

THE ENGINEERING ASSOCIATION  
OF  
NEW SOUTH WALES

*Established 1870.*

*Incorporated 1884*

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SESSION 1907-8.

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PART I,  
MINUTES OF PROCEEDINGS.  
ANNUAL GENERAL MEETING.

10TH OCTOBER, 1907.

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MR. RUSSELL SINCLAIR, PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected:—

**Students.**

PERCY EDWARD BOULTON, Engineering Apprentice,  
Mort's Dock and Engineering Co., Ltd., Balmain.

ALEXANDER ROBERT TIVENDALE, Engineering Ap-  
prentice, Mort's Dock and Engineering Co., Ltd., Bal-  
main.

VISIT TO TECHNICAL COLLEGE.—The President, Mr. Russell Sinclair, said, before dealing with the Annual Report and Balance Sheet, he desired to call attention to the matter of the visit to the Technical College, and as the authorities were making considerable preparations, he hoped as many members as possible would attend on Saturday afternoon next.

VISIT TO LITHGOW.—The President, Mr. Russell Sinclair, announced that it had been definitely decided to take the trip to Eskbank on Friday, the 18th October. Ar-

rangements had been made with the Railway Commissioners for a special train to leave the Central Railway Station at 8.15 a.m., arrive at Mount Victoria at 11.30 a.m., lunch there, arrive at Lithgow about 1 p.m., leave Lithgow about 4 p.m., reach Mount Victoria 5.30 p.m., for tea, and arrive in Sydney at 8.45 p.m.

Return fare, 12s. 8d., tickets available till Monday, the 21st inst. Catering, 3s. per head for the two meals.

Further arrangements had been made for members who reside up the line, for the train to stop at Strathfield each way, and as 100 members had been guaranteed from all the Societies he hoped as many as possible would come.

ANNUAL REPORT OF COUNCIL AND BALANCE SHEET.—  
On the motion of the President, Mr. Russell Sinclair, seconded by Mr. E. J. Erskine, the Annual Report of Council and Balance Sheet were adopted.

ANNOUNCEMENT OF RESULT OF BALLOT FOR ELECTION OF OFFICERS AND COUNCIL FOR THE ENSUING SESSION.—  
The President, Mr. Russell Sinclair, announced the result of this ballot as follows:—

PRESIDENT:—

MR. JAMES SHIRRA.

VICE-PRESIDENTS:—

MR. H. ADAMSON.

MR. E. J. ERSKINE.

HONORARY TREASURER:—

MR. JOHN SANDS.

HONORARY SECRETARY AND EDITOR:—

MR. HENRY V. AHRBECKER.

MEMBERS OF COUNCIL:—

MESSRS S. BROWN,	A. CHRISTIE,
J. FAIRWEATHER,	A. H. FRIEND,
W. H. GERMAN,	R. GRANT,
JAMES KIDD,	JAMES MACARTNEY,
	R. STEEL.

HONORARY SECRETARY AND EDITOR.—The President, Mr. Russell Sinclair, said before handing over the reins of office he desired to move a vote of thanks to the Honorary Secretary and Editor, Mr. Henry V. Ahrbecker, who, in bringing his work up to date, had done an immense amount of work, the back volumes had been a colossal work, and no one who has not done it knows the amount of time required to be spent on this matter. He was glad to say that the back volumes had been brought up to date, and moved a very hearty vote of thanks to Mr. Ahrbecker.

The motion was carried by acclamation.

THE RETIRING PRESIDENT, MR. RUSSELL SINCLAIR, then called on Mr. James Shirra, the new President, to take the Chair, which he vacated in his favour.

THE NEW PRESIDENT, MR. JAMES SHIRRA, on taking the Chair, thanked the members for appointing him to the high position, and said he trusted that the Association would continue to make such satisfactory progress as it had done under his predecessors.

PAPER BY MR. J. W. BRAGG ON "ECONOMY OF FUEL," ILLUSTRATED BY A NUMBER OF LANTERN SLIDES.—Paper read, and Lantern Slides explained by Mr. Bragg. The discussion was opened by Mr. J. W. Fell, followed by Messrs. James Kidd, Russell Sinclair, James Shirra, W. H. German, and J. W. Balfour. Mr. Bragg replied to the various points raised.

