrying Capacity and Speed	Sept.
verken Steam Turbo-compressor			Design	Oct.
System with	May	65	Form for Fast Ships. New Hull	Oct.
Electrolytic Iron Manufacture	Sept.	204	Form of Merchant Vessels Develop-	Dec.
with Geared Diesel Engines for Ship			ment of Hull	Dec.
Propulsion	Nov.	244	Former P. & O. "Razmak"	Sept.
Ellerman Liner "Malvernian"	April	130	Engine History of the Diesel	Aug
Emergency Measures	Sept.	187	Foundations. Elastic Diesel Engine	Dec.

	Issue.	Page.		Issue.	Page.
Foundry Progress	June	89	High-pressure Boilers. Performance		
Foundry Progress. Iron and Steel	Aug.	167	and Prospects of Steam Installations		
Freeboard and Lengthening of Motor		244	with Coal-fired	Aug.	136
Coasters	Nov.	244	High-pressure Station in U.S	Oct.	235
Friction Influence of Curvature on	Jan., 1956	262	High Temperature_Steam at 1,000°F	Jan., 1938	210
Fruit Research Laboratory at Covent	Dec.	202	and other Matters	March	20
Garden. New	July	109	High Tensile Steel. Rivets of	Jan., 1938	279
Fuel Afloat. Factors in the Efficient			High Vacuum for Steamships	April	52
Burning of Oil	Nov.	246	Higher Speeds for Auxiliary Engines	Oct.	239
Fuel and the Diesel Engine	Oct.	233	"Himalaya". Ships That Made History	Sept.	202
Fuel. Coal as a Marine	May	69	History—"Himalaya". Ships That Made	Sept.	202
Fuel Costs for High-powered Machinery	Sect	170	History—"John Bowes". Ships That	0.4	227
Fuel Diesel Engine	Oct	212	History of London's Water Supply	Oct.	231
Fuel Economics. German Coal and	Oct.	616	History of the Diesel Engine Forty	Sept.	1/4
Engine	Sept.	173	Years'	Aug.	136
Fuel in Diesel Engines. Experiments on			History of Torpedo Craft	Nov.	250
the Behaviour of	Aug.	156	History-"Victorian". Ships That Made	Oct.	236
Fuel Injection. Machinery of the			Honouring the Seagoing Engineer-		
"Cairo" with Automatic	June	93	Llewelyn Roberts	June	102
Fuel Derticle Size	Lop 1039	2/3	(Llowelup Poherte)	Turne	101
Fuel Problem National	Oct	213	Hoisting Machinery for Ships	Nov	247
Fuelling Launches. Engines for Aircraft	Sept	188	Hull Form for Fast Ships. New	Oct.	216
Furnace Repairs by Welding	Jan., 1938	301	Hull Form of Merchant Vessels.	000	
Future of the Airship	June	92	Development of	Dec.	253
Future, Power Supply of	March	24	Hydraulic Press. A Huge	Oct.	235
			Laborator (Laborator Challer)	0	004
Galvanising Small Parts	Aug.	158	Ice (Dry) for Extracting Large Shafts	Oct.	230
Gas Hazards on Shipboard	Nov.	110	Icefields External Forces on Hulls in	Dec	255
Gas Producers for Ships	Sept	173	Improved Bauer-Wach Installation	Sept.	177
Gases. Removal of Sulphur from	Sept.	115	Improvements in Safety Valve Clacks	May	75
Combustion	Sept.	199	Improving Boiler Efficiency	July	116
Gear. Large Semi-uniflow Engines with			Increased Power in Liner "Athos II".		
Modified Valve	May	64	Alterations to obtain	Jan., 1938	282
Gear Unit. Interesting Marine	Sept.	190	Indicators in Service. Cathode Ray	Dec.	- 204
Geared Diesel-engined Ships. 1 wo	Ten 1029	200	Influence of Curvature on Friction	Dec.	203
Geared Diesel Machinery with Electric	Jan., 1938	299	Injection, Krupp Two-stroke Diesel	Dec.	260
Couplings	Inne	102	Engines and Archaouloff	Jan., 1938	277
Geared Diesel Ships in Service	May	60	Injection. Machinery of the "Cairo"		
Geared Turbine Cargo Ship. An	2		with Automatic Fuel	June	93
American	May	62	Injection. Pilot Fuel	Dec.	273
	June	101	Insulation Heat	July	108
Conrad Turbings for Lake Freighters	Tan 1029	201	Interesting Condenser Departure	Sent	192
Generator for Merchant and Naval	Jan., 1938	284	Interesting Marine Gear Unit	Sept.	190
Vessels Velox Steam	May	81	Internal Combustion. Vagaries of	Nov.	249
Genoa Airport	Aug.	167	Inventions-Past and Future	Nov.	252
German Coal and Engine Fuel	U		Iron and Steel Foundry Progress	Aug.	167
Economics	Sept.	173	Iron. Cast	March	3.5
German Cruising Liners	April	38	Iron Manufacture Electrolytic	Aug.	204
German Society of Naval Architects.	E.L	2	Iron Special Cast	March	34
Gotaverken Steam Turbo-Compressor	Feb.	2	Iron Steam Pipes. Cast	Aug.	167
System with Electrically - driven			Irons. High-Duty Cast	June	104
Auxiliaries	May	65	Isle of Man Turbine Steamers "Tyn-		
Graf Zeppelin	April	54	wald" and "Fenella"	June	93
			Italian Banana Carriers. Four 17-knot	April	41
Harland-Elsinore Installation. First	April	56	Japanese Conred Dissel engined Shine		
Hazards on Shipboard Gas	Oct.	251	Two	Ian 1038	200
Heads. Copper Allov Cylinder	Dec	260	"John Bowes". Ships That Made	Jun., 1750	277
Heat Exchangers	Sept.	188	History	Oct.	237
Heat Insulation	July	108	Joints Corrosion of Welded	Sept.	206
Heat Insulation	July	118	"Joseph Stalin". Icebreaker	Oct.	236
Heat-treating Cast Iron	Aug.	158	Journals. Metal Sprayed	Dec.	267
Heating. Steam for Water	Sept.	206	Kast Namla Chinese Lille Den tit	Sect	103
High-powered Machinery for Large	June	104	Kort Nozzles Twin-screw Tug with	Sept.	192
Passenger Liners	Sept.	179	Kort Nozzles. Fishing Vessels with	Dec	269
	Dept.		the second standing vessels with		207

