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No. 2206

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THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

[Handwritten initials]

Report No. 2180 No. in Register Book 3544

GEORGE M. KARL

S.S. *"Scott Misener"*

Makers of Engines *Swan, Hunter & W.R. Rd.*

Works No. 1290

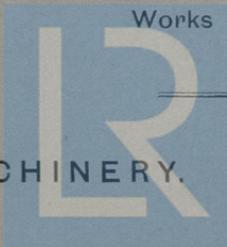
Makers of Main Boilers *Swan, Hunter & W.R. Rd.*

Works No. 1290

Makers of Donkey Boiler *None fitted.*

Works No. ✓ 2020

MACHINERY.



Lloyd's Register
Foundation

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No.

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. No. in Register Book

Received at Head Office *22nd August 1928*

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ^{Single Triple} ^{Wain Quadruple} Screw *Stained* "SCOTT MISENER"

Official No. *149475* Port of Registry *Newcastle*

Registered Owners *Wain Hunter & Wigham Richardson*

Engines Built by *Swan Hunter & W.R. Old*

at *Walker-on-Tyne*

Main Boilers Built by *Swan Hunter & W.R. Old*

at *Walker-on-Tyne*

Donkey " " "

at

Date of Completion *16th July 1928*

First Visit *27-9-27*

Last Visit *16-7-28*

Total Visits *48*



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RECIPROCATING ENGINES.

Works No. *1590* No. of Sets *One* Description

Same as 1536 - 1558.
3/8 Kingdoc Cartier 100

No. of Cylinders each Engine *Three* No. of Cranks *Three*
 Diars of Cylinders *15" 25" 440"* Stroke *33"*

Cubic feet in each L.P. Cylinder *24*

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.?

" " " each Receiver ?

Type of H.P. Valves,

1st I.P. "

2nd I.P.,

L.P. "

" Valve Gear

" Condenser

Cooling Surface sq. ft.

Diameter of Piston Rods (plain part)

Screwed part (bottom of thread)

Material "

Diar. of Connecting Rods (smallest part)

Material

" Crosshead Gudgeons

Length of Bearing

Material

No. of Crosshead Bolts (each)

Diar. over Thrd.

Thrds. per inch

Material

" Crank Pin " " " "

" Main Bearings

Lengths

" Bolts in each

Diar. over Thread

Threads per inch

Material

" Holding Down Bolts, each Engine

Diar.

No. of Metal Chocks

Are the Engines bolted to the Tank Top or to a Built Seat ?

Are the Bolts tapped through the Tank Top and fitted with Nuts Inside ?

If not, how are they fitted ?

Connecting Rods, Forged by *John Spencer & Sons*

Piston " "

Crossheads

Connecting Rods, Finished by *Swan Hunter*

Piston " "

Crossheads, "

Date of Harbour Trial *14th July 1928.*" Trial Trip *16th July 1928.*Trials run at *off R. Tyne.*Were the Engines tested to full power under Sea-going conditions ? *Yes.*

If so, what was the I.H.P.?

*706**Yes.*Revs. per min. *88 1/2*Pressure in 1st ^{*HP*} Receiver, *169* lbs., 2nd I.P., *52* lbs., L.P., *9* lbs., Vacuum, *26* ins.Speed on Trial *8.8*

If the Conditions on Trial were such that full power records were not obtained give the following estimated

data:— Builders' estimated I.H.P. Revs. per min. Estimated Speed 

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TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets Capacity of each

Type of Turbines employed

Description of Generators

Are the Propeller Shafts driven direct by the Turbines or through Gearing?

Is Single or Double Reduction gear employed?

No. of Motors driving Propeller Shafting

Are the Propeller Shafts driven direct by the Motors or through Gearing?

Is Single or Double Reduction Gear employed?

Description of Motors

Diar. of 1st Reduction Pinion } Width Pitch of Teeth
 " 1st " Wheel }

Estimated Pressure per lineal inch

Diar. of 2nd Reduction Pinion } Width Pitch of Teeth
 " 2nd " Wheel }

Estimated Pressure per lineal inch

Revs. per min. of Generators at Full Power

" " Motors "

" " 1st Reduction Shaft

" " 2nd "

" " Propellers at Full Power

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

Speed on Trial Knots. Propeller Revs. per min. S.H.P.

Makers of Turbines

Generators

Motors

Reduction Gears

Turbine Spindles forged by

Wheels forged or cast by

Reduction Gear Shafts forged by

Wheels forged or cast by

DESCRIPTION OF INSTALLATION.

