

THE ENGINEERING ASSOCIATION OF N. S. WALES

Annual Report of Council and Balance Sheet

FOR THE

YEAR ENDING 30th SEPTEMBER, 1918

Your Council has pleasure in presenting the Forty-eighth Annual Report for the year ending 30th September, 1918, in which will be found an account of the work carried out during the Session.

The following gentlemen were elected members of the several grades of the Association, viz. :—

Members—E. E. Lucy, C. A. Reed, F. W. Price, R. A. Anderson, W. F. Burrow, J. A. Woodward, E. R. Cambridge, H. T. Canning, H. J. P. Stiles, A. E. Cornwell, H. E. Ross, R. H. Barr, H. N. Reid, J. Hamilton, W. R. Swan.

Associate Members—J. A. L. Cotton, F. H. Holloway, A. N. Campbell, F. Fielder, J. Duncan, E. E. Lancaster, G. W. Dalby, T. R. Horton, A. C. Brown, T. G. Bennet, J. L. Fry.

Student Members—F. Honey, H. G. Ross, A. L. McCredie, E. Elliott, N. Jones.

Resignations.—The following gentlemen have resigned from membership :—M. McK. Neilsen, R. B. Sharp, R. R. Steel, and I. V. Doust.

The following names have been removed from the list of members in terms of Section V., No. 5, of the Rules and By-laws of the Association :—A. G. McDonald, E. L. Tighe, C. H. Eyre, G. B. Game.

Obituary.—We announce with deep regret the death of four of our members—Mr. W. H. German (Past President, Session 1905-6), Mr. David Chalmers, Capt. A. N. Sinclair, and Lieut. R. S. Lloyd.

Your Council keenly regrets the loss of Mr. German, who always took the very greatest interest in the affairs of the Association, and as President and Councillor Mr. German's professional ability was of considerable service in raising the prestige of the Association.

In the death of Mr. Chalmers the Association has lost an old and esteemed member.

The names of the late Capt. A. N. Sinclair and Lieut. R. S. Lloyd will be found on the Roll of Honour included in this Report.

MEMBERSHIP.

The names of 31 new members have been added to our list, and a tabulated statement is attached showing the changes during the past Session.

	M.	A.M.	A.	G.	S.	Totals.	
Totals at 30th Sept., 1916	166	15	6	11	58	..	257
Elected	15	11	..	..	5	..	..
Total Additions, 1918 ..	..	..	..	..	..	31	..
Deceased	2	..	..	..	..	..	..
Resigned .. .. .	..	2	..	1	1	..	..
Erased	1	1	..	1	1	..	..
Total Deductions, 1918 .	3	3	..	2	2	10	..
Net Alteration, 1918 ..	+12	+8	..	-2	+3	..	20
Totals at 30th Sept., 1918	178	23	6	9	61	..	277

Your Council appreciates the satisfactory increase in membership during the past Session, and would impress upon members generally the importance of still further adding to the membership of the Association.

The calls made upon your Council during the past year for information and advice upon engineering matters is an evidence that our efforts in advancing the scientific side of engineering are being appreciated by the various public and other bodies with whom we come in contact.

We would again thank those members who have so generously responded to the call for voluntary subscriptions, which has enabled us to remit the subscriptions of our members on active service. The total amount this Session so donated amounts to £54 ls.

COUNCIL MEETINGS.

During the Session 12 ordinary Council Meetings and one Special Meeting have been held, at which the attendances were as follows:—

	Council Meetings.	Special Meeting.
D. F. J. Harricks	12	1
Jas. Vicars	6	1
J. G. McEwin (absent from State for one meeting)	11	1
H. L. Thompson	12	1
J. McNamara	12	1
A. W. Tournay-Hinde	11	1
Wm. Sinclair (absent from City for 2 ¹ meetings)	10	—
P. A. Fildes	9	1
Wm. Poole	12	1
A. J. Hart	8	—
P. B. Hamilton	11	1
H. A. Bremner (elected in Feb., 1918)	6	1
J. G. Lancaster (absent from State for 2 meetings)	9	1
W. E. Adams	5	—

The following papers were read and discussed at the General Meetings, and as the attendance of members and visitors has been well up to the average, your Council feel that the interest shown in them is an evidence that the authors' efforts were appreciated by members;—

Oct. 11th, 1917: Address by the President, Mr. D. F. J. Harricks.

Mar. 4th, 1918: "The Permeability of Concrete to Water," by Mr. B. J. Smart.

April 11th, 1918: "Some Notes on Experiments on the Transmission of Heat from Non-Luminous Flames through Thin Plates," by Mr. A. W. Tournay-Hinde.

