(1) பக்கங்களின் எண்ணிக்கை 56

(2) புதுக்கித் திருப்பிய நாள் 23.7.88

(3) ஆதாரங்குறிப்பவர் சருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

நிதி (சட்டம்) துறை

அரசாணை எண். 2241-42 W. அச்சகம்
மு. கோப்புத் தாள் எண். பலவகை

நாள் : 23.7.1988 19 .

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

ஆவண. கா-1—18,000—15-6-87.

1
2241-2242

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following papers :—

From Colonel H. M. VIBART, R.E., Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department (through the Examiner, Public Works Accounts), dated Bangalore, 8th June 1888, No. 993.

With reference to G.O. No. 1257 W., dated 27th April 1888, I have the honor to forward a special indent, in triplicate, on the Home Government for a steam road roller, ten tons, with stone-breaker combined, required by the Superintending Engineer, IV Circle, for use in the Nilgiri Division.

From the Examiner, Public Works Accounts, dated 18th June 1888, No. 155 W.

No. 2322 C.

Referred back to the Superintending Engineer, V Circle, for favor of information whether the General Superintendent, Public Works Stores, has reason to believe that steam-rollers are now manufactured with stone-breakers attached.

(By Order.)

(Signed) W. L. C. BADDELEY, Captain, R.E.,
Dy. Chief Engineer, P.W.D.

22nd June 1888.

From Colonel H. M. VIBART, R.E., Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department, dated Chepâk, 30th June 1888, No. 1397.

In returning your endorsement No. 2322 C., dated 22nd June 1888, I have the honor to state that the General Superintendent, Public Works Stores, reports as follows :—

"I have some recollection of seeing, whilst in England some years ago, a steam-roller employed for driving a stone-breaker. I cannot find any estimate for the combined steam-roller and stone-breaker in our office catalogue, which, I may here remark, is very incomplete. I do not suppose there will be any difficulty in procuring a stone-breaking machine that can be attached to any description of engine or steam-roller by the most ordinary gearing."

No. 1881.

Returned with the necessary certificate.

(Signed) C. H. P. CHRISTIE, Major, R.E.,
Examiner, Public Works Accounts.

13th July 1888.

GENERAL.
ACCOUNT.

Govt. of {1888} Madras.

PUBLIC WORKS.

Dated July, 23rd.

Read. *Encl.*

G.O., 23rd July 1888, No. 2241 W.

JULY.

Indent

Ordered that the — for a steam-roller combined, if possible, with a stone-breaker for use on the Coonoor ghât in the Madras Presidency, be forwarded to the Home Government for compliance.

3/2241+2242

PUBLIC WORKS DEPARTMENT.

General Account.

LETTER—from

COLONEL J. O. HASTED, R.E.,
Secretary to the Government of Madras,
Public Works Department,

To

THE DIRECTOR-GENERAL OF STORES,
INDIA OFFICE, LONDON.

SIR,

I am directed to forward, for favor of compliance, an indent for a steam-roller combined, if possible, with a stone-breaker for use on the Coonoor ghât in this Presidency.

2. A certificate from the Examiner, Public Works Accounts, showing that the requisite funds have been provided, will be found printed with the Proceedings of Government herewith forwarded.

I have the honor to be,
Sir,
Your most obedient servant,

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

OOTACAMUND,
23rd July 1888.

ENDORSEMENT—dated 23rd July 1888, No. $\frac{2242\ W.}{A}$, Public Works.

Copy of the above, with copy of the indent, forwarded to the Government of India for information.

Colonel, R.E.,
Secretary to Government, P.W.D.

Exd. F. R. Bantleman.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of {1888} Madras.

PUBLIC WORKS.

Dated July, 23rd.

Recd. *Encl.*

23rd July 1888, Nos. 2242, 2242-A W.

JULY.

Indent

Forwarding copy of letter to the Director-General of Stores with copy of an — for a steam-roller combined, if possible, with a stone-breaker for use on the Coonoor ghât in the Madras Presidency.

S/2241x2242

PUBLIC WORKS DEPARTMENT.

General Account.

