



LORD KELVIN
(Past President Institute of Marine Engineers)
Born June 26, 1824. Died December 17, 1907

INSTITUTE OF MARINE ENGINEERS

INCORPORATED

SESSION



1907-1908

President: JAS. KNOTT, Esq., J.P.

Nineteenth Annual Volume

COMPRISING THE

PAPERS READ

AND DISCUSSIONS HELD DURING THE SESSION

ANNUAL REPORTS, FINANCIAL STATEMENT

Additions to Library and Property

ABBREVIATED REPORTS OF LECTURES TO JUNIOR SECTION

LIST OF MEMBERS

Copy of Memorandum and Articles of Association and By-Laws

EDITED BY

JAS. ADAMSON, Honorary Secretary

INSTITUTE OF MARINE ENGINEERS

INCORPORATED





1907-1908

President: JAS. KNOTT, Esq., J.P.

Hon. Treasurer: A. H. MATHER.

Hon. Secretary: JAS. ADAMSON.

Members of Council :-

GEO. ADAMS. A. E. BATTLE. J. BLELLOCH. P. T. CAMPBELL. JOHN CLARK. F. COOPER, R.N.R. J. E. ELMSLIE.

D. HULME.

J. LANG, R.N.R. JOHN MCLAREN.

J. F. REDMAN. W. I. TAYLOR.

W. LAWRIE-Chairman.

Hon. Minute Secretary: J. G. HAWTHORN.

Hon. Financial Secretary: E. W. Ross.

Conveners of Committees :-

GEO. ADAMS, Press cuttings. F. COOPER, Social events (Recreation). J. E. Elmslie, Issue of Transactions.

D. HULME, Reading Room. W. LAWRIE, Library.

JOHN McLAREN, Property. WM. McLaren, Experimental. A. E. BATTLE, Papers. W. I. TAYLOR, Annual Dinner.

J. G. HAWTHORN and JOHN LANG-Joint Conveners, Junior Section.

Vice-Presidents :-

C. Anderson (Bombay). T. ANDERSON (Liverpool). W. BIRKETT (Bombay). W. BLACK (S. America).
D. D. Boyd (Sea Service).
A. Boyle (London). G. W. BUCKWELL (Barrow). JAS. DENNY (Dumbarton). P. DENNY (Dumbarton). J. G. Dobbie (Glasgow).

Engr. Capt. R. W. Edwards, R.N. Prof. A. C. Elliott, B.Sc. (Cardiff). R. Elliott, B.Sc. (Greenock).

T. W. FISH (Calcutta).

ROBT. LESLIE, R.N.R. (London).

J. LOCKIE (Leith).

JAS. MACARTNEY (New South Wales).

J. MACDONALD (China). N. K. MACLEAN (Sea Service).

J. NEILSON (Calcutta).

J. W. RICHARDSON (Hull). W. C. ROBERTS, R.N.R. (London).

S. C. SAGE (London).

J. Stevenson (Sea Service). Jas. Stewart (Newcastle).

A. TAYLOR (Alexandria).

W. Tosh (Africa). F. P. Wallau (Southampton).

C. WILLIAMS (Bristol).

INSTITUTE OF MARINE ENGINEERS

INCORPORATED



President: JAS. KNOTT, Esq., J.P.

VOL. XIX

TABLE OF CONTENTS

Annual Meeting Proceedings.

List of Members.

Articles of Association and By-laws.

Oil Fuel on Shipboard, by Mr. GRAYDON HUME.

High Speed Two-Stroke Engines, by Mr. T. D. Kelly.

Salinometer and the use of Sea Water in Marine Boilers, by Mr. Jas. Shirra.

Reports of Lectures on Electricity, by Mr. A. E. Battle.

Engine Construction, by Mr. J. G. HAWTHORN.

Self-Help, by Mr. T. F. AUKLAND.

Conference of the Sanitary Institute at Dublin, Mr. Jas. Girvin, Representative.

Visits to Works during Summer.

Visit to Engineering Exhibition, Olympia.

New Methods of Effecting Boiler Repairs, by Mr. H. Ruck-Keene.

