(1) பக்கங்களின் எண்ணிக்கை 28

(2) புதுக்கித் திருப்பிய நாள் மேலும் 1991

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

அனுப்பணிதல் — முறை

அரசாணை எண்.	அச்சகம்
மு. கோப்புத் தாள் எண். 2573 W	பலவகை
நாள் : 11. 10. 1893	198 .

17 Sheets.

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

ஆவண . கா-1—18,006—15-6-87.

1/2573

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers:—

From W. P. AUSTIN, Esq., I.C.S., Chairman, Harbour Trust Board, to the Chief Secretary to Government, dated Madras, 4th September 1893, No. 1688.

I have the honour to forward, for the information of Government, copy of resolution passed by the Board at its meeting on Friday, the 1st instant, together with copy of chemical analyses of nine samples of cement.

ENCLOSURES.

EXTRACT of Proceedings of the Trustees of the Harbour of Madras at a meeting held at the offices of the Board on Friday, the 1st day of September 1893.

* * * * *

5. Read letter No. 583, dated 24th August 1893, from the Board's Engineer, forwarding copy of Chemical Examiner's No. 749, dated 18th idem, with the results of the chemical tests on the quantity of cement in stock with reference to Sir Alexander Rendel's remarks printed in G.O., No. 821 W., dated 24th March, and Board's Resolution No. 3, dated 9th June.

Resolved that the Chemical Examiner's analyses be forwarded for the information of Sir Alexander Rendel.

* * * * *

(True Extract.)

(Signed) J. HUTCHENCE,
Acting Secretary.

ANALYSES of nine samples of cement received with your letter No. 200, dated 26th June 1893.

—	S.S. *Goorkha*, 14th October 1890—Wouldham Cement Company.	S.S. *Ixora*, 26th October 1890—Wouldham Cement Company.	S.S. *Nawarina*, 25th December 1890—Wouldham Cement Company.	S.S. *Goorkha*, 15th March 1892—Tunnel Company.	S.S. *Ixora*, 1st April 1892—Tunnel Company.	S.S. *Golcondah*, 7th May 1892—Tunnel Company.	S.S. *Deepdale*, 9th May 1892—Tunnel Company.	S.S. *Nawarina*, 24th May 1892—Tunnel Company.	S.S. *Ixora*, 8th June 1892—Tunnel Company.
Moisture	0·310	0·490	0·412	0·246	0·200	0·112	0·238	0·174	0·176
Insoluble silica	5·693	5·328	3·054	2·520	2·467	2·597	2·114	1·783	2·200
Soluble silica	21·407	24·402	23·756	24·380	23·433	23·443	24·286	24·537	24·190
Ferri oxide (Fe_2O_3)	4·200	2·760	3·760	3·240	3·160	3 200	3·320	3·280	3·280
Alumina (Al_2O_3)	9·150	8·090	7·640	7·010	7 590	7·950	6·280	6·870	7·270
Lime (CaO)	54·107	53·468	56·951	58·180	58·716	57·976	59·332	59·035	58·732
Calcium sulphate ($CaSo_4$) ..	2·217	2·480	2·451	2·188	2·246	2·071	2 246	2·217	2·071
Magnesia (Mgo)	0·252	0·306	0·144	0·414	0·450	0·216	0·522	0·324	0·270
Potash (K_2O)	0·897	0·733	0·844	0·627	0·617	0·945	0·752	0·878	0·791
Phosphoric anhydride (P_2O_5) ..					trace.				
Carbonic anhydride (CO_2) and unaccounted for 1	1·767	1·243	0·988	1·195	1·121	1·490	0·910	0·902	1·026
	100·000	100·000	100·000	100·000	100·000	100·000	100·000	100·000	100·000
Specific gravity	4·32	4·35	4·16	3·21	3·28	3·18	3·23	3·28	3·52

MADRAS,
18th August 1893.

(Signed) J. L. VANGEYZEL, M.B., C.M., Surgn.-Major,
Chemical Examiner.

Tests of Portland cement.