Type of Thrust Blocks

No. of Rings

Diar. of Thrust Blocks at bottom of Collars

No. of Collars

At Air Couplings

Forward Coupling

Diar. of Intermediate Shafting by Hole

Actual

No. of Bolts each Coupling

Diar. at Mid Length

Diar. of Pinion Circle

Diar. of Propeller Shafts by Hole

Actual

Are Propeller Shafts fitted with Couplings Near Users?

Diar. over Users

Of what Material are the After Bearings composed?

Are the After Bearings composed of?

Are the Propeller Shafts fitted with Couplings Near Users?

Diar. over Users

Of what Material are the After Bearings composed?

Are the After Bearings composed of?

Are the Propeller Shafts fitted with Couplings Near Users?

Diar. over Users

Of what Material are the After Bearings composed?

Are the After Bearings composed of?



SHAFTING.

(Kingdoe) (Cartendoe)
 Same as 1236-58

Are the Crank Shafts Built or Solid?

No. of Lengths in each

One

Angle of Cranks

120°

Diar. by Rule

8.76

Actual

8³/₈

In Way of Webs

8²/₈

" of Crank Pins

8³/₈

Length between Webs

8¹/₄"

Greatest Width of Crank Webs

Thickness

Least

Diar. of Keys in Crank Webs

Length

" Dowels in Crank Pins

Length

Screwed or Plain

No. of Bolts each Coupling

Diar. at Mid Length

Diar. of Pitch Circle

Greatest Distance from Edge of Main Bearing to Crank Web

Type of Thrust Blocks

Multi-Collar

horse shoe

No. " Rings

Four.

Diar. of Thrust Shafts at bottom of Collars

8³/₈"

No. of Collars

4

" " Forward Coupling

8³/₈"

At Aft Coupling

8³/₈"

Diar. of Intermediate Shafting by Rule

7.858

Actual

No. of Lengths

No. of Bolts, each Coupling

Diar. at Mid Length

Diar. of Pitch Circle

Diar. of Propeller Shafts by Rule

8.878

Actual

9¹/₁₆ to 9¹/₈"

At Couplings

9¹/₈"

Are Propeller Shafts fitted with Continuous Brass Liners?

Diar. over Liners

Length of After Bearings

Of what Material are the After Bearings composed?

Are Means provided for lubricating the After Bearings with Oil?

" " to prevent Sea Water entering the Stern Tubes?

If so, what Type is adopted?

SKETCH OF CRANK SHAFT.

Same as 5/8 Kingdoe 1236



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No. of Blades each Propeller *Four* Fitted or Solid? *Fitted*
 Material of Blades *Cast Iron* Boss *Cast Iron*
 Diam. of Propellers *12'-3"* Pitch *10'-9"* Surface (each *48* S. ft.)
 Coefficient of Displacement of Vessel at $\frac{3}{4}$ Moulded Depth

Crank Shafts Forged by *J. Spencer* Material *I. S.*
 " Pins " " "
 " Webs " *Steel Co. of Scotland* " *R. Steel.*
 Thrust Shafts " *J. Spencer* " *I. S.*
 Intermed. " " " "
 Propeller " " " "
 Crank " Finished by *Swan Hunter*
 Thrust " " "
 Intermed. " " "
 Propeller " " "

STAMP MARKS ON SHAFTS.

Crank shaft
Thrust shaft
Propeller shaft
Piston & Coum rods
ECC & slide rods.

<i>SC</i>
<i>10488</i>
<i>J. L.</i>
<i>3. 4. 28.</i>

SKETCH OF PROPELLER SHAFT.

Same as 1236-7558.
of Kingdoe



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BOILERS.