Ventilation, Heating and Berthing, by Mr. A. E. BATTLE.

The President's Address, by Jas. Knott, Esq., J.P.

Adjourned Discussion on Salinometry.

Annual Dinner Report.

Marine Steam Turbine Lubrication, by Mr. A. H. MATHER.

Adjourned Discussion on New Methods of Effecting Boiler Repairs.

Adjourned Discussion on Ventilation, Heating and Berthing.

Repairs to the Hull of Iron and Steel Ships, by Mr. ROBERT ELLIOTT, B.Sc.

Repairs to Machinery, by Mr. ROBERT ELLIOTT, B.Sc.

Lecture on External Perception, by Mr. Jas. Adamson, Hon. Secretary.

Lecture on The Doctrine of Descartes, by Mr. Jas. Adamson, Hon. Secretary. Obituary references to the late Mr. J. Macfarlane Gray.

The Fear of the Lord is the Religiousness of Knowledge, by Mr. J. Macfar-Lane Gray.

The Pillar of Cloud, by Mr. J. MACFARLANE GRAY.

Modern Contrivances in the Stokehold, by Mr. Jas. C. Brand.

The Design of Suction Pipes, by Mr. Jas. Anderson.

Lecture on The Early Days of Marine Insurance, by Mr. T. F. AUKLAND.

Lecture on Roller Bearings, by Mr. Geo. B. Woodruff.

Prize Essay on "A Visit to the Engineering Exhibition at Olympia," by Mr. W. Smith.

VOL. XIX

List of Papers Read and Lectures Delivered

DATE.	TITLE.	NO.	AUTHOR.
1907. Feb. 4	Oil Fuel on Shipboard	CXXXVI	GRAYDON HUME.
	Electricity		A. E. BATTLE.
Mar. 4	High Speed Two-Stroke Engines	CXXXVII	T. D. KELLY.
	Engine Construction		J. G. HAWTHORN.
Mar. 25	Electricity	LECTURE	A. E. BATTLE.
	Self-Help		T. F. AUKLAND.
	Salinometry, and the Use of Sea		
		CXXXIX	Jas. Shirra.
June 25.	Conference of the Royal Sanitary		
0 0000 2011	Institute		Jas. Girvin.
Sept. 28	New Methods of Effecting Boiler		ono. Chivini
гере. 20	Repairs	CYL	H. Ruck-Keene.
Sept. 28	Ventilation, Heating and Berth-	CAL	an aroun annum
Бере. 20	ing	CYLI	A. E. BATTLE.
Oct. 7	President's Address	CXLI	JAS. KNOTT, Esq., J.P.
Oct. 14	Marine Steam Turbine Lubrica-	,	oas. Intoll, Esq., o.l.
Oct. 11	tion	CYLII	A. H. MATHER.
Oct 21	External Perception	LECTURE	JAS. ADAMSON.
Oct. 21	Repairs to the Hull of Iron and	LECTURE	JAS. ADAMSON.
000. 20	Steel Ships	CYLIII	ROBT. ELLIOTT, B.Sc.
Oct 30	Annual Dinner Report	CXLIII	ROBI. ELLIOTI, B.Sc.
	Repairs to Machinery	CYTTY	ROBT. ELLIOTT, B.Sc.
Nov. 16	The Doctrine of Descartes	LEGENTER	Jas. Adamson.
	The Early Days of Marine In-	LECTURE	JAS. ADAMSON.
Dec. 9	surance	THOMETON	T F ATTILITY
1908.	surance	LECTURE	I. F. AUKLAND.
	Modern Contrivances in the		
Jan. U			Jas. C. Brand.
Ton 19			
	Roller Bearings		G. B. WOODRUFF.
Jan. 27	The Design of Suction Pipes		JAS. ANDERSON
	The Religiousness of Knowledge		
	The Pillar of Cloud	LECTURE)	LANE GRAY.
	Obituary References to the late		T
	Mr. Macfarlane Gray		Jas. Adamson.
	Prize Essay on "A Visit to the		
	Engineering Exhibition at		W G
	Olympia		W. SMITH.