Number of sample.	Number of briquettes.	Name of manufacturer or of cement and date of delivery on the works.	Size of briquettes.	Quantity of water used in gauging.	Quantity of dry cement in each briquette.	Quantity of sand in each briquette in measures of cement.	Date of gauging.	Age. Months.	Age. Days.	Tensile strain—average.	Residue of dry cement on sieves. 25 × 25	Residue of dry cement on sieves. 50 × 50	Weight of dry cement per struck bushel.	Remarks.
			Sq. in.	oz.	lb. oz.	No.				lb.	per cent.	per cent.	lb.	
A.	18	Woolwich Cement Company per S.S. *Goorkha* on 14th October 1890.	One	1½	0 5½		6th Nov. 1890..		7	486	13	7	101½	Original tests in 1890.
							1st May 1893 ..		28	591	..	..	..	
B.	6	Woolwich Cement Company per S.S *Reora* on 26th October 1890.	,,	1½	0 5½	,,	29th April 1891.		7	478	..	..	..	Tests made in 1893.
									28	609	..	8	101	
									7	491	16	..	..	Original test in 1891.
							1st May 1893 ..		28	602	..	..	..	
C.	3	Woolwich Cement Company per S.S. *Navarino* on 25th December 1890.	,,	1⅞	0 5½	,,	30th April 1891.		7	444	..	..	..	Tests made in 1893.
									28	541	..	..	..	
									7	463	11	16	99½	Original test in 1891.
									28	564	..	..	..	
D.	3	Tunnel Cement Company per S.S. *Golconda* on 7th May 1892.	,,	1⅞	0 5½	,,	19th April 1893.		7	439	..	..	..	Test made in 1893.
									28	526	..	..	..	
							25th May 1892.		7	511	17	8	109	Original test in 1892.
							20th April 1893.		28	666	..	..	..	Tests made in 1893.
									7	612	..	..	..	
									28	676	..	..	107½	Original test in 1892.
							25th May 1892.		7	534	17	8	..	
E.	3	Tunnel Cement Company per S.S. *Deepdale* on 9th May 1892.	,,	1⅞	0 5½	,,	21st April 1893.		28	682	..	..	..	Tests made in 1893.
									7	605	..	..	..	
							11th June 1892.		28	706	13	8	108	Original test in 1892.
									7	501	..	..	..	
F.	3	Tunnel Cement Company per S.S. *Masters* on 24th May 1892.	,,	1⅛	0 6½	,,	21st April 1893.		28	643	..	..	..	Original test in 1892.
									7	539	..	..	..	
							11th June 1892.		28	677	..	..	..	Test made in 1893.
									7	480	13	8	108	
G.	3	Tunnel Cement Company per S.S. *Danera* on 8th June 1892.	,,	1½	0 5½	,,	21st April 1893.		28	605	..	..	..	Original test in 1892.
									7	487	..	..	..	
							18th May 1893.		28	598	..	..	..	Test made in 1893.
H.	..	Tunnel Cement Company per S.S. *Goorkha* on 15th March 1892.	,,	1⅛	0 6½	,,	19th April 1893.		7	440	17	9	107	Original test in 1892.
									28	651	..	..	..	
							22nd April 1892.		7	518	..	..	..	Test made in 1893.
									28	718	..	..	..	
I.	..	Tunnel Cement Company per S.S. *Reora* on 1st April 1892.	,,	1⅛	0 5½	,,	22nd ,, ,,		7	530	15	9	107½	Original test in 1892.
							20th ,, 1893.		28	700	..	..	..	
									7	553	..	..	..	
									28	696	..	..	..	Test made in 1893.

(Signed) A. LEE POGSON, M.I.M.E., A.I.E.E.,
Engineer, Harbour Trust Board.

Madras,
18th August 1893.

Analyses of nine samples of cement.