Krupp Two-stroke Diesel Engines and Archaouloff Injection

Issue.	Page.	Issue.	Page.
Dec. Jan., 1938	260 277	Memorial Lecture. First Parsons April Mercantile Marine. Present Position of	49
	100	British April Mercantile Marine. Use of Coal in the Marchant Vassels, Davidorment of Hull	40 34
July	109	Form of Dec.	253
Aug.	159	sion by the Emmett	245
Jan., 1938	284	Metal Experiments on Spraving of Dec	245
		Metal Sprayed Journals Dec.	267
Oct	221	Metals. Flow of Aug.	166
Oct.		Methods of Shaping Materials Employed	200
Dec.	262	in Shipyard Practice June	89
Sept.	193	Metric System in Shipbuilding Oct.	239
Aug.	164	Mill Scale on Corrosion Intensity. Effect	
		of Aug.	158
Jan., 1938	278	Miniature Ball Bearings Aug.	164
Sept.	188	Ministry of Marine June	103
A	127	Models Launching Experiments on	4
Aug.	250	Two Ship Aug	137
Sent	188	Models. Theory of Wake Measurement	157
Dept.	100	on Ship Sept.	174
Nov.	244	Modern Steel Progress. Notes on March	34
Sept.	204	Monel Metal in Shipbuilding. Applica-	
		tions of June	91
Jan., 1938	278	Moscow-Volga Canal. Vessels for Ser-	20 270
April	53	Vice on Jan., 19	138 278
July	120	New May	67
July	130	Motor Cargo Ship "Athen" Single-	07
Ian 1038	. 281	screw Feb.	. 3
April	38	Motor Coasters. Freeboard and Length-	
		ening of Nov.	244
June	88	Motor Coasters of Restricted Draught Dec.	253
Sept.	174	Motor Craft. High Speed Jan., 19	38 278
Dec.	261	Motor Launches. Electric Welding of	
Sept.	208	Light Material for Construction of Jan., 19	38 278
Oct.	212	Motor Tanker "Nueva Granada" Nov.	245
Aug.	139	and Bearings of Fast Running June	88
Dec	256	Motorship "Albert Leo Schlageter".	
Dec.	253	Rhine Passenger June	90
Dec.	272	Motorship "Delius" Aug.	147
		Motorship "Royal Sovereign". Pas-	1.10
		Senger Aug.	149
Sept.	179	lings More Oct	222
T	02	Motorships with Electric Couplings Sept.	209
June	162	Moving Parts and Bearings of Fast	
Aug.	102	Running Motors. Loads on June	88
		Mud. Lifting a Ship by Means of Sent.	204
Nov.	244		
		National Fuel Problem Oct.	213
	-	National Physical Laboratory Aug.	166
May	78	National Tank. Progress of May	85
Dec	250	Nations. Engineering through the April	38
Luly	118	German Society of Feb	2
July	130	Naval Fight of Sixty Years Ago Aug	167
July	150	Naval Review at Spithead	91
Sept.	204	Navy. Engineers for the June	103
Sept.	171	Netherlands' Navy's Cruiser "De Ruy-	
Dec.	262	ter". Royal Feb.	16
Jan., 1938	3 285	New Crossley-Premier Diesel Aug.	160
March	23	New Dual-tuel-burning Diesel Engine Oct.	217
Dec.	271	New Hull Form for Fast Ships Oct.	216
May	69	New (Moss) Steam Reciprocator.	67
Sept.	190	Next Step in Engineering Education Oct	220
Sent	103	Nickel Condenser Tubes Cooper- May	229
Sept.	194	Nomogram Calculations of Strength of	14
Dec.	263	Propellers Dec.	. 262