LETTER—from

COLONEL J. O. HASTED, R.E.,
Secretary to the Government of Madras,
Public Works Department,

To

THE DIRECTOR-GENERAL OF STORES,
INDIA OFFICE, LONDON.

SIR,

I am directed to forward, for favor of compliance, an indent for a steam-roller combined, if possible, with a stone-breaker for use on the Coonoor ghât in this Presidency.

2. A certificate from the Examiner, Public Works Accounts, showing that the requisite funds have been provided, will be found printed with the Proceedings of Government herewith forwarded.

I have the honor to be,
Sir,
Your most obedient servant,

Colonel, R.E.,
Secretary to Government, P.W.D.

OOTACAMUND,
23rd July 1888.

Exd. F. R. Bantleman.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of (1888) Madras.

PUBLIC WORKS.

Dated July, 23rd.

Recd. *Encl.*

23rd July 1888, No. 2242 W.

JULY.

Indent

Forwarding, for compliance, an — for a steam-roller combined, if possible, with a stone-breaker for use on the Coonoor ghât in the Madras Presidency.

No. 125 / W dy 27-4-88

1888.

P. W. DEPARTMENT.

Current No. 5865 7/24824

From

The Examiner
P.W. Accts.

Enclos — 1

No. 155 W

Dated 18th June 1888 x Enc triplicate

Received 19 — do —

Subject.

Forwarding with remarks letter from S.E.V circle submitting a Special Indent on the Home Govt for a Steam road roller - ten ton - with Stone breaker Continued reg^d by the S.E. IV for use in the Nilgiri Division x

Disposal.

No. 2322 C Dated 22 June 1888

Referred back to the S.E.V circle for favour of information whether the Genl. Supt. P.W. Stores has reason to believe that steam rollers are now manufactured with a

stone breakers attached.

(By order)

(sd) W. L. C. Baddeley
Capt R. E.
Dy. Chief Engr P. W. D.

I
13 VII 09

Desbd
27/6

ORM.—Abstract.

0215-9

CE 0115-7 8/22410/22a

Please see that
indents are signed by
W. Engr according
done to Maidan.
The papers are
herewith going to Mr.
DPWD.E.

6459

9
2241824

B

Petition for
writ relative to
grants made
Confirmed
Issued Sept 1850

Dec
4 F. 56

S Ans

Duplicate Statement
of documents No 1750
have been obtained
for the Petitioner
under Dept of State
which relate to
Annexation of No 7750
Ordered to be

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
		Rs.		Rs.	Rs.
	Erecting of Steam roller for Pattan (including work)				
1	One improved 10 Ton Steam roller complete by Aveling and Porter including transit to Nettarpathan			7500	
	Fitting & Erecting			250	
	F. Beatty — C.C.W.E. Supg. Engineer, Patan				
				Grand Total of Estimate	7750

Station Ootacamund
Dated 14th April 1888

Executive Engineer.

10
22/10242

Reference to Madras P. W. D. Code.

Paras. 921, 932, &c., 949, 952–955, 962–964.

SUPERINTENDING ENGINEER'S OFFICE
13/227/11
13 APR.38
P. W. D.
FOURTH CIRCLE

P. W. D. Form No. M 207.

Circle— Fourth

Division— Nilgiri

ESTIMATE FORM.—Abstract.

(To accompany the Detailed Estimate No. 29 of 1888-89 for *

Purchase of a Steam roller for use on the Kullar-Gudalur road.

* Here enter the name and description of work in full.

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
		Rs.		Rs.	Rs.
	Purchase of a Steam roller for use on the Kullar-Gudalur Road.				
1	8 H.P. improved 10 Ton Steam roller complete by Aveling & Porter including transit to Nettapollium			7500	
	Fitting & Contingencies			250	
					11/227/1242

Grand Total of Estimate ... 7750

Station Ootacamund

Dated 16th April 1888.

L. V. Beatty Lt. R.E.
Asstt. Engineer in charge

Nilgiri Tuph

Sd/ W. B. de Winton
Executive Engineer.

REFERENCE TO MADRAS P. W. D. CODE.

PARAS. 921, 932, &c., 949, 952—955, 962—964.

