

No. 2047

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1873* No. in Register Book *3187*

"*SOUTHERN SPRAY*"
S.S. *804*

Makers of Engines *Smith's Dock Co. Ltd.*

Works No. *273*

Makers of Main Boilers *Hawthorn Leslie & Co. Ltd.*

Works No. *8864*

Makers of Donkey Boiler

Works No. ✓

MACHINERY.



Lloyd's Register
Foundation

005358-005366-0159

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1873* No. in Register Book *3187*

Received at Head Office *28th October 1925*

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ~~Single Screw~~ *Whale*

Southern Shro

Official No. *147320*

Port of Registry *Liverpool*

Registered Owners

The Southern Whaling & Trading Co. Ltd.

Engines Built by

Smith, Skels Ltd.

at

South Broom-on Sea

Main Boilers Built by

Hawthorn, Leslie & Co. Ltd.

at

Newcastle-on-Tyne

Donkey

at

Date of Completion

7-24

First Visit

17-2-25

Last Visit

30-4-25

Total Visits *45*

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RECIPROCATING ENGINES

Works No.	No. of Sets	Description
243.	1	Tripto expansion S.C. Berks.

No. of Cylinders each Engine	³	No. of Cranks	³
Diars. of Cylinders	16" - 26" - 43"	Stroke	26"
Cubic feet in each L.P. Cylinder	21.8		

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

" " " each Receiver?

Type of H.P. Valves.

21 1st L.P. 22

" 2nd I.P. "

„ L.P. „

32 Valve Gear

Condenser

Diameter of Piston Rods (plain part)

Material

Diam. of Connecting Rods (smallest part)

„ Crosshead Gudgeons $4\frac{7}{8}$ Length of Bearing $5\frac{7}{8}$ Material

No. of Crosshead Bolts (each) 4 Diam. over Thrd. 2 7/8 Thrds. per inch 8 Material A.S.

„ Crank Pin „ „ 2 „ 2 7/8 „ 6 „ 4

„ Main Bearings 6 Lengths 10 1/8

„ Bolts in each 2 Diar. over Thread 2 7/8 Threads per inch 6 Material M.v

„ Holding Down Bolts, each Engine 90 Diar. 1 1/4 No. of Metal Chocks 4

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

Piston	"	"
--------	---	---

Crossheads

Connecting Rods, Finished by

Piston " "

Crossheads.

Date of Harbour Trial

" Trial Trip

Trials run at

Were the Engines tested to full power under Sea-going conditions?

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

Pressure in 1st I.P. Receiver, 60.8 lbs., 2nd I.P., ✓

Speed on Trial

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

data:—

Builders' estimated I.H.P.

Estimated Speed

Revol. per min.

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TURBINE ENGINES

Works No. Type of Turbines
 No. of H.P. Turbines No. of L.P. No. of L.L.P. No. of Stern

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

Is Single or Double Reduction Gear employed?

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

Estimated Pressure per lineal inch

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

Estimated Pressure per lineal inch

Revs. per min. of H.P. Turbines at Full Power S.H.P.

If the Conditions on Trial were such that full power could not be obtained give

" " L.P. " " "

" " 1st Reduction Shaft

" " 2nd " "

" " Propeller Shaft

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

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

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

TURBO-ELECTRIC MACHINERY DESCRIPTION OF INSTALLATION.

No. of Turbo-Generators per
 Type of Turbines employed
 Description of Generators

No. of Motors driving Propeller Shafts
 Are the Propeller Shafts driven direct by the Motors or through Gearing?
 Is Single or Double Reduction Gear employed?

