



THE  
Institution of Engineers  
Australia.  
PERTH DIVISION

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Annual Report  
for the  
*Twenty-second Session*  
1941

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GLEDDEN BUILDINGS,  
PERTH.

THE  
Institution of Refugees  
Anctiss.  
PERTH DIVISION

Audited Report

for the  
Third-quarter Session  
1941

CEDDEN BUILDINGS  
PERTH

# The Institution of Engineers, Australia

(Incorporated by Royal Charter, 1938).

## PERTH DIVISION.

### COMMITTEE REPORT FOR THE 1941-42 SESSION.

The retiring Committee has pleasure in submitting its report for the 22nd Session of the Perth Division of The Institution.

The Past President of the Institution, Colonel G. Drake-Brockman, M.C., M.I.E.Aust., who is a member of the Perth Division, is congratulated on his promotion and appointment as Director Engineering Services for the Commonwealth Military Forces.

The administration of the Division during the 22nd Session has been made difficult by the unusual times. Members have been exceedingly busy with duties connected with the Nation's war effort and this has been reflected in the attendance at Committee Meetings.

The 21st Annual General Meeting was held at Division Headquarters, Gledden Building, on 24th March, 1941, when the retiring Chairman, Mr. J. S. Foxall, B.E., M.I.E.Aust., delivered his address entitled "The Engineer in Mining," and the following members were declared elected for the 1941-42 Session:

Chairman	Mr. E. H. Oldham
Past Chairman	" J. S. Foxall
Vice-Chairman	" S. J. Hood
Vice-Chairman	" F. Mills
Hon. Secretary	" J. B. Jukes
Hon. Treasurer	" I. Davies

Committee: Assoc. Prof. O. F. Blakey; Messrs. N. Fernie, E. W. C. Godfrey, F. M. Kenworthy, W. A. McCullough, and J. W. Young.

Mr. S. J. Hood's resignation as Vice-Chairman of the Division was accepted with regret in October, 1941, and Mr. F. M. Kenworthy was elected Vice-Chairman by the Committee.

Mr. S. Johnson, A.M.I.E.Aust., was elected to the Committee in November 1941, under By-Law No. 12.

### COMMITTEE MEETINGS.

Eleven Committee Meetings were held during the Session and the attendance was as follows:—

Blakey, O. F.	10	Johnson, S.	2
(c) Cook, R. W.	4	Jukes, J. B.	10
Davies, I.	11	Kenworthy, F. M.	7
Fernie, N.	8	(c) Kilminster, R. W.	2
Foxall, J. S.	8	McCullough, W. A.	10
(b) Godfrey, E. W. C.	3	Mills, F.	1
(a) Hood, S. J.	1	Oldham, E. H.	11
		Young, J. W.	7

(a) Leave of Absence, 5 Meetings.

(b) Leave of Absence, 8 Meetings.

(c) Representatives of J. & S. Section. Mr. Cook succeeded Mr. Kilminster in August.

## REPRESENTATION ON COUNCIL.

The Councillors for the 1941-42 Session were Assoc.-Prof. O. F. Blakey, Messrs. J. S. Foxall and E. H. Oldham.

The following members have been elected for the 1942-43 Session: Assoc.-Prof. O. F. Blakey, Messrs. E. H. Oldham and J. W. Young.

Assoc.-Prof. Blakey attended the 89th Meeting of Council.

## SCRUTINEERS.

The Committee acknowledges with thanks the services of the following members who acted as Scrutineers for the Session:

Messrs. F. B. Durrant, J. D. Leach and D. A. Ross.

## MEMBERSHIP.

The change in the Division Membership for the twelve months ending 31/12/41 is shown in the following table:

	M.	A.M.	A.	J.	St.	Total
At 31/12/40	28	158	1	32	50	269
At 31/12/41	28	161	1	32	56	278
	—	—	—	—	—	—
	—	+3	—	—	+6	+9
	—	—	—	—	—	—

The following members were elected during the year:—

### **Assoc. Members:**

J. G. Y. Dean  
W. G. Hayman  
E. K. Pengilly  
J. W. Redpath  
F. T. Tredrea

### **Juniors:**

C. G. Carter  
R. A. J. Ferres  
F. M. Hilgendorf  
R. Horton  
R. E. Pennington  
W. G. Walker  
A. N. Watson

### **Students:**

E. K. Arblaster  
F. J. M. Bryant  
D. J. Durack  
C. P. Farrow  
L. Fenton  
E. R. Gorham  
L. S. Henshilwood  
N. W. H. Hill  
R. M. Hillman  
R. L. Keller  
M. J. Lane  
R. G. Robinson  
H. Rowbotham