P. W. D. Form No. M 207.

SUPDG. ENGINEER'S OFFICE
No. 2/2277/87
16 APR. 88
P. W. D.
FOURTH CIRCLE

CIRCLE—

DIVISION—

ESTIMATE FORM.—Abstract.

(To accompany the Detailed Estimate No. 29 of 1888-89 for *

* Here enter the name and description of work in full.

Estimate No. _____ of 1888-89.

12
2241d2242

Financial Head— Annual

Budget Head— Works & Plant

Departmental Head— Store Supplies

Main Head—

Sub-Head—

Project of which the work forms part—

Section—

Name of Work— Purchase of a Steam roller for use on the Trichinopoly-Pudukottai road.

Amount of Estimate— Rs 7:150.

To be carried out by—

N.B.—This space should not be written on as it is required for filing.

REFERENCES.

REFERENCE TO MADRAS P. W. D. CODE.

PARAS. 1074 TO 1076.

P. W. D. Form No. M 203.

OFFICE ENGINEER'S OFFICE No. — 16 APR 88 FOURTH CIRCLE P. W. D.

Circle.

DIVISION—

TALUK—

ESTIMATE FORM—Wrapper or Outer-sheet.

Estimate for

Amount of Estimate, Rs. 1150

Detailed Estimate, No. 39 of 1888-89

* Here enter nature and description of work in full.

Comparative Statement of Cost of Steam and Bullock Roller.

Description of Roller.	Weight	Prime Cost	Daily Cost: Labor and fireman	Daily Cost: Depreciation: Steam Roller 5 per cent	Daily Cost: Depreciation: Bullock roller 4 per cent	Daily Cost: Depreciation: Bullocks 15 per cent	Daily Cost: Total daily Cost	Daily work: L	B	D	Cubic Contents	Rate per Kg feet of Road Consolidation	Rate per C ft of Road Consolidation
								of metal Consolidated					
	Tons	Rs	Rs	Rs	Rs	Rs	Rs	Feet	Feet	Feet	C. ft.		
Rowling 8 Improved Steam Roller	10	7500	5	1	"	"	6	1760	12	½	3960	2 pies	⅓ pie
Bullock Roller.													
Roller	2	370	4½	"	0-0-8	-	4¾	107½	12	½	322	8 pies	2.6 pie
4 pairs Bullocks	-	480		"	"	0-3-2							

13/2291/84

Nilgiri Division Office
Ootacamund
16th April 1888

Executive Engineer

EXECUTIVE ENGINEER'S OFFICE
13/22 Ph
16 APR. 88
P. W. D.
SOUTH CIRCLE

Ofc 71
A.F.

14
2261/2262

Memorandum.

In reply to endorsement No 2580 dated 5th December 1887, received from the Executive Engineer Nilgiri Division on the subject of a Steam Roller, the undersigned has the honor to inform him that he enquired from Mr Mackenzie, one of the Contractors employed on the Calicut Wayitri road about the Steam Roller used by him. Mr Mackenzie said it Costs about Rs 5 per day to work the machine fire wood costing about one rupee per 1000 lbs. Further that it is difficult to manage the machine when going down hill, and that unless the man in charge is very steady and can keep his head under difficulties the Roller is apt to run away or become otherwise unmanageable. In short Mr Mackenzie Considered it could not be managed at all except by a steady and reliable man.

&c

2 As regards work, the machine is very useful when a comparatively long piece of road requires to be metalled but it is not very suitable when repairs to the road surface require to be done here and there. Mr Mackenzie's is a ten ton roller and he said it rolled and consolidated about two furlongs of the surface of the road each day on the Jaunacheri ghaut the metal being 6 inches thick.

3. In the absence of further information from the Executive Engineer regarding the cost time &c now expended by the Rollers drawn by bullocks the undersigned is not disposed to recommend that a Steam roller should be provided for the Nilgiri Division. He believes a Steam Roller would be expensive to work, and probably give a great deal of trouble in the way of repairs and management while working on inclines.