On the motion of Mr. Russell Sinclair, seconded by Mr. W. H. German, and supported by Mr. A. J. Arnot, a very hearty vote of thanks was accorded Mr. Bragg for his paper.

The motion being carried by acclamation.

The meeting then terminated.

12TH MARCH. 1908.

MR. JAMES SHIRRA, PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected:—

**Members.**

THOMAS MONTAGU NELMOS BLUCK, Engineer,  
Araluen, N.S.W.

JAMES WILLIAM KIDD, Engineer, Dalgety's Wharf,  
Miller's Point, Sydney.

CUTHBERT GEORGE PETRIE, Engineer, Colonial  
Sugar Refining Co., Sydney.

PERCIVAL JOHN TAYLOR, Engineer, The General  
Motor Co., Queen's Place, Sydney.

JAMES THOMPSON WISHURT, Engineer, Clyde Engi-  
neering Works, Granville.

PRESIDENTIAL ADDRESS, BY MR. JAMES SHIRRA.—Mr. Shirra then delivered his inaugural address, which proved to be of a highly interesting character. He thanked the members for the honor conferred on him in his election to the Chair, which had been so worthily filled in past years, and trusted that the end of the Session would still find the Association endued with the virility and industry of former years. He detailed the work of the past Session, and made feeling reference to the two members, Messrs. D. Salmond and W. H. Nisbet, lost by death.

He reviewed the engineering progress of the last fifty years, and said the prospects for engineering in the State, he considered, were good, although they were beset with uncertainty. Reference was made to the necessity for provision of facilities for transport in this country, and water conservation. He referred to the increase in the power and weight of locomotives in the last fifteen years or so, and made special reference to the engines in use on the New South Wales Railways. He spoke of the Brennan Mono-

rail, and said the same principle is being applied to maintain the stability of vessels. He spoke of the immense increase in the coal consumption in the Atlantic liners, and said the introduction of the triple engine marked a great era in history, special reference being made to our Coastal fleet. He then referred to the engineers' work in connection with harbours, dry docks, light-houses, etc., and spoke of the necessity of education and training of engineers in all its branches, and specially referred to the proposed Commonwealth legislation respecting engineers and their certificates.

On the motion of Mr. E. J. Erskine, seconded by Mr. Norman Selfe, a very hearty vote of thanks was accorded Mr. Shirra for his address.

Mr. Shirra having replied, the meeting terminated.

9TH APRIL, 1908.

MR. JAMES SHIRRA, PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected:—

**Members.**

ARTHUR EVERETT STANTON COOK, Engineer, 75  
Clarence-street Sydney.

GEORGE HAWKES, Engineer, Hotel Metropole, Bent-  
street, Sydney.

**Students.**

BRUCE DOWLING, Engineering Apprentice, Colonial  
Sugar Refining Co. Ltd., Pyrmont.

ALBERT JAMES LEA, Engineering Apprentice, Messrs.  
Mainwaring Bros., Sussex-street, Sydney.

ROBERT KENILWORTH OLIVER, Engineering Ap-  
prentice, N.S.W. Government Railway Workshops,  
Eveleigh.

ASHLEY PLOWMAN, Junior Demonstrator, Technical  
College, Ultimo.

REGINALD CLAUDE THOMAS, Engineering Apprentice, Colonial Sugar Refining Co., Ltd., Pyrmont.

PAPER ON "A COMPARISON OF THE STRENGTHS OF MAIN COMPRESSION NUMBERS ON THREE NOTABLE BRIDGES," BY MR. NORMAN SELFE, M.I.C.E., M.I. Mech. E.—Paper read, and diagrams explained by Mr. Selfe.

On the motion of Mr. Hector Kidd, seconded by Mr. H. J. Vale, a hearty vote of thanks was accorded Mr. Selfe for his paper.

The motion being carried by acclamation.

PAPER ON "NOTES ON THE APPLICATION OF MECHANICAL OR ACCELERATED DRAUGHT TO STEAM BOILERS TO INCREASE THEIR EFFICIENCY AND STEAMING CAPACITY," BY MR. HECTOR KIDD, M.I.C.E., M.I. Mech. E.—Paper read by Mr. Kidd.

On the motion of Mr. James Macartney, seconded by Mr. Robert Steel, it was resolved that the discussion on Mr. Kidd's paper be postponed until the next General Meeting, and that a hearty vote of thanks be accorded Mr. Kidd for his paper, which was carried by acclamation.