Description of Motors

Diam. of 1st Reduction Pinion }
 " 1st " Wheel } Width

Estimated Pressure per lineal inch

Diam. of 2nd Reduction Pinion }
 " 2nd " Wheel } Width

Estimated Pressure per lineal inch

Revs. per min. of Generators at Full Power

" " Motors

" " 1st Reduction Shaft

" " 2nd " "

" " Propeller Shaft

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

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

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by



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TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets Capacity of each

Type of Turbines employed

Description of Generators

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

Diam. of 1st Reduction Pinion

" 1st " Wheel

Width

Pitch of Teeth

Estimated Pressure per lineal inch

Diam. of 2nd Reduction Pinion

" 2nd " Wheel

Width

Pitch of Teeth

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 Gear

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

DESCRIPTION OF INSTALLATION.

SHAFTING.

Are the Crank Shafts Built or Solid?

Built.

No. of Lengths in each

4

Angle of Cranks

*120°*Diar. by Rule *8.25"*

Actual

*8 1/2"*In Way of Webs *8 7/8"*

" of Crank Pins

8 3/4"

Length between Webs

11"

Greatest Width of Crank Webs

24"

Thickness

5 1/4"

Least " "

13"

"

5 1/4"

Diar. of Keys in Crank Webs

1 1/2"

Length

4"

" Dowels in Crank Pins

1"

Length

3 1/2"

Screwed or Plain

plain.

No. of Bolts each Coupling

6

Diar. at Mid Length

2"

Diar. of Pitch Circle

12 1/2"

Greatest Distance from Edge of Main Bearing to Crank Web

3 1/6"

Type of Thrust Blocks

adj. Noncechal. Shoe Type.

No. " Rings

6

Diar. of Thrust Shafts at bottom of Collars

8 1/2"

No. of Collars

6

" " "

Forward Coupling

8 1/2"

At Aft Coupling

8 1/2"

Diar. of Intermediate Shafting by Rule

☒

Actual

☒

No. of Lengths

☒

No. of Bolts, each Coupling

☒

Diar. at Mid Length

☒

Diar. of Pitch Circle

☒

Diar. of Propeller Shafts by Rule

8.4"

Actual

8 7/8"

At Couplings

8 1/2"

Are Propeller Shafts fitted with Continuous Brass Liners?

Continuous.

Diar. over Liners

10.0"

Length of After Bearings

14.0 1/2"

Of what Material are the After Bearings composed?

Signum Vitae.

Are Means provided for lubricating the After Bearings with Oil?

no

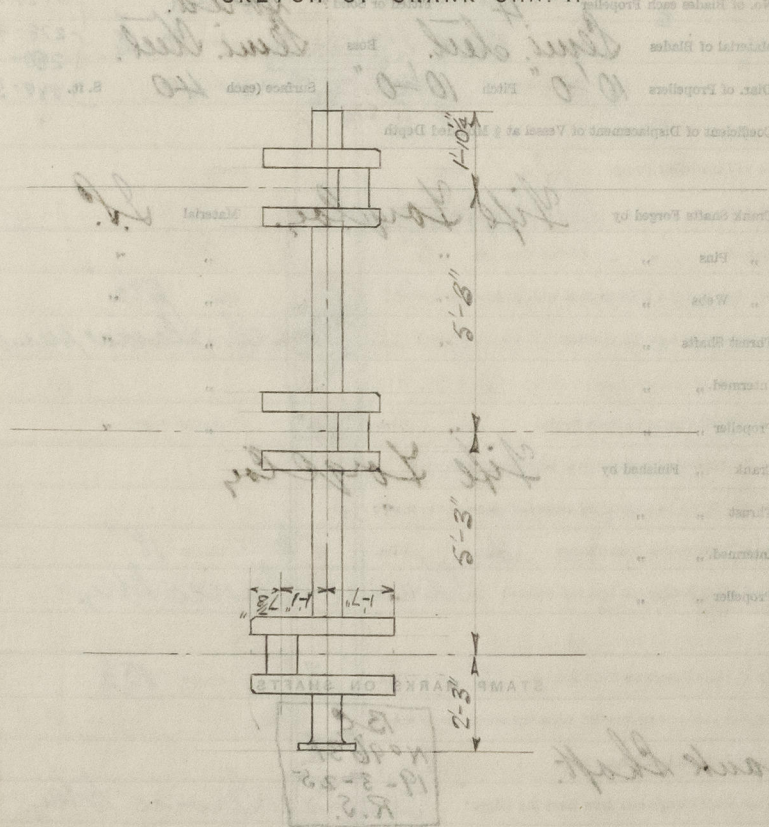
" " to prevent Sea Water entering the Stern Tubes?

no.