Laboratory at Covent Garden. New

Laboratory at Covent Garden. New Fruit Research Laboratory Tests on Serviceability of Steel and Steel Products Lake Freighters. Geared Turbines for Lake Zurich. A Converted Vessel on (S.L.M. Winterthur-engined "Thal-Ju Au Jan (S.L.M. Winterinur-engined Thar-wil') Laminar Boundary Flow. Spot of Abruption of Large Bells Large Screws for Efficiency Launches. Electric Welding of Light Material for Construction of Motor... Oc De Se Au Launches. Engines for Aircraft Fuelling Launching Experiments on Two Ship Models Law Suits. Engineers as Experts in ... Leaky Stop Valves Lengthening of Motor Coasters. Free-Se Lightweight Oil Engine, Vickers ... Liner "Malvernian" Ellerman Liners. Application of Diesel Motor to Propulsion of Large Express Propulsion of Large Express Liners. German Cruising Loads on the Moving Parts and Bear-ings of Fast-Running Motors ... London's Water Supply. History of ... Low Alloy Steel for Shipbuilding A Lubricating Oils. Carbonisation of ... Lubricating Oils. Dopes for ... Lubricating of Bearings of Internal D Machinery for Large Passenger Liners. Machinery of the "Cairo" with Auto-

Use	with
for	Ship
Consi	dera-
anufa	cture
in (argo
er	
ton I	loat-
ons	
g	
ower	and
	Use for Consider anufa in or ton F ons ons ower