May 9th, 1918: "Cooling of Condensing Water by Towers and Spraying," by Mr. E. W. Marriott.

June 13th, 1918: "Small Coastal Steamers," by Messrs. Walter Reeks and W. Sands.

July 11th, 1918: "Bridge Construction in New South Wales," by Mr. W. F. Burrow.

Aug. 8th, 1918: "Modern Road Pavements," by Mr. Jas. Vicars.

Sept. 12th, 1918: "A Method of Calibrating a Sharp-edged Orifice, used for determining the Flow of Air," by Mr. H. J. Swain.

ROLL OF HONOUR.

Your Council felt that it was incumbent on them to have a record of those of our members who have enlisted for active service, and a Roll of Honour has been prepared, and is placed in the Library. This, although of a temporary nature, serves to keep before us the names of our absent members.

We publish herewith a list showing the names and ranks of members who have answered the call, and we regret that several have made the extreme sacrifice.

1. Brand, J. J. C., Eng. Lieut., H.M.A.S. "Adelaide"
2. Burton, C. R. Sergeant
3. Baker, O. W.
4. Bayliss, T. M.
5. Bill, W. G. (died of illness)
6. Campbell, A. G.
7. Carruthers, J.
8. Cliff, R. C.
9. Cole, L. G.
10. Cleary, H. M.
11. Debenham, A. J.
12. Drinkwater, G. M., Lieut.
13. Dowling, B.
14. Dowling, D. R.
15. Donaldson, J. K. (killed in action)
16. Fewtrell, A. C., Lieut.-Col., D.S.O.
17. Ferguson, C.
18. Ferguson, F. J.
19. Fletcher, K., Lieut.
20. Fry, R. H., Sergeant
21. Galloway, R. F.
22. Grayson, G. W., Lieut., M.C.
23. Hamilton, J., Capt.
24. Hammond, H.
25. Herbert, J. E.
26. Henderson, L. G., Lieut.
27. Holliday, H. A. S.
28. Holroyde, J. B., Eng. Lieut.
29. Humbley, R.
30. Huntley, C. N., Lieut. (killed in action)
31. Irons, R. G., Lieut. (killed in action)
32. James, F.
33. Lambert, H. R.
34. Lees, J. W.
35. Lloyd, R. S., Lieut. (killed in action)

ROLL OF HONOUR—Continued.

36. Lund, W.
37. Macartney, J. G.
38. McAuliffe, S. J.
39. McClure, B. H.
40. McCorquodale, A.
41. Mawdesley, J. E.
42. Pauch, G.
43. Perry, I. D.
44. Pickering, J. L., Sergeant
45. Pike, W. E., Lieut. (killed in action)
46. Roberts, H. A., Capt.
47. Robbins, S. T.
48. Robinson, R. M. (killed in action)
49. Rowe, E. S., Lieut.
50. Sinclair, A., Capt., Military Cross (died of wounds)
51. Smith, A. P., Capt. (killed in action)
52. Shepherd, A. S.
53. Smith, W. R. M., Eng. Lieut., R.N.
54. Smyth, J. C., Lieut.
55. Shute, R. E. S.
56. Tregarthen, G. N., Lieut.
57. Thomas, E. H.
58. Wright, W. R., Eng. Lieut.
59. Williams, J. A.
60. Withers, A. J.
61. Witten, T. A.
62. Wright, J. L., Capt., Military Cross
63. Witney, C. A., Corporal
64. Wauhope, E., Lieut.

MUNITION WORK.

Professor S. H. E. Barraclough
 Professor A. J. Gibson
 R. Grant
 W. H. Grieve
 W. H. Medcalf
 E. F. Campbell
 N. A. Essermann
 D. G. Poyitt
 H. C. J. Kidd

SPECIAL SUB-COMMITTEES.

As previously mentioned, we have been asked from time to time to furnish assistance, by reports and representation, to various bodies; and sub-committees were appointed during the Session to deal with the following matters:—

“The Apprenticeship Question,” put forward by the British Engineers’ Association. Committee, the members of Council.

Town Planning Association Meeting, held in Brisbane—Personal representation by local members of the Engineering Association of N.S.W.

Roads Convention, convened by the Chamber of Commerce—Committee, Mr. Jas. Vicars and Mr. A. J. Hart.

The Gas Standard, and Alteration to Gas Act—Committee, Mr. D. F. J. Harricks, Mr. Wm. Poole, and Mr. J. G. Lancaster.