The meeting then terminated.

14TH MAY, 1908.

MR. JAMES SHIRRA, PRESIDENT, in the Chair.

The following candidate was balloted for and duly elected:—

**Member.**

ROBERT V. EDWARDS, Engineer, 250 Pitt-street, Sydney.

DISCUSSION ON MR. HECTOR KIDD'S PAPER ON "NOTES ON THE APPLICATION OF MECHANICAL OR ACCELERATED DRAUGHT TO STEAM BOILERS TO INCREASE THEIR EFFICIENCY AND STEAMING CAPACITY."—The discussion was opened by Mr. William Sinclair, followed by Messrs. F. E. Stowe, O. W. Brain, Forbes Mackay, D. F. J. Harricks, and James Shirra.

Mr. Hector Kidd, having replied to the various points raised, the meeting terminated.

11TH JUNE, 1908.

MR. JAMES SHIRRA, PRESIDENT, in the Chair.

COLONEL DENNY.—The President, Mr. Shirra, said, before proceeding to the business of the meeting, I have to intimate that your Council and myself took advantage of the presence in Sydney of Colonel John Denny, of the firm of William Denny Brothers, the Dumbarton ship-builders, to show our respect for him by inviting him to a Harbour excursion on the 1st inst. The idea of entertaining him somehow, was mooted by our Vice-President, Mr. Erskine, and I waited on Colonel Denny and told him we would delight to honor him some way, but his time was very limited, and he had a difficulty in fixing a time to meet us. If we had had a meeting during his stay in Sydney, we would have endeavoured to secure his presence at it, as it was we had to get up something extempore, and as the Honourable the State Treasurer put the use of a Government steamer at the Council's disposal, we arranged, somewhat hurriedly, to have a Harbour excursion. This was confirmed at an Extraordinary Council Meeting, where it was resolved to carry out the Harbour trip; invitations to be issued to a representative number of our members interested in marine engineering and shipbuilding, and to some of the leading people in the shipping world of Sydney, the expenses to be paid by contributions from the Council, and not in any way from the funds of the Association.

As the accommodation in the s.s "Premier" is rather limited, we could not give a general invitation to all our members, much as we would have liked to do so. We had representatives of the Harbour Trust, the Engineering Branch of the Royal Society, and the Marine Insurance Surveyors, amongst others present, and the Association may,

I think, feel satisfied that the Council selected its guests fairly well, seeing that the trip was for the entertainment of our visitor, and not of ourselves.

I may say the excursion was a success, and Colonel Denny was pleased to speak in kindly terms of our Association, and dwelt on the fact that it had reached a respectable age, and was still thriving. He asked me to convey his sentiments to you and your Council.

We presented him with a set of our volumes of proceedings, the three latest he got away with him, the others will be sent after him to Dumbarton, the cost of these volumes is all that we ask the Association to meet.

I am sure that it will unanimously approve of what we did in the matter.

The following candidates were balloted for and duly elected:—

**Members.**

DAVID CHALMERS, Engineer, 18 Glassop-street, Balmain.

ALBERT JOHN FISCHER, Engineer, 40-42 Clarence-street, Sydney.

CHARLES HORACE RELPH. Engineer, Motor Dept., Woolwich Dock.

PAPER ON "DESCRIPTION OF A MOLASSES BURNING FURNACE," BY MR. W. H. GERMAN.—Paper read.

On the motion of Mr. Russell Sinclair, seconded by Mr. A. J. Arnot, a very hearty vote of thanks was accorded Mr. German for his paper.

Mr. German having answered the various questions raised, the meeting terminated.

9TH JULY, 1908.

MR. JAMES SHIRRA, PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected:—



**Members.**

- A. FREDERICK HIRSCHER, Engineering Draughtsman,  
Public Works Department, Sydney.
- GEORGE ALFRED JULIUS, Consulting Engineer, Equitable Building, George-street, Sydney.
- DAVID LAWRENCE, Engineer, Adelaide S.S. Co.'s Works, Balmain.

**Student.**

- JOHN BAILEY HOLROYDE, Engineering Apprentice, Colonial Sugar Refining Co., Ltd., Sydney.

PAPER ON "THE WHARVES, QUAYS, AND SHIPPING OF PORT JACKSON, PAST, PRESENT, AND PROSPECTIVE," ILLUSTRATED WITH LANTERN SLIDES, BY MR. NORMAN SELFE, M.I.C.E.—Paper read, and views and diagrams explained by Mr. Selfe.