	Issue.	Page.		Issue.	Page
Non-destructive Testing of Materials	Sept.	207	Propellers. Singing	June	10.
Non-Ferrous Castings and Their Engi-			Propulsion Amidships. The Case for	May	7.
neering Interest. Modern	Jan., 1938	277	Propulsion. Cone-electric	Aug.	140
"Normandie". New Propeller for the	July	109	Propulsion. Diesel-electric Alternating-	0.1	22
Normandie's' New Records	April	25	Dresulaion of Lorge Eugenese Linens	Oct.	234
North Eastern Keneater Imple	Nov	218	Application of Discel Motor to the	Ian 1039	20
Notes on Refitting a Diesel Engine	Tune	240	Propulsion Vessel A Bow	Dec. 1950	261
Nozzle Chinese-built Tug with Kort	Sept.	192	riopuision vessel. R Dow	Dec.	207
Nozzles. Fishing Vessels with	Dec.	269	Ray Indicators in Service Cathode	Dec	264
"Nueva Granada" Motor Tanker	Nov.	245	"Razmak". Former P. & O	Sept.	208
Andrews werened as .			Reciprocator, Another New Moss	Sopt.	
Oil Consumption, Lubricating	Sept.	208	Steam	May	67
Oil Engine. Vickers Lightweight	July	126	Records. "Normandie's" New	April	53
Oil Engines. Prevention of Corrosion in	April	44	Reconditioning of the Transport		
Oil from Coal	Oct.	235	"Republic"	Aug.	137
Oil Fuel Afloat. Factors in Efficient			Reducing Valve of Unusual Design	Sept.	175
Burning of	Nov.	246	Refitting a Diesel Engine. Notes on	June	98
Oil Production in Scotland	June	91	Reheated Marine Steam Installation	April	54
Oil Reserves of the U.S.S.R	Sept.	204	Reheater Engine. Performance of	Dec.	268
Oil Tankers. Welding Large	Aug.	142	Reheater Iriple. North Eastern	July	111
Oils. Carbonisation of Lubricating	Oct.	120	Removal of Sulphur from Combustion	Cast	100
Oldest Warship	Ang	139	Papairs by Welding Furnace	Jap 1039	201
Oldest Warship	April	54	Repairs in Cargo Steamers Boiler	Jan., 1930	501
D & O Lines "Strathedor"	A	165	Maintenance and	Dec	250
P. & O. Liner Stratheden	Sent	208	"Republic" Reconditioning of the	Dec.	207
Parsons Memorial Lecture First	April	49	Transport	Aug	137
Parsons V8 Marine Set	Sept	194	Research at the William Froude Labora-		
Particle Size Fuel	Jan., 1938	301	tory	Oct.	213
Passenger Motorship "Royal Sovereign"	Aug.	149	Research. Form and Propeller	Sept.	206
Pass-out Turbines	Sept.	187	Research Laboratory at Covent Garden.		
Performance of the Reheater Engine	Dec.	268	New Fruit	July	109
Performances and Prospects of Steam			Research. Lubrication	Dec.	272
Installations with Coal-fired High-			Research. Steam Turbine	July	117
pressure Boilers	Aug.	136	Researches on Sea-water Corrosion.	M	50
Petter Safety Device	Dec.	267	Recent	May	201
Pilot Fuel Injection	Dec.	213	Reserves of the U.S.S.K. Oil	Sept.	204
Pipe Lines. Welded Steam	Oct.	215	Residual Stresses in Welded Flates	June	105
Pipes. Cast fron Steam	Oct.	220	Hull on Ship	lune	80
Piston Rings. Taper-sided	Oct.	220	Resistance of Ships New Method of	June	07
Piston	Dec.	257	Calculating Wave	Dec.	261
Plates with Sheared and Flame-Cut			Resistance. Ship Forms of Least	Dec.	261
Edges. Comparative Strength of			Resisting Corrosion	Nov.	242
Welded	Feb.	4	Restricted Draught. Motor Coasters of	Dec.	253
Plates. Residual Stresses in Welded	June	103	Reversing. Characteristics of Marine		
Position of British Mercantile Marine.			Installations during	Nov.	242
Present	April	40	Reversing Controls of Diesel Engines	Feb.	5
Power and Consumption Measurements	D	2.42	Review at Spithead Naval	June	91
On lug	Dec.	203	Schlageter"	Tumo	00
of Utilization of	T 1020	200	Rhine Shins "Duisherg" and "Ruhrort"	June	90
Power Supply of the Future	Jan., 1938	280	Seagoing	Oct	211
Preheaters for Marine Boilers Air	Tuly	108	Rings Taper-sided Piston	Oct	220
Present Position of British Mercantile	July	100	Rivets of High Tensile Steel	Jan. 1938	279
Marine	April	40	Roberts, Llewelyn-Honour Where	,,	
Press. A Huge Hydraulic	Oct	235	Honour is Due	June	101
Pressure Drop in Condensers	Tune	105	Roberts, Llewelyn-Honouring the Sea-		
Pressure Vessels. Welded	July	108	going Engineer	June	102
Prevention of Corrosion in Oil Engines	April	44	Rotary Air Starting Motor	Aug.	159
Problem. National Fuel	Oct.	213	Roughness of the Hull on Ship Resist-		00
Progress. Foundry	June	89	ance. Effect of	June	89
Progress in Smoke Abatement	July	109	Ruyter"	Feb	16
Progress. Iron and Steel Foundry	Aug.	167	"Roval Sovereign" Passenger Motor	reo.	10
Progress. Marine Engineering	March	23	ship	A 1107	140
Progress of the National Tank	March	34	"Ruhrort", Seagoing Rhine Shins	rug.	147
Propeller Research Form and	Sept	206	"Duisberg" and	Oct.	211
Propellers. Characteristics of	May	50			
Propellers for the "Normandie" New	Tuly	109	Safety Device. Petter	Dec.	267
Propellers. Nomogram Calculation of	2.4.5		Safety Valve Clacks. Improvements in	May	75
Strength of	Dec.	262	Salary and Status of the Engineer	June	89

Dec.