Portland cement analyses.	S.S. *Goorkha*, 14th October 1890—Woolwich Cement Company. A.	S.S. *Reora*, 26th October 1890—Woolwich Cement Company. B.	S.S. *Navarino*, 25th December 1890—Woolwich Cement Company. C.	S.S. *Golconda*, 7th May 1892—Tunnel Company. D.	S.S. *Deepdale*, 9th May 1892—Tunnel Company. E.	S.S. *Masters*, 24th May 1892—Tunnel Company. F.	S.S. *Danera*, 8th June 1892—Tunnel Company. G.	S.S. *Goorkha*, 15th March 1892—Tunnel Company. H.	S.S. *Reora*, 1st April 1892—Tunnel Company. I.
Moisture	0·310	0·490	0·412	0·112	0·238	0·174	0·176	0·246	0·200
Insoluble silica	5·625	5·328	3·054	2·597	2·114	1·783	2·200	2·520	2·467
Soluble silica	21·407	24·402	23·756	23·443	24·286	24·537	24·190	24·380	23·433
Ferri oxide (Fe_2O_3)	4·200	2·760	3·760	3·200	3·320	3·280	3·240	3·240	3·160
Alumina (Al_2O_3)	9·150	8·090	7·640	7·950	6·280	6·870	7·270	7·010	7·590
Lime (CaO)	54·107	53·468	56·951	57·976	59·332	59·035	58·732	58·180	58·716
Calcium sulphate ($CaSo_4$) ..	2·217	2·480	2·451	2·071	2·246	2·217	2·071	2·188	2·246
Magnesia (Mgo)	0·252	0·306	0·144	0·216	0·522	0·324	0·270	0·414	0·450
Potash (K_2O)	0·897	0·733	0·844	0·945	0·752	0·878	0·791	0·627	0·617
Phosphoric anhydride (P_2O_5) ..	trace.								
Carbonic anhydride (CO_2) and unaccounted for	1·767	1·943	0·988	1·450	0·910	0·902	1·020	1·195	1·121
	100·000	100·000	100·000	100·000	100·000	100·000	100·000	100·000	100·000
Specific gravity	4·32	4·35	4·16	3·18	3·23	3·28	3·52	3·21	3·18

Madras,
18th August 1893.

(Signed) J. L. VanGEYZEL, M.B., C.M., Surgn.-Major,
Chemical Examiner.

No. 1603, Marine.

Transferred to the Public Works Department.

Ootacamund,
9th September 1893.

(Signed) J. F. PRICE,
Chief Secretary.

From W. P. AUSTIN, Esq., I.C.S., Chairman, Harbour Trust Board, to the Chief Secretary to Government, dated Madras, 13th September 1893, No. 1801.

In continuation of my No. 1688, dated 4th instant, forwarding chemical analyses of nine samples of cement, I have the honour to forward the Engineer's tests of the cement, and to request if Government thinks it necessary that these tests may also be forwarded for the information of Sir Alexander Rendel.

No. 1646, Marine.

Transferred to the Public Works Department in continuation of endorsement, dated 9th September 1893, No. 1603.

Ootacamund,
18th September 1893.

(Signed) A. T. PRINGLE,
Assistant Secretary.

ORDER—dated 11th October 1893, No. 2573 W., Public Works.

Ordered that the Chemical Examiner's analyses and the Harbour Works Engineer's tests of the cement in stock at the Madras Harbour Works be forwarded to the Home Government.

[Here enter No. $\frac{8}{2573}$ W., dated 11th October 1893.]

(True Extract.)

(Signed) J. HANNAN,
Ag. Joint Secy. to Govt., P.W.D.,
General, Buildings and Roads Branch.

To the Chairman, Madras Harbour Trust Board.
" Marine Department.

Exd. A. D. Xavier.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1893} Madras.

PUBLIC WORKS.

Dated October, 11th.

Read. *Encl.*

G.O., 11th Oct. 1893, No. 2573 W.

OCTOBER.

Cement

The Chemical Examiner's analyses and the Harbour Works Engineer's tests of the — in stock at the Madras Harbour Works, ordered to be forwarded to the Home Government.

PUBLIC WORKS DEPARTMENT.

LETTER—to

THE RIGHT HONORABLE THE SECRETARY OF STATE FOR INDIA.

MY LORD,

With reference to Your Lordship's despatch No. 2 (Public Works), dated 23rd February 1893, we have the honour, at the request of the Madras Harbour Trust Board, to forward, for the information of Sir A. Rendel, copy of the Chemical Examiner's analyses of nine samples of cement in stock at the Madras Harbour Works; also the Harbour Works Engineer's tests of the cement.

We have the honour to be,
My Lord,
Your Lordship's most obedient, humble servants,

(Signed) WENLOCK.
(„) H. E. STOKES.
(„) J. H. GARSTIN.

OOTACAMUND,
11th October 1893.

Exd. A. D. Xavier.