If so, what Type is adopted?

☒

SKETCH OF CRANK SHAFT.



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No. of Blades each Propeller

4

Fitted or Solid?

solid.

Material of Blades

Semi. Steel.

Boas

Semi. Steel.

Diar. of Propellers

10'-0" Pitch

10'-0"

Surface (each

140

S. ft. 278-3

Coefficient of Displacement of Vessel at $\frac{1}{2}$ Moulded Depth

Crank Shafts Forged by

Life Long Co.

Material

S.S.

Pins

Webs

Thrust Shafts

Interned. "

Propeller "

Crank " Finished by

Life Long Co.

Thrust "

Interned. "

Propeller "

STAMP MARKS ON SHAFTS.

Crank Shaft.

B.C.
N09631
19-3-25
R.S.

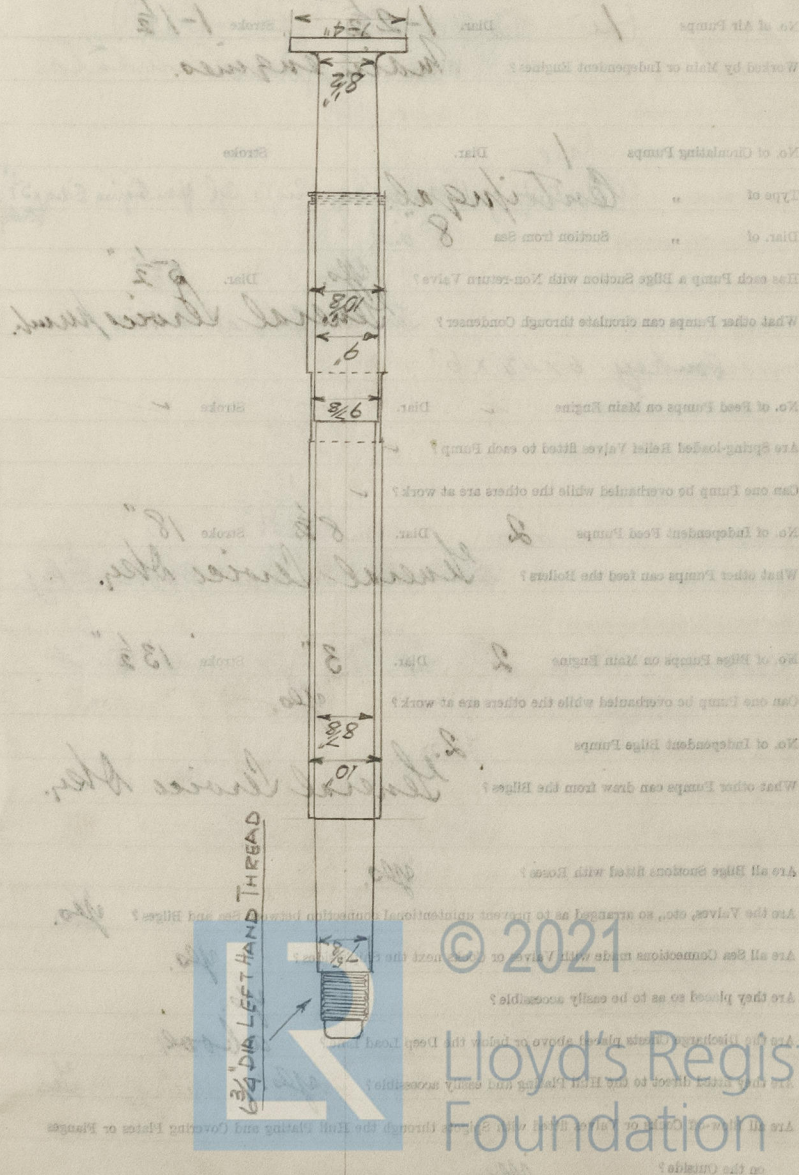
Thrust Tail Shaft

B.C.
N09631
9-4-25
R.S.