Issue Sanitation on Board Ship. Ventilation and Scale on Corrosion Intensity. Effect of Feb. Mill Scaling Evaporator Tubes ... Aug Dec. Scotland. Oil Production in June ... Screw Propellers. Characteristics of ... May Aug Screws for Efficiency. Large Seat Wear. Valve Sea-water. Corrosion in ... Tune ... May Sea-water Corrosion. Recent Researches

on ... Sea-water Evaporators for Steam and

Valve Gear. Large Valve Gear. Large Serviceability of Steel and Steel pro-

ducts. Laboratory Tests on the ... Shafts. "Dry Ice" for Extracting Large Shaping Materials Employed in Ship-yard Practice. Methods of Sheared and Flame-Cut Edges. Com-parative Strength of Welded Plates

parative Strength of Welded Plates with Sheathing. Compositions for Deck

July Ship Construction. Shop Work in Welded Ship Models. Launching Experiments Welded Dec

on Two Ship Models. Theory of Wake Measureon Two

ment on Ship Propulsion by the Emmett Mercury

Vapour Process Ship Propulsion. Diesel Electric ... Ship Resistance. The Effect of Rough-

ness of the Hull on ...

Shipbuilding. Applications of Monel

- Ships That Made History—"Victorian" Aug Aug Apri

Ships That Made History-"Victorian"

Shipyard Apprentices Shipyard Practice. Methods of Shaping

Silentbloc Couplings for High Powers... Sixty Years Ago Sixty Years Ago. Naval Fight of

Slip Couplings for Use with Geared Diesel Engines for Ship Propulsion. Electro-magnetic ...

S.L.M. Winterthur-engined "Thalwil" (Converted Vessel on Lake Zurich) ... Small Craft. All-diesel Installations for Oct. July Smoke Abatement. Progress in July Smoke Elimination. Use of Sound Waves for Smoke Indicators Aug Smoke Indicators Sound Proofing of Engine Rooms of Motor Vessels. Ventilation and Dec. Sound Waves for Smoke Elimination. Use of Aug. March

Special Cast Iron Special Steel for Ships in relation to Electric Arc Welding ...