2573/5

GOVT. OF MADRAS.

PUBLIC WORKS DEPARTMENT.

(Copy.)

LETTER to the Right Honorable the Secretary of State for India.

No. 8 / 2573 W., dated 11th Oct. 1893.

FORWARDING, for the information of Sir A. Rendel, copy of the Chemical Examiner's analyses and the Harbour Works Engineer's tests of the cement in stock at the Madras Harbour Works.

CURRENT No. 728

Harbour Trust Board Office,

MADRAS, 1st September 1893.

No. 1688.

1 Piece 2573/5

From Ware Austin Esquire I.C.S.

CHAIRMAN, HARBOUR TRUST BOARD,
MADRAS.

To The Honorable Mr J. F. Price I.C.S.

Chief Secretary to Government,
Marine Department.

SIR,

I have the honor to forward for the information of Government copy of resolution passed by the Board at its meeting on Friday the 1st Instant together with copy of Chemical analyses of 9 samples of cement.

I have the honor to be
Sir
Your obedt Servant

Wauclin
Chairman
Harbour Trust Board

By Secy.

W. CURRENT No. 8091

MARINE DEPARTMENT.

Mar Gov 2186-7-93. Rout 582 14-4-93 & No 1603

2573

FROM

THE CHAIRMAN,
HARBOUR TRUST BOARD,
MADRAS.

Is transferred to the Public Works dept.
Madras 7/9
Chief Secretary

TO

THE CHIEF SECRETARY TO GOVERNMENT,
Marine Department.

3.8.B 819

Cotacamund 9th September 1893

2573/7

DATED 4th

DESPATCHED 5th } September 1893.

RECEIVED 22nd

Regtd 7-9-93

ENCLOSURES two

No. 1688.

SUBJECT.

Submitting copy of Harbour Boards resolution with copy of Chemical Analyses of 9 Samples of Cement.

No. 821 Wd/24-8-93

Transferred

Encl 3
Recd 11-9
Pds 9-9

EXTRACT of Proceedings of the TRUSTEES OF THE HARBOUR OF MADRAS, at a Meeting held at the Offices of the Board on Friday the 1st day of September 1893.

2573/8

× × 2 ×

5. Read letter No 383 dated 21st August '93 from the Board's Engineer forwarding copy of Chemical Examiner's No 749 dated 18th idem, with the results of the chemical tests on the quantity of cement in stock, with reference to Sir Alexander Rendel's remarks printed in Pg. Co's No 821 Wd dated 24th March and Board's Resolution No 3 dated 9th June.

Mar Gov R No 58 14-4-93

Irg Gov R No 121 6-7-93

Resolved that the Chemical Examiner's analyses be forwarded for the information of Sir Alexander Rendel.

× × ×

True Extract

A. Hutchinson
Ag: Secretary
Harbour Trust Board

Analyses of 9 Samples of Cement received with your letter No 200 dated 26 June 1893

	S.S Goorkha 14.10.92 Manchester Cement Company	S.S. Rewa 26.10.92 Manchester Cement Company	S.S. Navarino 25.12.92 Manchester Cement Company	S.S. Goorkha 15.3.92 Tunnel Company	S.S. Rewa 1.4.92 Tunnel Company	S.S Golconda 7.5.92 Tunnel Company	S.S Dagdale 9.5.92 Tunnel Company	S.S. Navarino 24.5.92 Tunnel Company	S.S Dunera 8.6.92 Tunnel Company
Moisture	0.310	0.490	0.412	0.246	0.200	0.112	0.238	0.174	0.176
Insoluble Silica	5.693	5.328	3.054	2.520	2.467	2.597	2.114	1.783	2.200
Soluble Silica	21.407	24.402	23.756	24.380	23.433	23.443	24.286	24.537	24.190
Ferric Oxide (Fe_2O_3)	4.200	2.760	3.760	3.240	3.160	3.200	3.320	3.280	3.280
Alumina Al_2O_3	9.150	8.090	7.640	7.010	7.590	7.950	6.280	6.870	7.270
Lime (CaO)	54.107	53.468	56.951	58.180	58.716	57.976	59.332	59.035	58.732
Calcium Sulphate. ($CaSO_4$)	2.217	2.480	2.451	2.188	2.246	2.171	2.246	2.217	2.071
Magnesia (MgO)	0.252	0.306	0.144	0.414	0.450	0.216	0.522	0.324	0.270
Potash (K_2O)	0.897	0.733	0.844	0.627	0.617	0.945	0.752	0.878	0.791
Phosphoric anhydride (P_2O_5)	trace	trace	trace	trace	trace	trace	trace	trace	trace
Carbonic anhydride (CO_2) and unaccounted for .1	1.767	1.943	0.988	1.195	1.121	1.490	0.910	0.902	1.020
	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Specific gravity	4.32	4.35	4.16	3.21	3.28	3.18	3.23	3.28	3.52