Spare Tail Shaft.

B.C.
N09631
9-4-25
R.S.

SKETCH OF PROPELLER SHAFT.



PUMPS, ETC.

No. of Air Pumps *1/1* Diar. *1-2 1/2"* Stroke *1-1 1/2"*

Worked by Main or Independent Engines?

Main engines.

No. of Circulating Pumps *1/1* Diar. Stroke

Type of " *Centrifugal by Single cyl. open engine 5 dia x 5 1/2* Stroke

Diar. of " Suction from Sea *8 dia*

Has each Pump a Bilge Suction with Non-return Valve?

Yes.

Diar. *5 1/2"*

What other Pumps can circulate through Condenser?

General Service pump.

Donkey 6 x 4 1/2 x 6"

No. of Feed Pumps on Main Engine

✓ Diar. *✓* Stroke *✓*

Are Spring-loaded Relief Valves fitted to each Pump?

✓

Can one Pump be overhauled while the others are at work?

✓

No. of Independent Feed Pumps *2*

Diar. *8 1/2"* Stroke *18"*

What other Pumps can feed the Boilers?

General Service Skys. 8 sky

No. of Bilge Pumps on Main Engine *2*

Diar. *3"* Stroke *13 1/2"*

Can one Pump be overhauled while the others are at work?

Yes.

No. of Independent Bilge Pumps *2*

What other Pumps can draw from the Bilges?

General Service Skys.

Are all Bilge Suctions fitted with Roses?

Yes.

Are the Valves, etc., so arranged as to prevent unintentional connection between Sea and Bilges?

Yes.

Are all Sea Connections made with Valves or Cocks next the Ship's sides?

Yes.

Are they placed so as to be easily accessible?

Yes.

Are the Discharge Chests placed above or below the Deep Load Line?

Above.

Are they fitted direct to the Hull Plating and easily accessible?

Yes.

Are all Blow-off Cocks or Valves fitted with Spigots through the Hull Plating and Covering Plates or Flanges

on the Outside?

Yes.

Independent Service Pumps C. 279-80

Weirs 16 x 9 Monotype.

12

12/6/21

12/6/21

12/6/21

12/6/21

12/6/21

12/6/21

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12/6/21



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Are the Water Gauges fitted direct to the Boiler Shells or mounted on Pillars? *Direct to shell.*

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? *✓*

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

No. of Strakes of Shell Plating in each Boiler *1*

Plates in each Strake *2*

Thickness of Shell Plates Approved

in Boilers *1 3/8"*

Are the Rivets Iron or Steel? *Steel*

Are the Longitudinal Seams Butt or Lap Joints? *Butt*

Are the Butt Straps Single or Double? *Double*

Are the Double Butt Straps of equal width? *Yes*

Thickness of outside Butt Straps *1 1/2"*

inside *1 3/4"*

Are Longitudinal Seams Hand or Machine Riveted? *Machine*

Are they Single, Double, or Treble Riveted? *Treble*

No. of Rivets in a Pitch *5*

Diam. of Rivet Holes *1 7/16"* Pitch *9 7/8"*

No. of Rows of Rivets in Centre Circumferential Seams *No Centre seams*

Are these Seams Hand or Machine Riveted? *—*

Diam. of Rivet Holes Pitch *—*

No. of Rows of Rivets in Front End Circumferential Seams *2*

Are these Seams Hand or Machine riveted? *Hand*

Diam. of Rivet Holes *1 7/16"* Pitch *4"*

No. of Rows of Rivets in Back End Circumferential Seams *2*

Are these Seams Hand or Machine Riveted? *Machine*

Diam. of Rivet Holes *1 7/16"* Pitch *4"*

Size of Manholes in Shell *16 x 12"*

Dimensions of Compensating Rings *2'-10" x 2'-7" x 1 3/4"*

Thickness of End Plates in Green Space Approved

in Boilers

Thickness of Green Space Straps

Approved

in Boilers

Material of

How are they Riveted?