Works No. 1290.
 No. of Boilers Two Type *Same as 1236 & ~~1258~~* ("*Kingdoe*")
 Single or Double-ended *Single*
 No. of Furnaces in each *Two*
 Type of Furnaces *Seighton*
 Date when Plan approved *1-11-76*
 Approved Working Pressure *180 lbs.*
 Hydraulic Test Pressure *300*
 Date of Hydraulic Test *29th May 1908.*
 " when Safety Valves set *185 lbs.*
 Pressure at which Valves were set *185 lbs.*
 Date of Accumulation Test *none taken*
 Maximum Pressure under Accumulation Test ✓
 System of Draught *Howdens forced.*
 Can Boilers be worked separately? *Yes.*
 Makers of Plates *Steel Co. of Scotland.*
 " Stay Bars
 " Rivets *Rivet Ball Plant Co.*
 " Furnaces *Broomside Blev. Wks. Motherwell*
 Greatest Internal Diam. of Boilers *10'-1³/₈'*
 " " Length " *10'-9¹⁵/₁₆'*
 Square Feet of Heating Surface each Boiler *1068⁴/₁₆*
 " " Grate " " *32⁴/₁₆*
 No. of Safety Valves each Boiler *2* Rule Diam. Actual *2" (high left)*
 Are the Safety Valves fitted with Easing Gear? *Yes*
 No. of Pressure Gauges, each Boiler *one* No. of Water Gauges *one*
 " Test Cocks " *3.* " Salinometer Cocks *one*



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Are the Water Gauges fitted direct to the Boiler Shells or mounted on Pillars?

*Supporters
by pipes*

Are the Water Gauge Pillars fitted direct to the Boiler Shells or connected by Pipes?

Are these Pipes connected to Boilers by Cocks or Valves?

*Cocks
Back end plate*

Are Blow-off Cocks or Valves fitted on Boiler Shells?

No. of Strakes of Shell Plating in each Boiler

Plates in each Strake

Thickness of Shell Plates Approved

in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

Are the Butt Straps Single or Double?

Are the Double Butt Straps of equal width?

Thickness of outside Butt Straps

inside

Are Longitudinal Seams Hand or Machine Riveted?

Are they Single, Double, or Treble Riveted?

No. of Rivets in a Pitch

Diar. of Rivet Holes Pitch

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes Pitch

No. of Rows of Rivets in Front End Circumferential Seams

Are these Seams Hand or Machine riveted?

Diar. of Rivet Holes Pitch

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes Pitch

Size of Manholes in Shell

Dimensions of Compensating Rings



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Thickness of End Plates in Steam Space Approved

Are the Water Space End Plates in Boilers

Pitch of Steam Space Stays

Diar. " " " " Approved Threads per Inch

No. of Stays of Shell Plates in Steam Space

Material of " " "

How are Stays Secured?

Diar. and Thickness of Loose Washers on End Plates

" " " " Riveted " "

Width " " Doubling Strips "

Thickness of Middle Back End Plates Approved

" " " " " in Boilers

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at " " " "

Diar. of Stays Approved Threads per Inch

" " " " in Boilers "

Material "

Are Stays fitted with Nuts outside?

Thickness of Back End Plates at Bottom Approved

" " " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

Thickness of Doublings in " "

Thickness of Front End Plates at Bottom Approved

" " " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces

Inspection by proper locks back end plate



Diar. of Stays Approved Threads per Inch

" " in Boilers

Material "

Thickness of Front Tube Plates Approved

" " " " in Boilers

Pitch of Stay Tubes at Spaces between Stacks of Tubes

Thickness of Doublings in " " "

" Stay Tubes at " " "

Are Stay Tubes fitted with Nuts at Front End?

Thickness of Back Tube Plates Approved

" " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

" Plain "

Thickness of Stay Tubes

" Plain "

External Diar. of Tubes

Material "

Thickness of Furnace Plates Approved

" " " in Boilers

Smallest outside Diar. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of " " Tops Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Tops

Threads per Inch

Diar. of Screwed Stays Approved

" " in Boilers

Material "

Thickness of Combustion Chamber Backs Approved

" " in Boilers

Pitch of Screwed Stays in C.C. Backs

Diar. " Approved Threads per Inch

" " in Boilers

Material "

Thickness of Combustion Chamber Backs Approved

" " in Boilers

Pitch of Screwed Stays in C.C. Backs

Diar. " Approved Threads per Inch

" " in Boilers

Material "

Are all Screwed Stays fitted with Nuts inside C.C.?

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber

Centre " "

Depth and Thickness of Girders

Material of Girders

No. of Stays in each

No. of Stays in each

Pitch of Lower Manholes



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Diar. of Screwed Stays Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

Pitch of Screwed Stays in C.O. Sides

Diar. " " Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs Approved

" " " " in Boilers

Pitch of Screwed Stays in C.O. Backs

Diar. " " Approved Threads per Inch

" " " in Boilers

Material " "

Are all Screwed Stays fitted with Nuts inside C.O.?