Madras
16 August 1893

Signed J. H. Van Geyzel M.B.C.M.F.C.S. Edin
Surgeon major.
Chemical Examiner

To The Engineer
Harbour Trust Board
Madras.

(True Copy)

A. de Rozario
Engineer, Harbour Trust Board.

			Sqre. ins.	oz.	lbs.	oz.			
G.	3	Imperial Cement Co. per S.S. "Omera" on 8-6-92	one	1 1/8	-	5 1/2	nil	11-6-92	117-6
									4-7
"	"	"	"	"	-	"	"	21-4-93	23-4
									152-5
H.	"	Imperial Cement Co. per S.S. "Gookha" on 15-3-92?	one	1 1/16	-	5 1/2	nil	18-3-92	14-3
			"	"	"	"	"	" "	14-4
"	"	"	"	"	-	"	"	19-4-93	6-4
"	"	"	"	"	-	"	"	" "	7-5
I.	"	Imperial Cement Co. per S.S. "Kawa" on 11-4-92	one	1 1/16	-	5 1/2	nil	22-4-93	0-4
								23-4-92	0-5
"	"	"	"	"	-	"	"	20-4-93	7-4
								" "	8-5

Analyses of 9 samples of C

92	7	480	13	8	108	} Original test in 1892	
92	28	605					
93	7	487				} Test made in 1893	
93	28	598					
93	7	440	17	9	107	} Original test in 1892	
93	28	651					
93	7	518				} Test made in 1893	
93	28	718					
92	7	530	15	9	107½	} Original test in 1892	
92	28	700					
93	7	553				} Test made in 1893	
93	28	696					
	4	3	3	5	5		

A. Lee Rogers. M.I.M.E, A.M.I.C.E. A.I.E.E.
Engineer, Harbour Board.

ement

	S.S. Duncan 8.6.92	S.S. Goodall 16.3.92	S.S. Rewa 1.4.92
	Limited Company	Limited Company	Limited Company
	G.	H.	I.
	0.176	0.246	0.200
	2.200	2.520	2.467
	24.190	24.380	23.433
	3.280	3.240	3.160
	7.270	7.010	7.590
	58.732	58.180	58.716
	2.071	2.188	2.246
	0.270	0.414	0.450
	0.791	0.627	0.617
	Trace	Trace	Trace
	1.020	1.195	1.121
	100.000	100.000	100.000
	3.52	3.21	3.18

P. J. L. Van Geyzel M.B. C.M.
Surgeon major
Chemical Examiner

A. Lee Rogers
12/11/93

		per S.S. "Goorkha" on 8-6-92							
"	"	"	"	"	"	"	"	21-4-93	23-4- 10-5-
1.	"	Tunnel Cement Co. per S.S. "Goorkha" on 15-3-92	one	1 1/16	- 5 1/2	nil	18-3-92	14-3	
"	"	"	"	"	"	"	"	"	14-4
"	"	"	"	"	"	"	19-4-93	6-4	
"	"	"	"	"	"	"	"	"	7-5
I.	"	Tunnel Cement Co. per S.S. "Rewa" on 11-4-92	one	1 1/16	- 5 1/2	nil	11-4-92	0-4	
							23-4-92	0-5	
"	"	"	"	"	- "	"	20-4-93	7-4	
2	19	2	3	4	4	"	"	8-5	