Issue.	Page.		Issue.	Page.
		Special Steel in relation to Corrosion	-	
Feb.	2	and Shipbuilding Technology	Dec.	260
Aug	158	city and	Oct	211
Dec.	272	Speed Effect of Water Depth on	Oct.	230
Luno	01	Speed of Cargo Carriers	Nov	250
Man	50	Speed of Cargo Carriers	Oct.	230
May	164	Speeds for Auxiliary Englies. Inglier	Luno	01
Aug.	104	Spitnead, Navai Review at	Sant	102
June	105	Spontaneous Compustion Prevention	Sept.	195
May	15	Spot of Abruption of Laminar boundary	Dec	262
M	50	Flow	Dec.	267
May	39	Sprayed Journals. Metal	Dec.	201
M	20	Spraying of Metal, Experiments on	Dec.	203
March	30	Sprocket wheel. wooden Chain and	March	30
M	11	Stabilisation of Ships	March	24
May	04	Stalin Icebreaker Joseph	Oct.	230
		Starting Motor. Rotary Air	Aug.	159
Aug.	159	Status of the Engineer. Salary and	June	89
Oct.	235	Steam at 1,000°F. and other Matters	March	29
		Steam. Coal and	May	71
June	89	Steam for Water Heating	Sept.	206
		Steam Generator for Merchant and		
		Naval Vessels. Velox	May	81
Feb.	4	Steam Installation. Reheated Marine	April	54
July	110	Steam Installations with Coal-fired		
J		High-Pressure Boilers. Performance		
Dec	258	and Prospects of	Aug.	136
1000.	200	Steam Mains for Modern Plants. Con-	0	
A 110	137	siderations Affecting Design, Manu-		
riug.	157	facture and Erection of	May	78
Sant	174	Steam Pine Lines Welded	Oct	215
Sept.	114	Steam Pipes Cast Iron	Ang	167
Maria	215	Steam Propulsion in 1937	Ian 1038	288
Nov.	105	Steam Reciprocator Another New	Jan., 1700	200
Sept.	185	(Mose)	May	67
	00	Steam Turbing Research	Luly	117
June	89	Steamphics High Vocuum for	Acril	11/
-		"Stalinger" Valigular Form	Man	52
June	91	Steel and Steel Decluste Laboratory	May	39
Aug.	140	Steel and Steel Products. Laboratory	A	150
Aug	168	lests on the Serviceability of	Aug.	107
April	53	Steel. Creep-resisting	Sept.	18/
Oct.	231	Steel for Shipbuilding. Low Alloy	Dec.	261
Sept.	202	Steel for Ships in relation to Electric		
		Arc Welding. Special	Dec.	261
Oct.	237	Steel Foundry Progress. Iron and	Aug.	167
Oct.	236	Steel in relation to Corrosion and Ship-	-	
July	120	building Technology. Special	Dec.	260
		Steel Progress. Notes on Modern	March	34
June	89	Steel. Rivets of High Tensile	Jan., 1938	279
Dec.	258	Steels. Application of Certain Alloy	Nov.	242
Tune	92	Stop Valves. Leaky	Sept.	188
Oct	221	"Stratheden". P. & O. Liner	Aug.	165
Inne	105	Streamlining of Ship Superstructures	Jan., 1938	280
Feb	3	Strength of Propellers. Nomogram		
May	74	Calculations of	Dec.	262
Ang	167	Stresses in Welded Plates. Residual	June	103
riug.	101	"Strombus". Floating Whale-Oil Fac-		
		tory	April	38
Nov	211	Sulphur from Combustion Gases. Re-		
NOV.	244	moval of	Sept.	199
Ort	221	Sulzer Diesel Engine Development of	Aug	137
Oct.	221	Supercharging on the Buchi System	April	45
July	115	Super-pressure Back-pressure Turbines	Oct	226
July	109	super pressure such pressure rurbines	000	220
Aug.	154	Tank Establishment. Proposed Taylor		
Dec.	265	Experimental	Nov.	251
		Tank. Progress of the National	May	85
Jan., 1938	282	Tanker "Nueva Granada". Motor		

Tanker "Nueva Granada". Motor 282 Tanker Nov. 245 Tanker Tanker Practice. American 154 169 Aug. Tankers on the Caspian. New Types of 34 Jan., 1938 280 Tankers. Welding Large Oil ... 142 Aug. ...

220

Oct.