Size and Thickness of Loose Washers on End Plates

Riveted

Double Straps

Thickness of Machine Rivets End Plates Approved

in Boilers

Thickness of Doublings in Wide Spaces between Flanges

Thickness of Straps

Thickness of Straps Approved

in Boilers

Material

Are Straps fitted with Zinc outside?

Thickness of Back End Plates at Bottom Approved

in Boilers

Thickness of Straps at Wide Spaces between Flanges

Thickness of Doublings in

Thickness of Front End Plates at Bottom Approved

in Boilers

No. of Rows of Rivets in Centre Circumferential Seams



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Thickness of End Plates in Steam Space Approved

" " " " " in Boilers

Pitch of Steam Space Stays

Diar. " " " " Approved

Threads per Inch

" " " " " in Boilers

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

1 1/2"
2 1/2" x 20"

3 3/8" 6

Steel
Double nut washer
6 1/2" x 1/4"
None

2 3/4"
None
15" x 9"

1 7/8 - 1 5/8 9
Steel
Yes

2 3/4"
15" x 9"
Double 2 5/8"
3/2

3 1/2"
4

Diar. of Stays Approved

" " " " " in Boilers

Material "

Thickness of Front End Plates Approved

" " " " " in Boilers

Pitch of Stay Tubes at Spaces between Backs of Tubes

Thickness of Doublings in

Stay Tubes at

Are Stay Tubes fitted with Nuts at Front End?

Thickness of Back End Plates Approved

" " " " " in Boilers

Pitch of Stay Tubes in Back End Plates

" " " " "

Thickness of Stay Tubes

" " " " "

External Diar. of Tubes

Material "

Thickness of Furnace Plates Approved

" " " " " in Boilers

Diameter outside Diar. of Tubes

Length between Tube Plates



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Diar. of Stays Approved Threads per Inch
 " " in Boilers $2\frac{1}{2}" \times 6$
 Material " $Stal$

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 O.C. Tops

$3/32"$
 $13\frac{1}{2}" \times 7\frac{1}{2}"$
 1 in
 $3/8"$
 Yes.

$2\frac{1}{2}"$
 $7\frac{1}{2}" \times 7\frac{1}{2}"$
 $3\frac{3}{4}" \times 3\frac{3}{4}"$
 $7/16"$
 $9 \text{ L.S. } 5/16"$
 $2\frac{1}{2}"$
 Iron

$5/8"$
 $3' - 7\frac{3}{4}"$
 $8' - 0"$

$3' - 2"$ an box
 $2\frac{3}{8}"$
 $10 \times 9"$

Diar. of Screwed Stays Approved
 " " in Boilers
 Material "

Thickness of Combustion Chamber Tops Approved
 " " in Boilers

Pitch of Screwed Stays in O.C. Tops

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 O.C. Tops



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Diar. of Screwed Stays Approved

Threads per Inch

" " " in Boilers

Material " "

 $1\frac{3}{4}" \times 9$
 Std

Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Diar. " " Approved

Threads per Inch

" " " in Boilers

Material " "

 $1\frac{3}{4}" \times 9$
 Std

Thickness of Combustion Chamber Backs Approved

" " " " in Boilers

Pitch of Screwed Stays in C.O. Backs

Diar. " " Approved

Threads per Inch

" " " in Boilers

Material " "