Analyses of 9 samples of C

Portland Cement Analyses —	P. S. "Goorkha" 14.10.90 Wouldham Cement Company	S. S. "Rewa" 26.10.90 Wouldham Cement Company	S. S. "Ramsins" 25.12.90 Wouldham Cement Company	S. S. "Golconda" 4. 5. 92 Tunnel Company	S. S. "Deeplake" 9. 5. 92 Tunnel Company	S. S. "Ham 24. 5 Tunn Comp
	A.	B.	C.	D.	E.	F.
Moisture	0.310	0.490	0.412	0.112	0.238	0.17
Insoluble Silica	5.693	5.329	3.054	2.597	2.114	7.8
Soluble Silica	21.407	24.402	23.756	23.1443	24.286	4.5
Ferric oxide (Fe_2O_3)	4.200	2.760	3.760	3.200	3.320	3.2
Alumina (Al_2O_3)	9.150	8.090	7.640	7.950	6.280	2.8
Lime (CaO)	54.107	53.468	56.961	57.976	59.332	59.0
Calcium Sulphate ($CaSO_4$)	2.217	2.480	2.461	2.071	2.246	2.2
Magnesia (MgO)	0.252	0.306	0.144	0.216	0.522	2.3
Potash (K_2O)	0.897	0.733	0.844	0.946	0.762	2.2
Phosphoric Anhydride (P_2O_5)	trace	trace	trace	trace	trace	tra
Carbonic Anhydride (CO_2)	1.767	1.943	0.988	1.490	0.910	1.9
unaccounted for						
	100.000	100.000	100.000	100.000	100.000	100.0
Specific gravity	4.32	4.35	4.16	3.18	3.23	3.2

Analyses
18th August
1892

MADRAS HARBOUR WORKS.

TESTS OF PORTLAND CEMENT.

Number of Briquettes	Name of Manufacturer or of Cement, and date of delivery on the Works.	Size of Briquettes	Quantity of Water used in gauging.	Quantity of Dry Cement in each Briquette.	Quantity of Sand in each Briquette in measures of Cement.	Date of Gauging.	Date of Breaking.	Age. Months.	Age. Days.	Tensile Strain, average	Residue of Dry Cement on Sieves. 25 × 25	Residue of Dry Cement on Sieves. 50 × 50	Weight of Dry Cement per Struck Bushel.	REMARKS.
		Sqre. ins.	oz.	lbs. oz.						lbs.	per cent.	per cent.	lbs.	
16	Wouldham Cement Co per S.S. "Goorkha" on 14-10-90	one	1½	- 5½	nil	5.11.90	12.11.90		7	486	13	7	101½	Original tests in 1890
"	"	"	"	"	"	"	3.12.90		28	591	"	"	"	
"	"	"	"	"	"	1.5.93	8.5.93		7	478	"	"	"	Tests made in 1893
"	"	"	"	"	"	"	29.5.93		28	609	"	"	"	
6	Wouldham Cement Co per S.S. "Rewa" on 26-10-90	one	1⅛	- 5½	nil	29.4.91	6.5.91		7	491	16	8	101	Original tests in 1891
"	"	"	"	"	"	"	17.5.91		28	602	"	"		
"	"	"	"	"	"	1-5-93	8.5.93		7	444	"	"	"	Tests made in 1893
"	"	"	"	"	"	"	29.5.93		28	541	"	"	"	
3	Wouldham Cement Co per S.S. "Navarino" on 26-12-90	one	1 1/16	- 5½	nil	30.4.91	6.5.91		7	468	11	16	99½	Original test 1891
"	"	"	"	"	"	"	29.5.91		28	617	"	"	"	
"	"	"	"	"	"	19-4-93	25.4.93		7	439				Test made in 1893
"	"	"	"	"	"	"	17-5-91		28	526				
3	Tunnel Cement Co per S.S. "Golconda" on 7-5-92	one	1⅛	- 5½	nil	25.5.92	1.6.92		7	511	17	8	109	Original test in 1892
"	"	"	"	"	"	"	21.6.92		28	666	"	"	"	
"	"	"	"	"	"	20-4-93	27-4-93		7	512	"	"	"	Tests made in 1893
"	"	"	"	"	"	"	18-5-93		28	676	"	"	"	
"	Tunnel Cement Co per S.S. "Deepdale" on 9-5-92	one	1⅛	- 5½	nil	25.5.92	1-6-92		7	534	17	8	107½	Original test in 1892
"	"	"	"	"	"	"	22.6.92		28	682	"	"	"	
"	"	"	"	"	"	21.4.93	28.4.93		7	605	"	"	"	

2973/10

AUSTEN 13 SEP 93

MADRAS HARBOUR WORKS.

