

No. 1830

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 2143 No. in Register Book 3498

FACON

" "
S.S. *CONISCLIFFE HALL*

Makers of Engines *Swansea Dock Co Ltd*

Works No. *304*

Makers of Main Boilers *Blair & Co (1926) Ltd*

Works No. *B584*

Makers of Donkey Boiler

Works No.

MACHINERY.



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THE BRITISH CORPORATION FOR THE SURVEY

AND

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Report No. No. in Register Book

Received at Head Office *22nd November 1928*

Surveyor's Report on the **New Engines, Boilers, and Auxiliary Machinery of the** *Single Triple* **Screw** *Twin Quadruple*

Official No. *160706*. Port of Registry *Middlesbrough*.

Registered Owners *Wall Corporation of Canada*.

Engines Built by *Spartan Rods Co Ltd*

at

South Bank-on-Tees

Main Boilers Built by *Blair & Co (1926) Ltd*

at

Stockton-on-Tees

Donkey " " "

at

Date of Completion *4-28*

First Visit *1-11-27*

Last Visit *12-4-28*

Total Visits *40*

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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

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 Shafts at bottom of Collars

At Air Couplings

No. of Couplings

Actual

Diar. at Mid Length

Diar. of Pinion Shafts

At Couplings

Actual

Diar. of Propeller Shafts by Rule

Are Propeller Shafts fitted with Continuous Brass Liners?

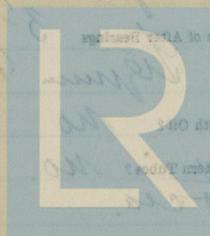
Length of Air Headers

At what Interval are the Air Headers composed?

Are Motors provided for insulating the After Bearings with Oil?

Do they have any other means of insulating the After Bearings?

If so what are they?



PUMPS, ETC.

No. of Air Pumps 1 Diar. 14" Stroke 16 1/2"
 Worked by Main or Independent Engines? *Main engines.*

No. of Circulating Pumps 1 Diar. 10" Stroke 10"
 Type of " *Vertical duplex.*
 Diar. of " Suction from Sea 7"
 Has each Pump a Bilge Suction with Non-return Valve? *yes.* Diar. 4 3/4"
 What other Pumps can circulate through Condenser? *Ballast hump.*

No. of Feed Pumps on Main Engine 2 Diar. 2 3/4" Stroke 16 1/2"
 Are Spring-loaded Relief Valves fitted to each Pump? *yes.*
 Can one Pump be overhauled while the others are at work? *yes.*

No. of Independent Feed Pumps - Diar. - Stroke -
 What other Pumps can feed the Boilers? *General Services.*

No. of Bilge Pumps on Main Engine 2 Diar. 2 3/4" Stroke 16 1/2"
 Can one Pump be overhauled while the others are at work? *yes.*

No. of Independent Bilge Pumps -
 What other Pumps can draw from the Bilges? *Ballast General Services.*

Are all Bilge Suctions fitted with Roses? *Rundbox tail pipes.*
 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.*

BOILERS

No. of Boilers 2
 Type *Vertical duplex*
 Single or Double-ended
 No. of Furnaces in each
 Type of Furnaces
 Date when first approved
 Approval Working Pressure
 Hydraulic Test Pressure
 Date of Hydraulic Test
 " when safety valves set
 Pressures at which valves were set
 Date of Examination Test
 Maximum Pressure under Examination Test
 System of Design
 Can boilers be worked separately?
 Nature of Flues
 Size of Flues
 Girths
 Length
 Square Foot of Heating Surface
 No. of Safety Valves
 Date
 No. of Safety Valves
 Date
 No. of Safety Valves
 Date
 No. of Safety Valves
 Date

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

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?

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

Handwritten note: All are as per spec to call

Thickness of Last Plates in Steam Space Approved

in Boilers

Thickness of Steam Space Straps

Approved

in Boilers

Material of

Last two Straps Approved

Plan and Thickness of Loose Washers on End Plates

Riveted

With

Doubling Strips

Thickness of Middle Back End Plates Approved

in Boilers

Thickness of Doublings in Wide Spaces between

End Plates

Plan of Seams Approved

in Boilers

Material

Are Straps fitted with Wire outside?

Thickness of Last End Plates at Bottom Approved

in Boilers

Plan of Seams at Wide Spaces between

End Plates

Thickness of Doublings

Thickness of Front End Plates at Bottom Approved

in Boilers

No. of Rows of Rivets in Front End Circumferential Seams

Are these Seams Hand or Machine Riveted?



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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

None as per schedule call



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None as per schedule call

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.O. Tops

Same as 40 Cyclops ball

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. Stays

Diar. " " Approved Threads per Inch

" " " in Boilers

Material "

Thickness of Combustion Chamber Backs Approved

" " " in Boilers

Pitch of Screwed Stays in C.O. Heads

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

" " " " "

Diap. and Thickness of Girders

Material of Girders

No. of Stays in each

No. of Tubes each Boiler

Size of Lower Flanges



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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.C. Sides

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 Tubes, each Boiler

Size of Lower Manholes

Same as sp. 144110

VERTICAL DONKEY BOILERS

Type No. of Boilers

Height Greatest Int. Diam.

Height of Boiler Crown above Fire Grate

Are Boiler Crowns Flat or Dished?

Internal Radius of Dished Boilers Thickness of Plates

Description of Seams in Boiler Crowns

Diam. of Rivet Holes Pitch

Height of Niblock Crown above Fire Grate

Are Niblock Crowns Flat or Dished?

External Radius of Dished Crowns Thickness of Plates

Diam. Material No. of Crown Stays

External Diam. of Niblock at Top Bottom Thickness of Plates

No. of Water Tubes Int. Diam.

