

THE ENGINEERING ASSOCIATION  
OF  
NEW SOUTH WALES.

*Established 1870.*

*Incorporated 1884.*

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SESSION 1906-7:

PART I.

MINUTES OF PROCEEDINGS.

ANNUAL GENERAL MEETING.

12TH OCTOBER, 1906.

MR. W. H. GERMAN, PRESIDENT, in the Chair.]

The following candidates were balloted for and duly elected:—

MEMBERS:

EVAN JAMES HOPKINS, Superintending Engineer, (Port Jackson Co-op. S.S. Co.), Sydney.

HUBERT JOHN DAVYS, Engineer (Messrs. H. and A. McArthur), 15 Macquarie-place, Sydney.

NIEL CAMPBELL MARR, Manager (Messrs. R. L. Scrutton and Co., Ltd.), Sydney.

HENRY ALFRED MEMBREY, Forman Boilermaker (Clyde Engineering Co., Ltd.), Granville.

STUDENT:

RICHARD SERJANTSON LLOYD, Apprentice (Mort's Dock and Engineering Co., Ltd.), Balmain.

ANNUAL REPORT AND BALANCE SHEET.—The Annual Report and Balance Sheet having been read, on the motion of the President, Mr. W. H. German, seconded by Mr. Russell Sinclair, were adopted.

ANNUAL DINNER.—The President announced that it had been decided by the Council to hold the Annual Dinner on Friday, the 2nd November.

The President announced the result of this ballot, as follows:—

PRESIDENT:

RUSSELL SINCLAIR.

VICE-PRESIDENTS.

JAMES SHIRRA.

H. ADAMSON.

HON. TREASURER:

JOHN SANDS.

HON. SECRETARY AND EDITOR:

HENRY V. AHRBECKER.

MEMBERS OF COUNCIL.

G. BOULTON.

T. BROWN.

A. CHRISTIE.

E. ERSKINE.

J. FAIRWEATHER.

R. GRAN.

J. KIDD.

R. R. KING.

WM. MARR.

The retiring President, (Mr. W. H. German), then congratulated the new President on his election, and said he was sure that Mr. Sinclair would fill the position with dignity and credit, both to himself and the Association, he thanked the members of the Association and Council for the very hearty support they had given him during his term of office, he now had the honor of vacating the chair in favour of Mr. Sinclair.

The new President, (Mr. Russell Sinclair), thanked the retiring President and the members for having elected him to the position of President for the ensuing session, and said he trusted with the assistance of the Council and the hearty co-operation of the members to keep up the rate of progress the Association had recently shown, he further desired to

give expression to the very high appreciation they all had of the past president's efforts during the past session, and moved that a very hearty vote of thanks be accorded him, which was seconded by Mr. James Shirra, who said that Mr. German had worthily represented the Association before the outside world, and had been an ideal President.

The motion was carried by acclamation.

DISCUSSION ON PROFESSOR WARREN'S PAPER ON REINFORCED CONCRETE CONSTRUCTION.—The President announced that the discussion on Professor Warren's paper had been deferred until next Session.

TOPICAL DISCUSSION ON CORROSION OF METALS.—The discussion was opened by Mr. James Shirra, followed by Messrs. H. Adamson, James Kidd, R. R. Ferrier, Walter Reeks, and the President, Mr. Russell Sinclair.

The meeting then terminated.

MR. RUSSELL SINCLAIR, President, in the chair.

The following candidates were balloted for and duly elected :—

**MEMBERS :**

ARTHUR McCUBBIN, Engineer, Quinton-road, Manly.

HERBERT MAINWARING, Engineer, 204 Sussex-street, Sydney.

EDWARD WEST MARRIOTT, Engineer, Colonial Sugar Refining Co., Ltd., Sydney.

ARTHUR BRUCE SCORER, Engineer, 64 Pitt-street, Sydney.