TESTS OF PORTLAND CEMENT.

Number of Briquettes	Name of Manufacturer or of Cement, and date of delivery on the Works.	Size of Briquettes	Quantity of Water used in gauging.	Quantity of Dry Cement in each Briquette.	Quantity of Sand in each Briquette in measures of Cement.	Date of Gauging.	Date of Breaking.	Age. Months.	Age. Days.	Tensile Strain,	Residue of Dry Cement on Sieves.	Weight of Dry Cement per Struck	REMARKS.

CURRENT No. 760

Harbour Trust Board Office,

MADRAS, 13th September 1893.

2533/11

No. 1801

From Ware Austin Esquire I.C.S

CHAIRMAN, HARBOUR TRUST BOARD,
MADRAS.

To The Honble Mr J.T. Price I.C.S

Chief Secretary to Government,
Marine Department.

SIR,

C No 728 transferred to P.W.D

In continuation of my No 1688 dated 4th instant, forwarding Chemical Analyses of 9 samples of cement, I have the honour to forward the Engineer's tests of the cement; and to request if Government thinks it necessary that these tests may also be forwarded for the information of Sir Alexander Rendel.

I have the honour to be
Sir
Your obedient Servant

Ag Secretary

Ware Austin
Chairman

P. W. CURRENT No. 8092

MARINE DEPARTMENT.

FROM

THE CHAIRMAN,
HARBOUR TRUST BOARD,
MADRAS.

To

THE CHIEF SECRETARY TO GOVERNMENT,
Marine Department.

DATED 13th

DESPATCHED 14th Sept: 1893.

RECEIVED — UNDER SECY TO GOVT. 15 SEP 93 PUBLIC WORKS DEPT

ENCLOSURE —

Recd 16th

No. 1601

Repd: 22-9-93

SUBJECT.

Submitting the Board's Engineer's Report on Portland Cement.

Recd 18-9

Transferred

W. E

No. 1646

Transferred to the Public Works Department in continuation of Endorsement 9th September, 1893, No. 1603.

Assistant Secretary.

Ootacamund
18th September 1893

To

The Public Works Department

× Returned 18/9/93

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

From the Chairman, Harbour Trust Board, No. 1688 dated 4th Septr. 1893.

" Marine dept., No. 1603 dated 9th Septr. 18

Do — 1646 — " — 18 — " —

Ordered that the chemical Examiner's analyses of the cement in stock at the Madras Harbour Works be forwarded to the Home Govt.

Chairman Re. H.T. Board
Marine Dept

DESPATCHED 12 OCT. 93

To

The Right Hon'ble the Secy of State for India

My Lord,

With reference to your Lordsh.

40—800-23-8-93.

Lordship's Despatch No. 2
(Public Works) dated 23rd February 1893, we have the honour, at the request of the Madras Harbour Trust Board, to forward for the information of Sir A. Rendel copy of the chemical examiner's Analyses of 9 samples of cement in stock at the Madras Harbour works. also the Harbour Works Engineer's tests of the cements.

Chemical Analyses of the cement used for the Madras Harbour works

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Dec 19 1893

RECEIVED 12 DEC 93

C/No. 8092

Govt. of {1893} Madras.
PUBLIC WORKS.

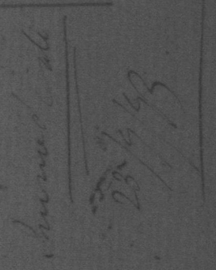
When numbered please
send to P. C. C.

26.11.93

Dated

Rec'd. -

Encl.



G.O., 11th Oct 1893, No. 2573-W

8
2573-W

Cement

=

the Chemical Exam.
analyses and the
Harbour Works Engineer
tests of the — in
stock at the Madras
Harbour-Works
ordered to be
forwarded to the
Govt.

- 2° -

Forwarding &c

the information
of Sir A. Mendel
copy of the Chemical
Examiner's analyses
and the Harbour
Works Engineer's
tests of the —
in stock at the
Madras Harbour
Works.

2° 11/10.