Taper-sided Piston Rings

307

	Issue.	Page.		Issue.	Page.
Taylor Experimental Tank Establish-			Vehicular Ferry "Stedingen"	May	59
ment. Proposed	Nov.	251	Velox Boiler Installation	Sept.	196
T.B.D.'s and C.M.B.'s	Dec.	274	Velox Steam Generator for Merchant		
Telegraphs. Electric Engine-room	Sept.	178	and Naval Vessels	May	81
Testing of Materials. Non-destructive	Sept.	207	Ventilation and Sanitation on Board		
Testing Installations for Ships' Fans	Dec.	259	Ship	Feb.	2
Lests of Propelling Machinery of New	Fab	1	Engine Rooms of Motor Vessels	Inn 1029	282
Tests on the Serviceability of Steel and	reb.	4	Ventilation Unification of Calculations	Jan., 1956	202
Steel Products Laboratory	Ang	1.59	for Natural	Ian 1938	283
"Thalwil". S.L.M. Winterthur-engined	in all a	107	Vessels for Service on Moscow-Volga	Jun, 1700	200
(Converted Vessel on Lake Zurich)	Oct.	221	Canal	Jan., 1938	278
Theory of Wake Measurement on Ship			Vessels. Welded Pressure	July	108
Models	Sept.	174	Vibration Bolts. Anti	Aug.	164
Torpedo Craft. History of	Nov.	250	Vibrations on Engines	April	39
Transatlantic Air Service	Aug.	138	Vickers Lightweight Oil Engine	July	126
I ransport Republic . Reconditioning	Ang	127	Victorian —Snips that Made History	Oct.	230
Treatment of Marine Boilers Colloidal	March	24	Effect of	Dec	261
Triple North Fastern Reheater	Inly	111	Volga Canal Vessels for Service on	Dec.	201
Tube for Difficult Conditions. Con-	July		Moscow	Ian., 1938	278
denser	Sept.	175	8	5, 2700	
Tubes. Copper-Nickel Condenser	May	72	Wake Measurement on Ship Models.		
Tubes, Scaling Evaporator	Dec.	272	Theory of	Sept.	174
Tug with Kort Nozzle. Chinese-built	Sept.	192	Warship. Oldest	April	54
Tug with Kort Nozzles. Twin-screw	July	129	Water Circulation in Boilers	Dec.	264
Tug Power and Consumption. Measure-	1100	262	Water, Deaeration of Boller	Sept.	181
Turbing Cargo Ship American Geared	May	62	Water Evaporators for Steam and	Oct.	239
Turbine Cargo Sinp. American Geared	June	101	Motor Ships, Sea-	March	30
Turbine Research. Steam	July	117	Water Heating. Steam for	Sept.	206
Turbine Steamers "Tynwald" and	2 2		Water Problems. Boiler	Dec.	268
"Fenella". Isle of Man	June	93	Water Supply. History of London's	Sept.	174
Turbines for Lake Freighters. Geared	Jan., 1938	284	Water-tube Boilers	Nov.	249
Turbines. Super-pressure Back-pressure	Oct.	226	Water-tube Boilers. Baffles for Marine	April	48
Turbo-compressor System with Electri-			Wave-making of Ships. Effect of Vis-	Dee	2/1
Steam	May	65	Wave Resistance of Ships New	Dec.	201
Turning of Shins	Feb	3	Method of Calculating	Dec	261
Twin-Screw Dredger "Chien She"	April	54	Wear of Cylinders and Piston Rings	Dec.	257
Twin-screw Tug with Kort Nozzles	July	129	Wear. Valve Seat	June	103
Two Ship Models. Launching Experi-			Welded Joints. Corrosion of	Sept.	206
ments on	Aug.	137	Welded Plates with Sheared and Flame-	-	
Two-stroke Diesel Engines and Arch-	Jan., 1938	2/1	Cut Edges. Comparative Strength of	Feb.	4
aouloff Injection. Krupp	Dec.	200	Welded Plates. Residual Stresses in	June	103
wo-stroke Single-acting Englie. D.	Dec	275	Welded Ship Construction Shop Work	July	108
"Tynwald" and "Fenella" Isle of Man	Dec.	215	in	Dec	258
Turbine Steamers	Tune	93	Welded Steam Pipe Lines	Oct.	215
Types of Machinery	Aug.	162	Welding Developments in Shipbuilding	Aug.	168
			Welding. Furnace Repairs by	Jan., 1938	301
Unification of Calculations for Natural			Welding Large Oil Tankers	Aug.	142
Ventilation	Jan., 1938	283	Welding of Light Material for Con-		
Up-to-date Cargo Steamship	June	21	Walding on Shiphuilding Effort of	Jan., 1938	278
Use of Coal in the Mercannie Marine	Inly	118	Welding Special Steel for Shine in	Aug.	140
Use of Sound Wayes for Smoke Elim-	July	110	relation to Electric Arc	Dec	261
ination	Aug.	154	Welding Stations, Coefficient of Utili-	Du.	201
U.S.A. High-pressure Station in	Oct.	235	zation of Power of	Jan., 1938	280
U.S.S.R. Oil Reserves of the	Sept.	204	Weldless Steel Chains	March	27
			Whale-Oil Factory "Strombus". Float-		
V8 Marine Set. Parsons	Sept.	194	ing	April	38
Vacuum for Steamships. High	April	271	William Frauda Laboratory Decord	Sept.	172
Vacuum-operated Filters	Nov	240	at the	Oat	212
Valve Clacks Improvements in Safety	May	75	Winches and Cranes (Hoisting Machin-	Oct.	215
Valve Gear. Large Semi-uniflow En-			ery) for Ships	Nov.	247
gines with Modified	May	64	Wooden Chain and Sprocket Wheel	March	30
Valve of Unusual Design. Reducing	Sept.	175	"Wuppertal". A.C. Drive for Propul-		
Valve Seat Wear	June	103	sion and Auxiliary Machinery. M.S.	Jan., 1938	293
Valves. Diesel Engine	Sept.	18/	Wuppertal". Diesel-electric M.S	July	120
valves. Leaky	Sept.	100	Zeppenn, Graf	April	54