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber

" " " Centre "

Depth and Thickness of Girders

Material of Girders

No. of Stays in each

No. of Tubes, each Boiler

Size of Lower Manholes

VERTICAL DONKEY BOILERS

No. of Boilers Type Height Greatest Int. Diam. Height of Boiler Crown above Fire Grate Are Boiler Crowns Flat or Dished? Internal Radius of Dished Ends Description of seams in boiler crowns Diam. of Rivet Hoops Width of Overlap Height of Firebox Crown above Fire Grate Are Firebox Crowns Flat or Dished? External Radius of Dished Crowns No. of Crown stays Material Diam. Thickness of Plates External Diam. of Firebox at Top No. of Water Tubes Size Diam. Material of Water Tubes Size of Manholes in Shell Dimensions of Compensating Ring Heating surface each Boiler Grate surface

SUPERHEATERS

Description of superheaters Where situated? Which boilers are connected to superheaters? Can superheaters be shut off while boilers are working? No. of tubes, tubes on each boiler No. of tubes, tubes with heating coils Date when coils valves set Pressure on valves



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VERTICAL DONKEY BOILERS.

No. of Boilers	Type		
Greatest Int. Diar.		Height	
Height of Boiler Crown above Fire Grate			
Are Boiler Crowns Flat or Dished?			
Internal Radius of Dished Ends		Thickness of Plates	
Description of Seams in Boiler Crowns			
Diar. of Rivet Holes	Pitch	Width of Overlap	
Height of Firebox Crowns above Fire Grate			
Are Firebox Crowns Flat or Dished?			
External Radius of Dished Crowns		Thickness of Plates	
No. of Crown Stays	Diar.	Material	
External Diar. of Firebox at Top	Bottom	Thickness of Plates	
No. of Water Tubes	Ext. Diar.	Thickness	
Material of Water Tubes			
Size of Manhole in Shell			
Dimensions of Compensating Ring			
Heating Surface, each Boiler		Grate Surface	

SUPERHEATERS.

Description of Superheaters	
Where situated?	
Which Boilers are connected to Superheaters?	
Can Superheaters be shut off while Boilers are working?	
No. of Safety Valves on each Superheater	Diar.
Are " " fitted with Easing Gear?	
Date of Hydraulic Test	Test Pressure
Date when Safety Valves set	Pressure on Valves

MAIN STEAM PIPES.

No. of Lengths	
Material	
Brand, Weight or Diameter	
Internal Diar.	
Thickness	
How are Joints secured?	
Date of Hydraulic Test	
Test Pressure	
No. of Lengths	
Material	
Brand, Weight or Diameter	
Internal Diar.	
Thickness	
How are Joints secured?	
Date of Hydraulic Test	
Test Pressure	
No. of Lengths	
Material	
Brand, Weight or Diameter	
Internal Diar.	
Thickness	
How are Joints secured?	
Date of Hydraulic Test	
Test Pressure	



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MAIN STEAM PIPES.

No. of Lengths	3		
Material	Steel		
Brazed, Welded or Seamless	S. D.		
Internal Diam.	3 1/2"		
Thickness	1/4"		
How are Flanges secured?	Screwed		
Date of Hydraulic Test	5.4.28		
Test Pressure	540 lbs.		
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			

No.			
Working Pressure			
Date of Test of Safety Valves under Steam			
Test Pressure			
Date of Test			
Makers			
TYPE			
TESTED BY			
EVAPORATORS			
No.			
Working Pressure			
Date of Test			
Makers			
TYPE			
TESTED BY			
FEED WATER HEATERS			
No.			
Working Pressure			
Date of Test			
Makers			
TYPE			
TESTED BY			
FEED WATER FILTERS			
No.			
Working Pressure			
Date of Test			
Makers			
TYPE			
TESTED BY			
SUPERHEATERS			



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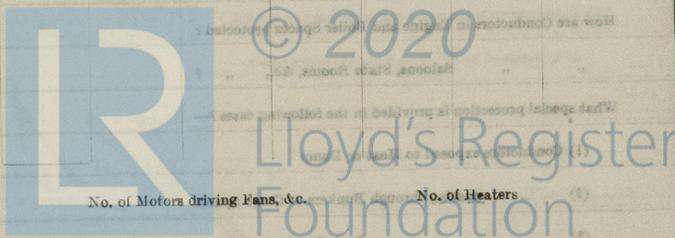
ELECTRIC LIGHTING.