Grade Transfers during the year:—

### **A.M. to M.:**

N. Fernie  
F. Mills  
V. C. Munt

### **Jun. to A.M.:**

G. L. Cheffins  
H. B. Jarvis  
W. R. Moir  
J. D. Murray  
L. B. Nicholls  
J. A. Taylor

### **Std. to A.M.:**

J. J. Edwards

### **Std. to J.:**

D. Bryden  
F. S. Shaw

Transfers from other Divisions:—

A.M.:	Std.:
J. A. McCormack	W. R. Hamill

Transfers to other Divisions:—

A.M.:	Jun.:	Std.:
D. C. Gilder	O. F. Fry	R. L. Kellar
A. E. Lambert	G. A. Kennedy	V. L. Moore
A. Stoneman	A. N. Watson	R. S. Walker
A. S. A. Sundquist		

Erasures:

C. F. Blatchford, A.M.  
L. Iggo, Std.

Deaths:

C. V. Anderson, Std.  
A. S. Devine, A.M.  
E. A. Evans, Member

Resignations:

J. A. Ellis, Member  
A. C. Hewitt, Assoc. Member  
F. E. Shaw, Member

THE YEAR'S WORK.

The following General Meetings were held during the Session:—

Date	Paper or Address	Author	Att.
28/4/41	Rational Design for Continuous Building Frames ..	F. S. Shaw (read by O. F. Blakey) ..	50
26/5/41	The Development of the Wire Netting Industry in Western Australia .....	J. H. Lang .....	30
23/6/41	(a) Vectors as used in Alternating Currents .....	P. H. Fraenkel .....	33
28/7/41	The Design of Samson Brook and Stirling Dam ..	R. J. Dumas and R. A. Macbeth .....	56
25/8/41	Road Vehicles .....	G. H. Tilley .....	30
22/9/41	The Manufacture of Munitions in Australia, particularly Western Australia ..	F. Mills .....	65
27/10/41	(b) "Unwanted Plants" ..	Dr. G. A. Currie ..	60
24/11/41	Sound Films of "Modern Methods of Earth Movement" ..	Wigmore's Ltd. ..	41

(a) This was a joint meeting with the W.A. Branch of The Institution of Electrical Engineers, London.  
(b) This was a social evening at which ladies and members of allied societies were present.

The average attendance at the General Meetings was approximately 46.

FINANCE.

The Auditors' Report, the Annual Balance Sheet and Revenue Account are presented with this Report. It is pleasing to note an excess of revenue over expenditure of £46/0/9.

LIBRARY.

Further reference books have been added to the Library, and the binding of Journals has been kept up to date.

## ACTIVITIES CONNECTED WITH THE WAR.

(a) **Tutorial Classes for R.A.A.F. Ground Staff Trainees:** Mr. F. H. Palmer, A.M.I.E.Aust., has organised and carried on these classes in Electricity and Mechanical Drawing and, for a part of the year, in Fitting Theory. He has had some willing assistants, but unfortunately not enough to adequately cope with the work. The Juniors and Students' Section has recently done much to ease the position, but instructors are still required. In spite of difficulties, good work has been done, and the Teaching Staff at the Perth Technical College and the Air Force Officers attribute much of the success of W.A. Trainees when drafted to the Eastern States to the help given them in these classes.

(b) **Training of Munition Workers:** The classes in Workshop Practise, Mechanical Drawing and Simple Mathematics, held at the Perth Technical College for the benefit of Munition trainees, have continued throughout the year under Mr. L. L. Blair, A.M.I.E.Aust., with several assistants. Mr. C. G. Carter, Jun.I.E.Aust., is now taking over the classes, which have not been availed of fully, but have produced pleasing results amongst those who have attended.

## DIVISION MEMBERS WITH THE FORCES.

We are proud to record the names of the following members who have enlisted for active service abroad:—

Ballantine, Lieut. R. L.	Lane, E. H.
Blackwood, Major G. W.	Letch, Pilot Officer L. A. C.
Chippington, A.C.2 T. G.	Leyden, Capt. P. G.
Clifford, Pilot Officer E. G.	Murray, Pilot Officer J. D.
Davenport, Capt. J.	Odlum, Capt. A. H. R.
Dawson, Lieut. B. F.	Pennington, Actg. Serg.
Dimond, Lieut. C. M.	Pond, Pilot Officer A. C.
Dowson, Capt. J. S.	Redpath, Capt. J. W.
Field, Lt.-Col. C. R.	Robertson, Lieut. A. G.
Grigg, Pilot Officer C. D.	Royce, A. H.
Herbert, Lieut. W. M.	Scott, A/Sgt. J. B.
Hillman, Lieut. G. A. de C.	Steere, Lieut. E. K.
Hudson, Lieut. K. F.	Taylor, Sub.-Lieut. P. W.
Jarvis, Capt. H. B.	Weston, E. T.