Coimbatore
22nd February 1888

Signed/ J. Wallerstein
Offg. Supdg. Engineer
II Circle
(True copy)
R. Beatty Lieut. R.E.
Superintending Engineer II Circle

dll

N.B.—*Please quote the number and date of this letter in future communication on this subject.*

No. 181 P. W. D. 15/224/1242

Nilgiri Division Office,
Station. Ootacamund the 16th April 1888.

Enclosures. X3
1 Comparative statement
1 abstract estimate
1 do. duplicate

From
W. B. de Mouton Esquire
Executive Engineer, Nilgiri Division,
Ootacamund,

To
The Superintending Engineer,
Fourth Circle,
Coimbatore.

Sir,

With reference to your No. 71 of 23rd February 1888, I have the honor to forward herewith a statement showing the comparative cost of a steam and bullock roller on the Coonoor ghaut by which you will perceive that the advantage is very much in favor of the former.

2. For the daily cost of the steam roller I have taken the figures supplied by you in the above memo, as I can find get firewood for about the

same money.

3. You will see that I have taken only half the distance mentioned by Mr. Martin in para 2 of the memo, as the daily work of a steam roller because 2 furlongs seemed to me to be excessive, in which opinion I was supported by Mr Allen, Asstt Engineer, when I met him last month at Chiladi.

4. That officer also stated that the daily cost was nearer Rs 8 than Rs 5, but even if this additional cost is taken into account the advantage is still very greatly in favor of the steam roller.

5. I have little doubt myself that a steam roller on the Lonavar ghaut will be more economical in the long run than a bullock roller and the work it does is incomparably superior. It will have long lengths of road to work on, because I hope by degrees

to re-metal the whole ghaut.

6. The only difficulty is a driver, and I think we ought to be able to obtain a skilled from one of the Railway companies, for Rs 150 per month, who would be fully competent to take charge of the roller.

7. I have therefore, the honor to submit an estimate for the latest type of steam roller obtained in Bombay and delivered at Kalyan, amounting to Rs 7750 and beg that you will forward it for the sanction of Government.

I have the honor to be
Sir,
Your most obedient servant
J Burke Smith
Executive Engineer

16
22 Jan 20

SUPT. ENGINEER'S OFFICE
NO. 227h
16 APR 88
P. W. D.
FOURTH CIRCLE

17

No 1143
Ed

From

THE EXECUTIVE ENGINEER,
NILGIRI DIVISION,

To

THE SUPERINTENDING ENGINEER,
4TH CIRCLE.

Dated 14th April 1888.
Despatched 16th
Received

No. 681

Enclosures. Nil 3.

Subject.

Forwarding a comparative statement of Corry Steam & Buccleuch roller for information with an Estimate for Rs. 7,750 for purchasing the Steam Roller.

Submitted to the Chief Engineer P. W. Department with a request that he will be good enough to obtain the sanction of Government to the purchase of a Steam Roller for use on the Mullar Gudalur Road.

From the enquiry made and information obtained from the works on the Tanjore Short, it appears there would be great economy by the use of a Steam Roller.

Copy of the Memo of the Ag. Supt. Engineer No. 71 N.I. of 23rd February 1888 is also forwarded for information.

L. Beatty - Col. R.E.
Supt. Engineer, IV Circle.
Coimbatore
16th April 1888

On the back

From

The Supt. Engineer,
Fourth Circle

Dated 16th April 1888

No: 143
Rd

Steam Roller

Requesting to obtain sanction of Government to the purchase of a — for use on Kullar Ghadaluc Road.

Public Works Department.

18
2241/1242

Current No. 3594
Letter No. 143 E.R.
Dated 16th April 1888
From the Supt. Engr. IV Circle

The Steam roller should be obtained through the Indent Store Dept. The Indent should contain information regarding the ordinary standards on which the roller will have to work.

Asst
W. G. 88

Dept. order sanctioning Steam Supply, accordingly

NOTE OF REMARKS.

The estimate under review amounting to Rs 7,750 provides for the purchase of a Steam Roller required for use on the Kullar Ghadaluc Road in the Shikarpur District.