 $1\frac{3}{4}" \times 8\frac{1}{4}"$
 Std

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

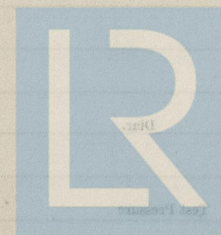
 $15\frac{1}{2}"$
 4
 2
 $10' \times \frac{3}{4}"$
 Std
 3
 268
 $16' \times 12"$

VERTICAL DONKEY BOILERS

No. of Boilers
Type
Greatest Int. Diam.
Height of Boiler Crown above Fire Grate
Are Boiler Crowns Flat or Dished?
Internal Radius of Dished Boilers
Description of Stays in Boiler Crown
Diam. of Rivet Holes
Pitch
Height of Firebox Crown above Fire Grate
Are Firebox Crowns Flat or Dished?
External Radius of Dished Crowns
Thickness of Plates
Diam.
No. of Crown Stays
External Diam. of Firebox at Top
Bottom
Thickness
No. of Water Tubes
Material of Water Tubes
Size of Manholes in Shell
Dimensions of Compensating Flue
Greatest Diameter, each Boiler
Greatest Pressure

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
Are Safety Valves connected to Boilers?
Date when Safety Valves set
Pressure on Pipes



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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 Pipes

Material

Internal Diameter

Thickness

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Internal Diameter

Thickness

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Internal Diameter

Thickness

Date of Hydraulic Test

Test Pressure



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MAIN STEAM PIPES.

No. of Lengths	3
Material	copper.
Brazed, Welded or Seamless	S.D.
Internal Diam.	4"
Thickness	5 W.S.
How are Flanges secured?	braked.
Date of Hydraulic Test	8-6-25
Test Pressure	400 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	

EVAPORATORS

Boiler No. 1

Working Pressure 100 lbs.

Date of Test 8-6-25

Test Pressure 100 lbs.

How are Flanges secured? Bolted

Internal Diam. 4"

Thickness 5 W.S.

Date of Hydraulic Test 8-6-25

Test Pressure 400 lbs.

FEED WATER HEATERS

Boiler No. 2

Working Pressure 100 lbs.

Date of Test 8-6-25

Test Pressure 100 lbs.

How are Flanges secured? Bolted

Internal Diam. 4"

Thickness 5 W.S.

Date of Hydraulic Test 8-6-25

Test Pressure 400 lbs.

FEED WATER FILTERS

Boiler No. 3

Working Pressure 100 lbs.

Date of Test 8-6-25

Test Pressure 100 lbs.

How are Flanges secured? Bolted

Internal Diam. 4"

Thickness 5 W.S.

Date of Hydraulic Test 8-6-25

Test Pressure 400 lbs.



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EVAPORATORS.

No. ☒ Type ☒ Tons per Day ☒
 Makers ☒
 Working Pressure ☒ Test Pressure ☒ Date of Test ☒
 Date of Test of Safety Valves under Steam ☒

FEED WATER HEATERS.

No. 1 Type *Surface Feed Heater* *Mechanical Steam*
 Makers *Chas. H. Raynes*
 Working Pressure *200 lbs.* Test Pressure *30 lbs.* Date of Test *28/5/25*
Heater as above for Cont. 100 lbs. 273-4-281-2-3.

FEED WATER FILTERS.

No. *1* Type *Feed water Filter* *Heater*
 Makers *Smith's & Co. Ltd.*
 Working Pressure ☒ Test Pressure ☒ Date of Test ☒
C 279-280 only

LIST OF DONKEY PUMPS.

Lamont's General Service Donkey Pump
Vertical Duplex 6" x 4 1/4" x 6"
W. Watson 9" Centrifugal Circulating Pump.

1 Pair Wire Lead pumps 6" x 8 1/2" x 18" adjacent
Dawson & Bowrie's Vertical Duplex
Pump 4" x 4" x 5"
C 273-4-8-281-2-3 as above

additional 1/2" for C 279-280

Independent Ridge Pumps
Dawson & Bowrie's 4" x 4" x 5" Vertical Duplex.