Mr. W. H. German proposed a very hearty vote of thanks to Mr. Selfe for his highly interesting address, which was seconded by Mr. J. Macartney, and supported by Mr. H. D. Walsh, who said if it would be of any interest to the members to continue the discussion next meeting, he would send down some plans of the latest wharves proposed to be put up, and where they propose to put them.

On the motion of Mr. W. H. German, seconded by Mr. James Macartney, it was resolved that Mr. Walsh's offer be accepted, and that the discussion of Mr. Selfe's paper be adjourned until the next monthly meeting.

The meeting then terminated.

13TH AUGUST, 1908.

MR. JAMES SHIRRA, PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected:—

**Member.**

- MAURICE BERNARD HALLIGAN, Consulting Engineer, Equitable Building, George-street, Sydney.

**Students.**

HENRY DAVID HILL, Mechanical Draughtsman, Sydney Harbour Collieries, Ltd., Balmain.

GEORGE MAHONEY DRINKWATER, Apprentice, Messrs. Ritchie Bros., Auburn.

JAMES G. MACARTNEY, Apprentice, 96 Glassop-street, Balmain.

PAPER ON "THE TECHNICAL COLLEGE IN ITS RELATION TO THE APPRENTICE," BY MR. J. W. TURNER.—Paper read by Mr. Turner.

On the motion of Mr. Hector Kidd, seconded by Mr. Russell Sinclair, a hearty vote of thanks was accorded Mr. Turner for his very interesting address.

The President, Mr. Shirra, in conveying the thanks for the paper, said: "I think it will be discussed, especially if Mr. Turner would be good enough to send the syllabus.

Mr. Turner, in replying, said he thought the suggestion a good one, and that he would be at their service if given a day or two's notice, to come down at any time.

DISCUSSION ON MR. NORMAN SELFE'S PAPER ON "THE WHARVES, QUAYS, AND SHIPPING OF PORT JACKSON, PAST PRESENT AND PROSPECTIVE."—Mr. H. D. Walsh explained several diagrams relating to proposed new wharves, and answered questions connected therewith.

On the motion of the President, Mr. Shirra, a very hearty vote of thanks was accorded Mr. Walsh for his remarks, which was carried by acclamation.

The meeting then terminated.

10TH SEPTEMBER. 1908.

MR. JAMES SHIRRA, PRESIDENT, in the Chair.

The following candidates were balloted for and duly elected:—

**Members.**

THOMAS R. IONS, Engineer, Mort's Dock and Engineering Co., Ltd., Balmain.

JAMES JOHN B. SCOTT, Engineer, Borehole Collieries, Ltd., Boolaroo.

APPOINTMENT OF AUDITORS TO AUDIT THE ACCOUNTS FOR THE SESSION ENDING SEPTEMBER 30TH, 1908.—On the motion of Mr. J. Fell, seconded by Mr. W. Reeks, Messrs. H. J. Vale and R. R. King were duly appointed Auditors.

APPOINTMENT OF SCRUTINEERS FOR BALLOT OF OFFICERS AND COUNCIL FOR THE ENSUING SESSION.—On the motion of Mr. J. P. Hutchison, seconded by Mr. J. Scoular, Messrs. H. Kidd and W. Sinclair 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. Luke Muras, junr., "Modern Steel Roofs."

2nd Prize: Mr. Thomas Freeman, "Triple Effect Sugar Boiling."

PRESENTATION OF PRIZES.—The President, Mr. James Shirra, then awarded the prizes as follows:—

1st Prize, £5 5s.: Mr. Luke Muras, junr.

2nd Prize, £2 2s.; Mr. Thomas Freeman.

DISCUSSION ON MR. J. W. TURNER'S PAPER ON "THE TECHNICAL COLLEGE IN ITS RELATION TO THE APPRENTICE."

—The discussion was opened by Mr. Russell Sinclair, followed by Messrs. E. J. Erskine, R. J. Vincent, P. Connie, and the President, Mr. Shirra.

Mr. J. W. Turner replied to the various questions raised.

On the motion of the President, Mr. Shirra, a very hearty vote of thanks was tendered to Mr. Turner, which was carried by acclamation.

The meeting then terminated.