The Sub Dy. Supt. Engineer, Mr. Jhatial has submitted the following particulars of the Roller on the Steep Gradient of Coal Formation and difficulty of transportation from Sukkur down the

But from information obtained from the Works in the Tinnevelly District objection which and it is known that a claim will be made to more economical and speedy Works than the ordinary Metal Roads, the Superintending Engineer requests that sanction may be obtained for the purchase of a Steam Roller for the Kallar Ghaut Road -

The Rate cannot be checked on this Estimate

Capt
20/4/88

PUBLIC WORKS DEPARTMENT.

2c/2249

PROCEEDINGS OF THE MADRAS GOVERNMENT

UNDER date the

READ the following

from S.E. IV Circle Ex 14 Dec. 16. 4. 88

The Superintending Engineer of Tinnevelly District requests that sanction may be obtained for the purchase of a Steam Roller for the Kallar Ghaut Road is sanctioned; but the machine should be obtained from England through the India Office. The Superintending Engineer should communicate information regarding the ordinary maximum gradient on which the Roller will have to work

The Secretary

P.W. Stores indent forms
An indent on the Home
for 1. according to, in
Communication with the
Supdg Engr IV Circle

Chem
31.4.88

Supdt
23/4/88

2741
2742
2743

S.E. IV. Circle
S.S. V Circle

Cir

P 1

SUPERINTENDING ENGINEER'S OFFICE,

No. 993. V CIRCLE, MADRAS,
Bangalore 8th June 1888.

From

Colonel H M Vibart RE
SUPERINTENDING ENGINEER,
V CIRCLE.

22/2241/2242

To

THE Chief Engineer
Public Works Department
Thro' the Examiner P.W. Accounts

SIR,

Enclosures.

With reference to G. O. No 1257 W dated 27th April 1888 I have the honor to forward a special Indent in triplicate on the Home Government for a Steam road roller - Ten tons - with stone breaker combined required by the Superintending Engineer fourth circle for use in the Nilgiri Division.

I have the honor to be,
Sir
Your most Obed't Servant

Alexander Vibart Col RE
Supg Engineer V circle

1/117 P.W.S.
28-6-88

1/2885
22-6-88.

No. 155 W dated 8th June 1888

Forwarded to the Secretary to Government P.W.D. with a request that this office may be informed whether an appropriation of funds will be sanctioned in the current year under Provincial Tools and Plant to meet the amount of the Indent.

Major R.E.
Examiner of P.W. Accounts
Madras

Encs: One 29.

EXAMINER
JUN 1883
ENCLOSURES
P. W. ACCOUNTS.

From

THE SUPERINTENDING ENGINEER,

V CIRCLE,

To

THE

Dated
Read. } 188

ENCLOSURES.

No.

1/127/1044
20-6-88

P. W. Dept.
To be returned with reply

No. 2322 C d/22 June 1888

Referred back to the Supdg. Engr. V circle for favour of information whether the Genl. Supdt. P.W. Stores has reason to believe that steam rollers are now manufactured with stone breakers attached.

(By order)

W.E. Baddeley
Capt R.E.
Dy. Chief Engineer P.W.D.

From.

Major C.A.P. Christie R.E.
Examiner of P.W. Accounts
Madras.

7 JUL 1888
ENCLOSURES
P. W. ACCOUNTS

To.

The Secretary to Government
Public Works Departt.

Encs: One

No. 1537 dated 18th June 1888.

Special Indent for a steam road roller in triplicate.

Forwards letter No. 993 dated 8th June/88 from the Superintending Engineer 5th Circle regarding a —

1397

Referred

4

SUPERINTENDING ENGINEER'S OFFICE,
V Circle, Madras,
Chepauk, 30 June 1888.

No. 1397

From Lt Col H.A.H. Cadell R.E. 23/226/1242
SUPERINTENDING ENGINEER, V CIRCLE,

To THE Chief Engineer
P.W. Department.

SIR,

Enclosures.

I have the honour to acknowledge receipt of your endorsement No. 2322 C dated 22nd June 1888, and have the honour to state that the Executive Engineer Stores Superintendent reports as follows.