Considerable difficulty is experienced in getting information about members in the forces, and the above list includes only those members of whose enlistment the Hon. Secretary has been notified.

## JUNIORS AND STUDENTS' SECTION.

The report of the Committee of the Juniors and Students' Section is appended.

JAMES B. JUKES,  
Hon. Secretary.

## JUNIORS AND STUDENTS' SECTION. ANNUAL REPORT.

The Management Committee has pleasure in presenting the Annual Report of the Section for the year ending 31st December, 1941.

The 10th Annual General Meeting was held on 7th July, 1941, when the following officers were elected for the 1941-42 Session:—

Chairman ..... Mr. L. A. C. Letch  
Vice-Chairman ..... " R. W. Cook  
Hon. Secretary ..... " J. H. Leevers  
Committee: Messrs. G. A. Kennedy, J. V. Kreuzspiegel,  
R. G. Button and D. B. Sugden.

Owing to the resignation of Mr. Letch, who is now in the R.A.A.F., Mr. Cook was elected Chairman on 28th July, and Mr. Button was elected Vice-Chairman.

Mr. Kennedy's resignation was received at the 46th General Meeting, and Mr. J. F. M. Bryant was elected to the vacancy on the Committee.

### PAPERS.

10th Annual General Meeting, 7th July, 1941: 24 members present.

"Explosives," Mr. L. A. C. Letch.

"Aircraft Fuel Injection," Mr. J. B. Scott.

46th General Meeting, 4th August, 1941: 12 members present.

"Design of Concrete Mix," Mr. R. W. Cook.

47th General Meeting, 8th September, 1941: 16 members present.

"Design and Construction of West Australian Wheat Silos,"  
Mr. J. V. Kreuzspiegel.

48th General Meeting, 13th October, 1941: 12 members present.

"Railway Signalling," Mr. J. H. Leevers.

49th General Meeting, 10th November, 1941: 11 members present.

"Lightning," Mr. R. W. Kilminster.

50th General Meeting, 8th December, 1941: 10 members present.

Discussion: "The Engineer's Place in the Community."

Although the first meeting was not held until July, the attendance and interest shown by the members was very satisfactory, and the enthusiasm was quite equal to any previous year.

During the year it was decided that those who found it possible would have tea together before the meetings. This was found to be a great success by all who attended.

Visits were arranged to the Perth Hospital and Perth Observatory during the year.

A supper was held in conjunction with the December meeting to replace the usual Smoke Social.

Members of the Section take this opportunity to thank those members of the Division Committee who gave up their time in the interests of the Management Committee.

J. H. LEEVERS,

Hon. Secretary, J. & S. Section.

## AUDITORS' REPORT.

22nd January, 1942.

The Honorary Secretary,

The Institution of Engineers, Australia (Incorporated  
by Royal Charter), Perth Division,  
PERTH.

Dear Sir,—

1. We have pleasure in reporting having completed the audit of the books and accounts of the Perth Division of the Institution for the year ended 31st December, 1941, subject to the following remarks. We append hereto the undermentioned statements:—

Balance Sheet as at 31st December, 1941.

Revenue Account for the year ended 31st December, 1941.

Schedule of Subscriptions in Arrears at 31st December, 1941.

Schedule of Subscriptions Paid in Advance at 31st December, 1941.

2. In accordance with the instructions contained in Headquarters letters No. 408/41 of 3rd April, 1941, and No. 408/41 of 19th June, 1941, only 35% of current subscriptions and arrears received during the year have been credited and remitted to Headquarters.

3. In accordance with the instruction issued by the Council of the Institution only subscriptions (65%) actually collected during the year under review have been taken into account. Neither the whole nor any part of subscriptions in arrears at the balancing date have been brought into account, but the amount outstanding is shown as a Contingent Asset in a certificate on the Balance Sheet, and a schedule of these subscriptions is appended.

4. We hold a certificate from the Commonwealth Bank of the amount of Inscribed Stock in the name of the Institution on 31st December, 1941.

5. Depreciation has been written off Furniture and Fittings and Library at a rate of not less than 10% per annum. No Depreciation has been provided in the current year's accounts in connection with the Davis Bequest Cinema Equipment.

6. Subscriptions paid in Advance prior to 31st December, 1941, are shown as a liability in the Balance Sheet, and a schedule of same is attached.

7. Accrued Interest on investments of Inscribed Stock has been brought into account at the balancing date.

8. The Revenue Account shows an excess of Income over Expenditure for the year of £46/0/9, and this has been credited to Accumulated Funds, bringing the total of the latter account to £1914/4/11 at 31st December, 1941.

9. The practice which has received your expressed approval, whereby certain items such as Telephone Charges, Interest on Loans, Deposits, etc., have been taken into account for a period

of twelve months other than that covered by the Divisional financial year, has been adopted.