E. C. STEERE, Electrical Engineer, Colonial Sugar Refining Co., Ltd., Pyrmont.

WILLIAM HENRY GRIEVE, Engineer, 163 Clarence-street, Sydney.

## STUDENTS :

ALLISON OSBORNE BURROWS, Engineer Apprentice,  
Government Dockyard, Biloela.

LUKE REDFORD MURAS, Engineer Apprentice, 3 and  
5 Bridge-road, Glebe.

CLEMENT C. NIELSEN, Engineer Apprentice, 491  
Kent-street, Sydney.

MALCOLM McINTOSH NIELSEN, Engineer Apprentice,  
491 Kent-street, Sydney.

STUDENTS' COMPETITION PAPERS.—The President announced that the papers to be submitted by Students in connection with the prizes of 5 guineas and 2 guineas, offered by the Association, should be handed in on or before the 31st. July, next.

PRESIDENTIAL ADDRESS.—Mr. Russell Sinclair then delivered his inaugural address which proved to be of a highly interesting character, in thanking the members for the honor conferred in electing him to preside over the business and deliberations of the Association, he said the position carried with it a great deal of responsibility, but he was confident with the help of an energetic Council and the sympathetic assistance of members generally, the session would not be a barren one. On reviewing the work of the past session, he said that while the marked increase was very gratifying he hoped it was only one step on the upward grade. He made feeling reference to the three members Messrs. R. M. Scott, T. J. Granger, and R. W. Finlayson lost by death during the year, and said by the decease of Mr. Finlayson many of them felt they had lost a personal friend. He then spoke of the rapid development in Mechanical Engineering and the improvement in Gas, Oil and similar engines, the rapid increase in steam turbines, the progress in refrigerating machinery, and the uses of mechanical refrigeration, the use of liquid air as a possible source of power, the corrosion of steel and iron, the metric system and other matters, and terminated his remarks by directing attention to the necessity of giving suitable opportunities to the rising generation of mechanical engineers of obtaining the training and knowledge they require.

Mr. James Shirra proposed that a very hearty vote of thanks be accorded Mr. Sinclair for his very able address which was seconded by Mr. Hector Kidd and carried by acclamation.

The President replied, and the meeting then terminated.

11TH. APRIL, 1907.

MR. RUSSELL SINCLAIR, President, in the chair.

The following candidates were balloted for and duly elected :—

**MEMBERS :**

ALEXANDER CULLEN, Engineer, Power Station, Ultimo.

JAMES PENNY HUTCHISON, Engineer, Power Station, Ultimo.

**STUDENT :**

STUART MARKELL BROWN, Engineer Apprentice, 72 Hayes-street, Neutral Bay.

“**BON VOYAGE**” TO MR. HECTOR KIDD.—The President said we have with us to-night Mr. H. Kidd, who is leaving on a trip to the old country, and on behalf of the Association he would like to give an expression to their feelings at this time, for many years Mr. Kidd had been connected with engineering and had a long connection with the Engineering Association of New South Wales, and had always taken a deep interest in its affairs, having been President for two years, besides being connected with the Council for many years. To-night, he thought, they might suitably express their hearty appreciation of the services he had rendered, and take this opportunity of wishing him a pleasant holiday and *bon voyage* in the trip he is about to take.

Mr. Kidd in his reply thanked the President and Members for the way they had received the proposal.

PAPER BY MR. RUSSELL SINCLAIR, ON “**MACHINERY OF DOUBLE-ENDED FERRY STEAMER.**”

REPORT BY MR. JAMES SHIRRA, ON “**TEST TRIALS OF FERRY STEAMER, ‘KOOKOUBURRA.’**”

Discussion was opened by Mr. James Shirra followed by Mr. Hector Kidd (whose remarks were read by the President, in Mr. Kidd's absence), and Mr. Norman Selfe, who moved the adjournment of the discussion until the next monthly meeting, which was seconded by Mr. D. Borthwick and carried.

The meeting then terminated.