"I know of no recollection of having enquired whilst in England some years ago for steam rollers employed for pulverising stone for road metal. Estimates for steam rollers are frequently received in connection with stone breakers for use on roads in this country. Office records are very incomplete

"incomplete. I do not suppose
"there will be any difficulty
"in procuring a Stone Break-
"ing machine that can be
"attached to any description
"of Engine or Steam Roller
"by the most ordinary gearing."

I have the honour to be
Sir
Your Most Obedt Servt

Superintending Coll. R.E.
Superin.g Engineer.
F. Hicks.

2.5/22/1222

Assistant Engineer
Commanding Madras.

No. 2322 C/ 22-6-88
" 1257 W. 27-6-88

1888.

P. W. DEPARTMENT.

Current No. 5865 & 6459

From

The Supdtg. Engineer
V circle.

ENCLOS.—

No. 1397
Dated 30th June 1888
Received 3rd July 1888

SUBJECT.

Submitting the report of the General Supdt. P. W. Store on the Steam road roller with stone breaker Combined.

DISPOSAL.

No. 2541 C Dated 5th July 1888

To

C

Please attach the requisite certificate. The cost will be met from the grant to the Nilgiri division under Tools & Plant (2d) W. L. C/B 4-7-88

Jud Mad 6/7

26

No 23220 · 22.6.88
P. No 12574 · 27.6.88

No. 2541 Cd/5 July 1888

To

C

Please attach the requisite certificate

The Cond will be met from the grant to the Nilgiri division under Tools & Plant.

4.7.88

Dew.

To

No. 1881/87 13.7.88
Encl: 5

W.

5

Returned with the necessary certificate

13/7.

From

THE SUPERINTENDING ENGINEER,

V Circle,

To

THE Chief Engineer
P.W. Department

EXAMINED
DEC 1881
ENCLOSURES
P. W. OFFICE

Dated 30 June 1888.
Reed.

ENCLOSURES.

No. 1891.

Combined Steam Roller and Mowing Machine.

Forwarded the Report of Genl Superintendent P.W. Stores & Workshops on the —

Re Indent can be dealt with as framed.

To

6.7.88

T. No 2241 W.

Encl
Recd

22/2241/2241

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 5th July 1888.

READ the following

From the S.E. V Circle No. 993 dated 8th June/88
the Examiner P.W.A. No. 1550 dated 18th June/88
Memo to the S.E. V Circle No 23220 dated 22nd June/88
From the S.E. V Circle No 1397 dated 30th June/88
the Examiner P.W.A. No 1881 dated 13th July/88.

Ordered that the indent be forwarded to the Home Government for compliance

S.E. IV Circle
" V Circle
Examiner P.W.A.

No. 2541 W dated 5.7.88

To

The Director General of Stores
India office
London.

Sir

I am directed to forward for favor of compliance, an indent for a steam roller, ~~for~~ Combined if possible with a Stone breaker, for use on the Coonoor Ghat ~~ro~~

in this Presidency, ~~as in Bombay~~

~~has already provided with a~~
~~strong breakwater.~~

2. A certificate from the Examiner P.W. accounts showing that the requisite funds have been provided, will be found printed with the Proceedings of Government herewith forwarded.

I have etc.

Jell
18/7/88

H.E. No 2242 dated 23rd July 1888

Copy Note above, with copy of Enclosure, forwarded to the Govt of India for information.

Secy
27/7/88

D
27/7

Cor

P. 1 & 12.7.88 Bus 11/7 Hm 19.7 Hm 24.7.88

Fwd No 2240 W

Indent

Forwarding copy of letter
dated 22nd July 1911 with
copy of an — for a steam roller combined
if possible with a stone-
breaker for use on the
Coimbatore Road in the Madras
Presidency

Indent

Forwarding an — for a steam
roller combined if possible
with a stone-breaker for
use on the Coimbatore Road in
the Madras Presidency.

22nd July 1911 2241 W
2242
Indent 21424
A

Received this day — for a
steam roller combined if
possible with a stone-breaker
for use on the Coimbatore Road
in the Madras Presidency
be forwarded to the Secretary
of State for information for compliance.

For Indent

Forwarding for compliance
an — for a steam roller
combined if possible with
a stone-breaker for use on
the Coimbatore Road in the
Madras Presidency.

P/ 2317 Stat 2241