10. In conclusion, we have to state that subject to the comments contained in this report we certify:—

- (a) We have obtained all the information and explanations we have required.
- (b) In our opinion the Balance Sheet referred to in this report is properly drawn up so as to exhibit a true and correct view of the state of The Institution's affairs according to the best of our information and the explanations given to us and as shown by the books of The Institution.
- (c) In our opinion the records which The Institution is required to keep by law or by its Bye-laws have been properly kept.

11. We wish to record the satisfactory manner in which the books have been kept during the year and presented for audit by the Honorary Treasurer, Mr. I. Davies.

With Compliments, we are,

Yours faithfully,

E. & R. STEPHEN HART,

Chartered Accountants (Aust.),  
Auditors.

THE INSTITUTION OF ENGINEERS, AUSTRALIA (Incorporated by Royal Charter),  
PERTH DIVISION.

BALANCE SHEET AS AT 31st DECEMBER, 1941.

LIABILITIES.		ASSETS.					
		£	s. d.	£	s. d.	£	s. d.
Sundry Creditors	.. . . . .	1	3	1			
Headquarters I.E. Australia—							
Subscriptions 35%	.. . . . .	33	13	8			
Entrance Fees	.. . . . .	1	1	0			
Transfer Fees	.. . . . .	2	2	0			
Sale of Publications	.. . . . .	2	11	6			
		<hr/>		<hr/>		<hr/>	
Subscriptions Paid In Advance	.. . . . .	10	4	9			
Accumulated Funds—							
Balance at 31st December, 1940	.. . . . .	1868	4	2			
Add Excess Income over Expenditure	.. . . . .	46	0	9			
		<hr/>		<hr/>		<hr/>	
		1914	4	11			
CONTINGENT ASSETS.							
Subscriptions in Arrears—							
We hereby certify that the value of Subscriptions in Arrears at 31st December, 1941, was as stated hereunder:—							
On account of year ended	31/12/1941	..	155	0	3		
On account of year ended	31/12/1940	..	42	10	5		
On account of year ended	31/12/1939	..	6	6	0		
On account of year ended	31/12/1938	..	3	3	0		
		<hr/>		<hr/>		<hr/>	
		£206	19	8			
		<hr/>		<hr/>		<hr/>	
		£1965	0	11			
		<hr/>		<hr/>		<hr/>	
Particulars of the total involved are given in the schedule appended hereto; 35% of the whole or any portion of such arrears if and when collected shall be due to Headquarters.							
There is also an amount of £2/2/- due by members for Transfer Fees, the whole of which is due to Headquarters when collected.							
E. & R. STEPHEN HART, Chartered Accountants (Aust.), Auditors.							
JAMES B. JUKES, Hon. Secretary.							
22nd January, 1942.							

THE INSTITUTION OF ENGINEERS, AUSTRALIA (Incorporated by Royal Charter),  
PERTH DIVISION.

REVENUE ACCOUNT FOR THE TWELVE MONTHS ENDED 31st DECEMBER, 1941.

EXPENDITURE.		RECEIPTS.	
	£ s. d.		£ s. d.
To Administration Expenses—		By Subscriptions Received, 65%—	
Salaries, etc. . . . .	£270 0 0	For Current Year . . . . .	342 15 7
Rent . . . . .	215 7 0	On Account of Arrears . . . . .	49 17 9
Less Sub-tenants . . . . .	54 13 0	Paid in Advance in previous years . . .	6 2 1
Office Cleaning and Lighting . . . . .	62 12 8		398 15 5
Telephone Charges . . . . .	9 19 6		
Postages and Telegrams . . . . .	19 12 8		
General Printing . . . . .	35 12 7		
Audit Fees . . . . .	10 10 0		
Insurance . . . . .	4 8 4		
General Expenses . . . . .	7 17 0		
,, Expenses of Meetings—			
General Meetings . . . . .	18 8 5		
J. & S. Meetings . . . . .	4 19 2		
,, Depreciation—			
Furniture and Fittings . . . . .	50 17 1		
Library . . . . .	11 18 10		
,, Excess of Income over Expenditure—			
Transferred to Accumulated Funds . . .	46 0 9		
		£441 10 0	
This is the Revenue Account for the Twelve Months ended 31st December, 1941, referred to in our report to the Division Committee under date 22nd January, 1942.			
IDNA DAVIES,		E. & R. STEPHEN HART,	
Hon. Treasurer.		Chartered Accountants (Aust.),	
JAMES B. JUKES,		Auditors.	
Hon. Secretary.			
		22nd January, 1942.	
			£441 10 0

R. S. Sampson Printing Co., 971-3 Hay-st., Perth.