9TH MAY, 1907.

MR. RUSSELL SINCLAIR, PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected :—

#### MEMBERS :

JOHN WILLIAM BALFOUR, Borough Electric Lighting Engineer, Redfern.

CHARLES BOGENRIEDER, Engineer (c/o. Messrs. Lohmann and Co.), 9 Castlereagh-street, Sydney.

WILLIAM JOHN SIMPSON, Draftsman (Colonial Sugar Refining Co., Ltd.), O'Connell-street, Sydney.

#### STUDENTS:

HENRY GEORGE DICKEY, Engineering Apprentice (Colonial Sugar Refining Co., Ltd.), Pyrmont.

THOS. FREEMAN, Engineering Apprentice (Colonial Sugar Refining Co.), Pyrmont.

FRANCIS DUNCAN HUNTER, Engineering Apprentice, 8 Abercrombie-street, Sydney.

HECTOR CHARLES GORDON KIDD, Engineering Apprentice (Colonial Sugar Refining Co., Ltd.), Pyrmont.

KENNETH S. SINCLAIR, Apprentice, 12 Donnelly-street, Balmain.

WILLIAM ROBERT MEDWAY SMITH, Engineering Apprentice (Colonial Sugar Refining Co., Ltd.), Pyrmont.

GREVILLE NOEL TREGARTHEN, Engineering Apprentice, "Kylemore," Bellevue Hill.

**STUDENTS' PAPERS.**—The President announced that a circular had been sent out to each Student informing them that:—

“The papers to be submitted in connection with the prizes of Five Guineas and Two Guineas must reach the Honorary Secretary, Henry V. Ahrbecker, Esq., Society's Rooms, 5 Elizabeth-street., not later than 31st July next, in a sealed envelope endorsed ‘Students' Paper.’”

The following conditions are to be observed:—That the papers must be original and on a subject dealing with mechanical engineering or naval architecture, the paper not to be signed, but to have a motto attached to it, accompanied by the name of the sender, in a separate envelope.

**DISCUSSION ON MR. RUSSELL SINCLAIR'S PAPER ON “MACHINERY FOR DOUBLE-ENDED FERRY STEAMER.”**—The adjourned discussion was opened by Mr. Norman Selfe, followed by Messrs. Walter Reeks, William Marr, — Flashman, G. W. F. Findlay, R. R. Ferrier, F. E. Stowe and James Shirra.

The PRESIDENT, MR. RUSSELL SINCLAIR, replied to the various points raised.

The meeting then terminated.

13TH. JUNE, 1907.

MR RUSSELL SINCLAIR, President, in the chair.

The following candidates were balloted for and duly elected:—

**MEMBERS:**

EDWARD MAURICE GRANT, Engineer, 163 Clarence-street, Sydney.

ARTHUR GEORGE HALL, Engineer, Colonial Sugar Refining Co., Ltd., Nansori, Fiji.

RICHARD WILDRIDGE, Engineer, C/o C. A. McDonald, 63 Pitt-street, Sydney.

**STUDENT:**

ALFRED D. J. FORSTER, Student, Engineering School, University, Sydney.

**DISCUSSION ON PROFESSOR WARREN'S PAPER ON "REINFORCED CONCRETE CONSTRUCTIONS."**

The discussion was opened by Mr. W. H. German's paper (read by the President in Mr. German's absence through indisposition), followed by Messrs. Smail, James Shirra, Walsh, H. E. Ross, W. E. Cook and Gummow.

Professor Warren having replied to the various points raised, the meeting terminated.

11TH JULY, 1907.