Your Council decided that the report prepared by this Sub-committee be presented to the members, and a copy is appended hereto.

Repatriation.—Following upon a resolution carried at the General Meeting held on the 13th June—"That the members of the Engineering Association of N.S.W. agree to place their services at the disposal of the Commonwealth Government for the purpose of forming an Honorary Advisory Committee in connection with National Organisation arising out of the war"—a sub-committee, consisting of the President and two Vice-Presidents, was appointed to consider the best means of putting this resolution into effect.

A suggestion by Mr. A. S. Plowman, that a branch of the Association be formed at Broken Hill, is receiving consideration by Council, and the President, Vice-Presidents, Hon. Treasurer and Hon. Secretary have been appointed a sub-committee in connection with this matter.

AMALGAMATION OF ENGINEERING SOCIETIES.

A very great amount of work has been undertaken with the object of bringing about the formation of an Australian Institution of Engineers.

At a conference held in Melbourne on February 12th and 13th last, a very full discussion of the question took place, and it was unanimously agreed that co-operation was an urgent necessity.

Your delegates to the conference were the President, Mr. D. F. J. Harricks; Vice-Presidents, Mr. Jas. Vicars and Mr. J. G. McEwin; and Mr. A. W. Tournay-Hinde, and your Council have pleasure in announcing that our Association was honoured by the conference electing our esteemed President to the chair.

Certain definite resolutions were adopted at the conference, one of which was that a Provisional Council should be appointed to draw up a draft Constitution, and that this

Council should meet at Sydney on the 15th of May. The two representatives from our Association were the President, Mr. D. F. J. Harricks, and the Senior Vice-President, Mr. Jas. Vicars. Our President was elected chairman. In the absence of the Hon. Secretary, Mr. J. McNamara, our Hon. Treasurer, Mr. H. L. Thompson, was appointed Hon. Secretary to the Provisional Council.

The Provisional Council sat for two days, and drew up the main provisions of the proposed Constitution, but left the verbiage and consequential alterations to be dealt with by an Executive Committee, consisting of the Sydney members of the Provisional Council, namely, Messrs. J. J. C. Bradfield, J. P. Tivey, Wm. Poole, F. Danvers Power, G. A. Julius, T. H. Kirkpatrick, and our two representatives mentioned above.

The Executive Committee completed its preliminary work, and the rough draft of the Constitution was issued to the Councils of the various Institutions, with the request that they should consider the draft with their representatives on the Provisional Council, and forward recommendations and suggestions to the Executive Committee.

The replies have been received, and the Executive Committee is now engaged in collating these before submitting the important recommendations to a letter ballot of the whole of the members of the Provisional Council.

Your Council view this movement as being the most important action that has been taken up to the present time for the betterment of the Engineers of Australia.

The draft Constitution will be submitted to every member of the Association in due course, when the Associations will be asked to express their approval of the scheme, and it is confidently expected that the active interest and assistance of the members of this Association will be given to the furthering of this important project.

LIBRARY REPORT.

Report of the Library Committee to Council, 30th September, 1918:—

During the past Session the efforts of the Library Committee have been considerably hampered by the difficulty in obtaining suitable text-books, and in effecting exchanges, but, nevertheless, some fine reference books have been secured, covering a wide range of subjects, e.g., "Industrial

Chemistry" (Martin), 2 vols., "Reinforced Concrete," 3 vols. (Hoole); "Metallography of Steel" (Howe), "Mechanical Handling of Materials" (Zimmer), "Factory Administration and Accounts" (Elborne), "Engineers' Handbook" (Halsey), "Steel Bridges" (Kunz), "American Petroleum Industry" (Bacon & Hamor), "Industrial Accident Prevention" (Beyer), "Contracts" (Mead), "Dynamo Design" (Hobart), "Electro Chemistry and Electric Welding" (Burgess-Cravens), "Large Electric Power Stations" (Klingenberg).

In all, 18 volumes were added at a cost of £24 11s. 4d., making a total of 170 volumes in the Text Book Section.

Twenty-four volumes of Transactions and Periodicals were bound at a cost of £10 16s. 6d.

The following exchanges and donations were received during the Session, and form a welcome addition to our lists:—"Cassiers Magazine," "Machinery," "Railway Engineer," "Technical Gazette of N.S.W.," "Architecture," "Sydney Municipal Council By-laws Governing Steel and Reinforced Concrete Construction," "The Commonwealth Year Book," and "Town Planning with Common Sense."

The Committee has to thank Mr. Godfrey Stevenson for his presentation of Meyer's "Modern Locomotive Practice."