Independent Air pumps. Weirs 16 x 9 / 12"
Mono Type Air pumps.



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OTHER ARTICLES OF SPARE GEAR:—

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REFRIGERATORS.

No. of Machines

Capacity of each

Makers

Description

No. of Steam Cylinders, each Machine

No. of Compressors

No. of Cranks

Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines
or Independently

System of Refrigeration

2. Insulation

Are Brine and other Regulating Valves placed so as to be accessible without entering the Insulated Spaces?

Are all Pipes, Air Trunks, &c., well secured and protected from risk of damage?

Are all Bilge, Sounding, and Air Pipes in Insulated Spaces properly insulated?

Are Thermometer Tubes so arranged that Water cannot enter and freeze in them?

Date of Test under Working Conditions

RESULTS OF TRIALS.

Articles of Spare Gear for Refrigerating Plant carried on board:—

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ELECTRIC LIGHTING

ELECTRIC LIGHTING.
R. Pickersgil & Sons Ltd.

Compound bound.

J. H. Holmes, Newcastle

45

Amperes, at 100 Volts, 400 Revols. per Min

Continuous

Double

Started Side, Starling Platform
Engine Room, Tow Walkhead

Engine Room Tow Bulkhead

No. of Circuits to which Switches are provided on Main Switch Board 5

Particulars of these Circuits:—

Circuit.	Number of Lights.	Candle Power.	Current Required Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
after accommodation	2 1/4	210 watts.	2.1	7/029			600 meg.
Engine Room Cokehold	11	330 watts.	3.3	7/029			
Main Ship's Crews.	19	540 watts.	6	7/036			
Wireless Navigation	1/2 K.W. 6	180 watts	1.8	7/044			

Total No. of Lights 43

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

none.

Position of Switch Board	No. of Switches	Position of Switch Board	No. of Switches

Are Cut-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits

yes.

On Aux. " " each Auxiliary Circuit

Wherever a Cable is reduced in size

yes.

To each Lamp Circuit

yes.

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

yes.

Are the Fuses of Standard Sizes?

yes.

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

yes.

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

*yes.*Smallest Single Wire used, No. *1/044* S.W.G., Largest, No. *1/044* S.W.G.

How are Conductors in Engine and Boiler Spaces protected?

Lead covered / Armoured cable.

Saloons, State Rooms, &c., " ?

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp

Lead covered / Armoured

(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?

no joints

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

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

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

affected by them?

yes.

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

yes.

Has the Insulation Resistance over the whole system been tested?

yes.

What does the Resistance amount to?

2 Megohms.

Ohms.

Is the Installation supplied with a Voltmeter?

yes.

" " " an Ampere Meter?

*yes.*Date of Trial of complete Installation *31-8-25* Duration of Trial *6 hours.*

Have all the requirements of Section 42 been satisfactorily carried out?

yes.

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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, are the Plans and Boilers so placed that the Compasses are

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 has the Resistance amount to?

Is the insulation supplied with a Voltmeter?

an Amperes Meter?

Date of Trial of complete installation

Have all the requirements of Section 42 been satisfactorily carried out?

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.

"SOUTHERN SPRAY"

as ascertained by ^{us}me from personal examination

Ernest Pitt (Boiler)
J. D. Dipheusen
Engineer Surveyor to the British Corporation for the
Survey and Registry of Shipping.

Fees—

MAIN BOILERS.

		£	s.	d.
H.S.	2600	Sq. ft.	21	13: 0
G.S.	63	"	:	:

DONKEY BOILERS.

		£	s.	d.
H.S.	✓	Sq. ft.	:	:
G.S.	✓	"	:	:

ENGINES.

		£	s.	d.
L.P.C.	21.8	Cub. ft.	22	14: 0
Testing, &c.	£ 5		5	0: 0
Expenses	...		:	:
Total	...	£	49	7: 0

It is submitted that this Report be approved,

Glenn King
Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the 14th November 1925

Fees advised

Fees paid



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