**MR. JAMES SHIRRA, SENIOR-VICE PRESIDENT, in the chair.**

The following candidates were balloted for and duly elected:—

**STUDENTS:**

**JAMES WILDING BELL, Engineering Apprentice** (Colonial Sugar Refining Co., Ltd.), Pymont.

**SYDNEY JAMES KIDD, Engineering Apprentice** (Colonial Sugar Refining Co., Ltd.), Pymont.

**COLIN AIRLIE WARDEN, Engineering Apprentice** (Colonial Sugar Refining Co., Ltd.), Pymont.

**PAPER BY MR. W. H. GRIEVE ON "STEAM TURBINES."—** (Paper read by Mr. Grieve)—On the motion of Mr. James Macartney, seconded by Mr. Walter Reeks, a very hearty vote of thanks was accorded Mr. Grieve for his paper, and the discussion on same was adjourned until the next monthly meeting.

The meeting then terminated.

8TH AUGUST, 1907.

**MR. RUSSELL SINCLAIR, PRESIDENT, in the chair.**

The following candidates were balloted for and duly elected:—

**MEMBER:**

**EDWD. JOHN GARDINER, Engineer, 63 Pitt-street, Sydney.**

**STUDENT:**

**DAVID THOMAS DRAKE, Student, Bald Rock, Balmain.**

DISCUSSION ON MR. W. H. GRIEVE'S PAPER ON "STEAM TURBINES."—The discussion was opened by the President, Mr. Russell Sinclair, followed by Messrs. J. Scoular and W. E. Cook.

The President said that owing to Mr. Grieve being unavoidably absent from Sydney the reply to the discussion would be written by Mr. Grieve, and published in the volume in due course.

STUDENTS' PAPERS.—The President announced that in response to the notices sent out *re* the Students' Competition Papers for the prizes of £5 5s., and £2 2s., five papers had been received, and these were being dealt with by the Committee appointed by the Council, and he hoped by the next General Meeting to be able to announce the result.

FURTHER DATA OF RESULTS FROM DOUBLE-ENDED FERRY STEAMER WITH ALTERED PROPELLERS BY MR. RUSSELL SINCLAIR.

Paper read and diagrams explained by Mr. Sinclair.

The meeting then terminated.

12TH SEPTEMBER, 1907.

MR. RUSSELL SINCLAIR, President, in the chair.

The following candidate was balloted for and duly elected :—

STUDENT :

PERCY ROBERT KING, Draftsman, Union Bank Chambers, Pitt-street, Sydney.

APPOINTMENT OF AUDITORS TO AUDIT THE ACCOUNTS FOR THE SESSION ENDING 30TH. SEPTEMBER, 1907.—

On the motion of Mr. Norman Selfe, seconded by Mr. R. Rutherford, Messrs. H. J. Vale and R. R. King were duly appointed auditors.

APPOINTMENT OF SCRUTINEERS—BALLOT OF OFFICERS AND COUNCIL FOR THE ENSUING SESSION.—

On the motion of Mr. Robert Steel, seconded by Mr. H. J. Vale, Messrs. W. H. German and J. Johnston were duly appointed Scrutineers.

ALLOCATION OF PRIZES FOR STUDENTS' PAPERS—

The President announced that the committee appointed by the Council to deal with the papers awarded the prizes as follows:—

1st Prize, Mr. G. W. Findlay, "Improving the Efficiency of the Steam Engine."

2nd Prize, Mr. R. S. Lloyd, "The Steam Turbine," and owing to the excellence of the paper by Mr. S. M. Brown on "Gas Producers," a special prize of one guinea was awarded to him.

PRESENTATION OF PRIZES—

The President then awarded the prizes as follows:—

- 1st Prize, £5 5s ... Mr. G. W. F. Findlay.
- 2nd Prize, £2 2s ... Mr. R. S. Lloyd,
- Special Prize, £1 1s ... Mr. S. M. Brown.

READING OF PRIZE PAPERS BY THE AUTHORS—

The papers were read by the authors:—"Improving the Efficiency of the Steam Engine," by Mr. G. W. F. Findlay; "The Steam Turbine," by Mr. R. S. Lloyd; "Gas Producers," by Mr. S. M. Brown.

The meeting then terminated.