The sum of £29 10s. 3d. was spent during the Session on new chairs and a writing table, and on renovating existing furniture, with the object of making the Library more comfortable, and consequently more attractive to members. It has been generally expressed that the expenditure was justified, but the Committee would be glad to see the Library made use of to a much greater extent.

The Committee is pleased to place on record that at its suggestion it was decided that this year, and in future, the amount of £5 5s. for the Students' Prize be taken from the interest on the P. N. Russell Bequest, and that it be known as the "P. N. Russell Prize."

During the Session rules were drawn up and approved by Council for the government and control of the Library, and they will shortly be available in printed form.

The Committee again appeals for recommendations and suggestions from members for the improvement of the Library, and would be glad of gifts of technical books, periodicals, etc., for use in the Library.

Appended is a statement of receipts and expenditure on the Library to date, showing a cash balance of £171 15s. 8d.

The Statement of Receipts and Expenditure for the Session shows a debit balance of £10 4s. 1d., this being due to the expenditure of Amalgamation being met out of the interest from the P. N. Russell Bequest, as decided at the General Meeting on the 9th May last.

D. F. J. HARRICKS.

WM. POOLE.

JAS. McNAMARA.

H. PASQUILL.

H. L. THOMPSON.

LIBRARY STATEMENT AT 30th SEPTEMBER, 1918.

	£	s.	d.	£	s.	d.		£	s.	d.
Expenses, 1914-15—Library	67	1	9				Transfer from General Fund			
" 1915-16—	61	8	3				Interest from P. N. Russell	50	0	0
" 1916-17—	66	9	9				Bequest—			
" 1917-18—	65	4	4				1914-15	95	12	6
Transferred to Revenue A/c for P. N. Russell Stu- dents' Prize	5	5	0				1915-16	135	0	0
Transferred to Revenue A/c for Amalgamation Ex- penses	51	16	9				1916-17	146	5	0
							1917-18	135	0	0
				317	5	10	Cheque refunded			511 17 6
Depreciation, 1914-15 ..	16	4	6							6 0 0
" 1915-16 ..	18	15	6							
" 1916-17 ..	20	18	0							
" 1917-18 ..	22	18	0							
						78 16 0				
Cash Balance at 30.9.'18 ..				171	15	8				
				£567	17	6				£567 17 6

LIBRARY ACCOUNT FOR YEAR ENDED 30th SEPTEMBER, 1918.

	£	s.	d.	£	s.	d.		£	s.	d.
To Debits—							By Receipts—			
Dymock's Book Arcade							" Interest on P. N. Russell Bequest—			
—Text Books ..	24	11	4				War Loan	135	0	0
Bead, Watson, Ltd.—							" Balance	10	4	1
Furniture ..	29	10	3							
Chapman & Co.—Bind- ing	10	16	6							
Sundries	0	6	3							
				65	4	4				
" Depreciation for 1917-18 on Library, Photos, etc.				22	18	0				
" P. N. Russell Students' Prize				5	5	0				
" Amalgamation Expenses —Balance				51	16	9				
				£145	4	1				£145 4 1

P. N. RUSSELL BEQUEST.

The interest accruing from this bequest, which, as members know, is invested in the Commonwealth War Loan, has been of great assistance in helping the finances of the Association, enabling additions to the library to be carried out, as well as providing for certain donations towards furthering the amalgamation of the Commonwealth Engineering Societies.

Your Council thought it fitting that the annual student prize of £5 5s. be taken from the fund and be termed the "P. N. Russell Prize," Students' Section.

STUDENTS' SECTION.

To those members of the Students' Section and the members of the Senior Council who kept alive the interest necessary to make a success of this branch, your Council are deeply indebted. We feel that even though the younger members are taking up the cause of the Empire, that those unable to do this work should maintain their interest in the Students' Section of the Association. The papers presented and lectures prepared are always of such a nature that even the members of the Senior body would derive great benefit from attending the meetings.

STUDENTS' PRIZE.

The Committee adjudicating on the papers for the 1916-17 Session awarded the P.N. Russell Price of £5/5/-, referred to in the Library Report, to Mr. A. J. Coyle for his paper of "Ignition Systems for Internal Combustion Engines."

The papers read before the Section were as follows:—

1918.—March 14th: "The Measurement of Horse Power," by A. W. Devitt, B.E.

April 24th.—"Case-Hardening," by Mr. W. R. Morris. Chairman, Mr. H. A. Bremner.

May 22nd: "The Development of the Battleship," by E. S. Maclean. Chairman, Mr. A. W. Tournay-Hinde.