Installation Fitted by *Swankinton & Co.*
 No. and Description of Dynamos *One compound wound*
 Makers of Dynamos *Sunderland Forge.*
 Capacity " *91* Amperes, at *110* Volts, *360* Revois. per Min.
 Current Alternating or Continuous *Continuous.*
 Single or Double Wire System *Double.*
 Position of Dynamos *Lower platform Starb Side*
 " Main Switch Board *near dynamo.*
 No. of Circuits to which Switches are provided on Main Switch Board
 Particulars of these Circuits:— *Four!*

Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
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Same as 1236-4
15
Stirling

Total No. of Lights No. of Motors driving Fans, &c. No. of Heaters
 Current required for Motors and Heaters



Positions of Auxiliary Switch Boards, with No. of Switches on each

Installation fitted by *Warranted 1928*

No. and Description of Dynamos *one compound wound*

Make of Dynamos *Warranted 1928*

Capacity *10 Amps at 110 Volts*

Current Alternating or Continuous *Continuous*

Single or Double Wire System *Double*

Location of Dynamos *Compartment from Main Board*

Main Switch Board *one*

No. of Circuits to which switches are provided on Main Switch Board *one*

Particulars of these Circuits:—

Circuit	Number of Lights	Capacity Power	Current Rating Amps	Size of Conductor	Current Intensity	Conductivity of Conductor	Insulation Resistance per Mile
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Are Out-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits

On Aux. " " each Auxiliary Circuit

Wherever a Cable is reduced in size

To each Lamp Circuit

To both Flow and Return Wires of all Circuits when the Double-Wire System is adopted

Are the Fuses of Standard Sizes?

Are all Switches and Cut-outs constructed of Non-inflammable Material?

Are they placed so as to be always and easily accessible?

Smallest Single Wire used, No. S.W.G., Largest, No. S.W.G.

How are Conductors in Engine and Boiler Spaces protected?

" " Saloons, State Rooms, &c., " ?

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp

(2) " " passing through Bunkers or Cargo Spaces

(3) " " Deck Beams or Bulkheads

Are all Joints in Cables properly soldered and thoroughly insulated so that the efficiency of the Cables

is unimpaired?

Are all Joints in accessible positions, none being made in Bunkers or Cargo Spaces?

Are all Hull Connections for Single-Wire Systems made with Secaws of large Surface?

Are the Dynamos, Motors, Main and Branch Cables, so placed that the Compasses are not injuriously affected by them?

Have Tests been made to prove that this condition has been satisfactorily fulfilled?

Has the Insulation Resistance over the whole system been tested?

What does the Resistance amount to? *810,000* Ohms.

Is the Installation supplied with a Voltmeter?

" " " an Ampere Meter

Date of Trial of complete Installation *16.7.28* Duration of Trial *6 hours.*Have all the requirements of Section 42 been satisfactorily carried out? *Yes.*

GENERAL CONSTRUCTION

Have the Machinery and Boilers been constructed in accordance with the requirements of the Rules and the

Approved Plans? *Yes*

If not, give details of the points of difference, and state when these were sanctioned by the Chief

Surveyor. *Yes*

Are the Materials used in the Construction of Engines and Boilers, so far as could be seen, sound and

trustworthy? *Yes*

Is the Workmanship throughout thoroughly satisfactory? *Yes*

The above correctly describes the Machinery of the S.S. *Scott Wisener*

as ascertained by *me* from personal examination

John Lundgren
 Engineer Surveyor to the British Corporation for the
 Survey and Registry of Shipping.

Fees—

MAIN BOILERS.		£	s.	d.
H.S.	Sq. ft.	:	:	
G.S.	"	:	:	
DONKEY BOILERS.				
H.S.	Sq. ft.	:	:	
G.S.	"	:	:	
		£	:	:
ENGINES.				
L.P.O.	Cub. ft.	:	:	
		£	:	:
Testing, &c. ...		:	:	
		£	:	:
Expenses ...		:	:	
Total ...		£	:	:

It is submitted that this Report be approved,

Walter King
 Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the 22ND AUGUST, 1928

Fees advised

Fees paid



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Robert ...
 Secretary.

GENERAL CONSTRUCTION

U.S.	100.00		
G.S.	100.00		
DONKEY ROLLERS			
H.S.	100.00		
G.S.	100.00		
ENGINEER			
L.P.O.	100.00		
TESTING, ETC.			
EXPENSES			
Total	1000.00		

It is submitted that this Report be approved.

[Signature]
Chief Engineer

Approved by the Committee for the Class of M.E.S. on the 25th August 1909

[Signature]

[Signature]
[Signature]



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