June 26th: "The Manufacture of Sugar," by Mr. D. F. J. Harricks.

July 24th: "Suction Gas," by Mr. J. R. Hunter. Chairman, Mr. Wm. Poole.

August 28th: "CO₂ Recorders," by Mr. C. A. W. Devitt, B.E. Chairman, Mr. A. W. Tournay-Hinde.

Sept. 25th: A lecture on "Military Engineering at the Front," by Lieut. E. A. Rowe. Chairman, Col. A. C. Fewtrell.

ACCOUNT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDED 30th SEPTEMBER, 1918.

		£	s.	d.	£	s.	d.			£	s.	d.	£	s.	d.
1917—October 1—								1918—September 30 —							
To Balance—								By Printing Proceedings ..		168	3	9			
Bank of N.S.W. ..	..	155	8	4				„ Rent of Rooms ..	..	90	0	0			
Govt. Savings Bank of N.S.W. ..	..	127	3	2				„ Office Expenses ..	..	80	0	0			
Commonwealth of Australia—Inscribed Stock 3000	0	0						„ Stamps and Postages ..	..	22	0	8			
Cash in hand ..	..	4	19	6				„ General Printing ..	..	23	18	0			
					3287	11	0	„ Stationery ..	..	3	16	0			
1918—September 30 —								„ General Expenses—							
To Members' Subscriptions received ..		396	12	0				Telephone ..	..	7	12	4			
„ Members' Entrance Fees received ..	..	60	18	0				Electricity Supply ..	..	2	14	6			
„ Members' Voluntary Subscriptions received ..	..	54	1	0				Audit Fee ..	..	5	5	0			
					511	11	0	„ Sundries ..	..	5	1	0			
„ Interest—								„ Hire of Lantern for General Meetings ..	..	6	0	0			
Commonwealth of Australia—War Loan Int.	135	0	0					„ Insurance ..	..	0	17	5			
Govt. Savings Bank of N.S.W.—Interest ..	..	7	5	2								415	8	8	
					142	5	2	„ Furniture, Fixtures and Fittings ..	..				1	10	0
„ Withdrawal from Bank of N.S.W. ..	..				100	0	0	„ Certificates of Membership ..	..				9	16	0
„ Sundries—								„ Library—Books, Binding, Furniture, etc. ..	..				69	9	10
Refund Circulars ..	..	0	15	7				„ “P. N. Russell” Students' Prize ..	..				5	5	0
Exchanges ..	..	0	3	9				„ Amalgamation Expenses ..	..				94	15	6
Sale of Chairs ..	..	2	15	0				„ Deposit, Govt. Savings Bank of N.S.W. ..	..				100	0	0
Sale of Members' Certificates ..	..	3	5	0				„ Balance—							
Refunds, Amalgamation Expenses ..	..	42	18	9				Bank of New South Wales	157	1	3				
					49	18	1	Govt. Savings Bank of New South Wales ..	..	234	8	4			
								Commonwealth of Australia—Inscribed Stock 3000	0	0					
								Cash in hand ..	..	3	10	8			
												3395	0	3	
					£4,091	5	3						£4,091	5	3

REVENUE ACCOUNT, YEAR ENDED 30th SEPTEMBER, 1918.

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.			
To Printing Proceedings	131	3	11				By Entrance Fees	60	18	0					
„ Rent of Rooms	90	0	0				„ Subscriptions	393	9	0					
„ Office Expenses	80	0	0				„ Voluntary Subscriptions ..	54	1	0					
„ Stamps and Postages	22	0	8								508	8	0		
„ General Printing	22	1	5				„ Interest on Savings Bank								
„ Stationery	3	16	0				Deposit					9	9	0	
„ General Expenses	20	9	1				„ Certificates of Membership					3	5	0	
„ Hire of Lantern for Gene- ral Meetings	6	0	0				„ P. N. Russell Bequest In- terest A/c—								
„ Insurance	0	17	5				Transfer from Library								
				376	8	6	Reserve for P. N.								
„ Depreciation, Furniture, Fixtures and Fittings, 5 per cent.					6	6	Russell Students' Prize	5	5	0					
„ Certificates of Membership					9	16	Ditto, for Amalgamation								
„ P. N. Russell Students' Prize					5	5	Expenses	51	16	9			57	1	9
„ Amalgamation Expenses					51	16	9								
„ Depreciation, Library, Drawings, Photos, etc., 5 per cent.					22	18	0	„ Library Reserve A/c—							
„ Balance				128	11	6		Provision for Library De- preciation					22	18	0
				£601	1	9							£601	1	9