Material of Water Tubes

Size of Manhole in Shell

Thickness of Compensating Ring

Heating Surface, each Boiler (State Surface)

SUPERHEATERS

Description of Superheaters

Where situated?

Which boilers are connected to them, and can superheaters be run on with boilers are working?

No. of Safety Valves on each Superheater

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Date when Safety Valves set Pressure on Valves Date of Examination

VERTICAL DONKEY BOILERS.

No. of Boilers *In Use* Type

Greatest Int. Diar. Height

Height of Boiler Crown above Fire Grate

Are Boiler Crowns Flat or Dished? *As approved*

Internal Radius of Dished Ends Thickness of Plates

Description of Seams in Boiler Crowns

Diar. of Rivet Holes *Approved* 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 *As specified* Diar. Material

External Diar. of Firebox at Top Bottom Thickness of Plates

No. of Water Tubes *As specified* Ext. Diar. Thickness

Material of Water Tubes *As specified*

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

Handwritten notes:
 4
 2
 3
 4
 11-12-28
 11-12-28

No. of Lengths

Material

Joined, Welded or Seamed

Internal Diar.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

No. of Lengths

Material

Joined, Welded or Seamed

Internal Diar.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure



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MAIN STEAM PIPES.

No. of Lengths

4

Material

Copper.

Brazed, Welded or Seamless

S.D.

Internal Diam.

3 1/2"

Thickness

1/4 W.L.

How are Flanges secured?

braced.

Date of Hydraulic Test

11-4-28

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

SUPERHEATERS.

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

EVAPORATORS.

6" x 12" Vertical Paper Mill
 3 1/2" x 3 1/2" x 4" Paper Mill
 3 1/2" x 3 1/2" x 4" Paper Mill
 7 1/2" x 11 1/2" x 11 1/2" Paper Mill
 180 lbs. Test Pressure
 12-3-28

FEED WATER FILTERS.

180 lbs. Test Pressure
 12-3-28



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EVAPORATORS.

No. Type *4* Tons per Day

Makers *Allen*Working Pressure *90* Test Pressure *120* Date of Test

Date of Test of Safety Valves under Steam

FEED WATER HEATERS.

No. *1* Type *Walden Brook*
 Makers *Walden & Brook*
 Working Pressure *180 lbs.* Test Pressure *400 lbs.* Date of Test

FEED WATER FILTERS.

No. *1* Type *Maccotti Patheok* Size
 Makers *Maccotti Patheok*
 Working Pressure *180 lbs.* Test Pressure *400 lbs.* Date of Test *15-3-28*

LIST OF DONKEY PUMPS.

6" x 4" x 6" Vertical Duplex General Service Donkey

3 1/2" x 3 1/2" x 4" Duplex Cantan Donkey

3 1/2" x 3 1/2" x 4" Duplex Fresh water pump

9 1/2" x 11 1/2" x 4" Vertical Duplex Ballast pump



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BOILERS.

Works No. *B 584*

No. of Boilers *2* Type *Cylindrical multitubular*

Single or Double-ended *single*

No. of Furnaces in each *2*

Type of Furnaces *slight*

Date when Plan approved

Approved Working Pressure *180 lbs.*

Hydraulic Test Pressure *320 "*

Date of Hydraulic Test *19-3-28*

" when Safety Valves set *12-4-28*

Pressure at which Valves were set *185 lbs.*

Date of Accumulation Test *12-4-28*

Maximum Pressure under Accumulation Test *185 lbs.*

System of Draught *N.A.*

Can Boilers be worked separately?

Makers of Plates *W.W. Beardmore & Co. Ltd.*

" Stay Bars *Blair & Co. Ltd.*

" Rivets *W.W. Beardmore & Co. Ltd.*

" Furnaces

Greatest Internal Diam. of Boilers *10' 4 3/8"*

" " Length " *10' 9 1/16"*

Square Feet of Heating Surface each Boiler *1128 sq ft*

" " Grate " " *33.8 sq ft*

No. of Safety Valves each Boiler *2* Rule Diam. Actual *2 1/2"*

Are the Safety Valves fitted with Easing Gear? *yes.*

No. of Pressure Gauges, each Boiler *2* No. of Water Gauges *1*

" Test Cocks " *3* " Salinometer Cocks *1*

Are the Water Gauges fixed direct to the Boiler Shells or mounted on Pipes?

Are the Water Gauge Pipes 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?

No. of Stitches of Shell Lapping in each Boiler

Plates in each Stance

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 Triple Riveted?

No. of Rivets in a Pitch

Dist. of Rivet Holes

No. of Rows of Rivets in Centre of longitudinal Seams

Are these Seams Hand or Machine Riveted?

Dist. of Rivet Holes

No. of Rows of Rivets in Front End of longitudinal Seams

Are these Seams Hand or Machine Riveted?

Dist. of Rivet Holes

No. of Rows of Rivets in Back End of longitudinal Seams

Are these Seams Hand or Machine Riveted?

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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.

Have tests been made to prove that the condition has been satisfactorily fulfilled?

Has the Indication Resistance of the whole system been tested?

What does the Resistance amount to?

At the Indication Resistance with a Volume of ...

on a ...

Date of trial of complete installation

Have all the requirements of Section 22 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.*

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

Does the above correctly describe the Machinery of the S.S. "CONISCLIFFE HALL"

as ascertained by ^{us}me from personal examination

When special protection is provided in the following cases:

(1) Construction exposed to Heat or Damage

(2) ...

(3) ...

J. D. Stephenson
 Engineer Surveyor to the British Corporation for the
 Survey and Registry of Shipping.

Fees—

MAIN BOILERS.

| | | | | |
|------|-------------|---------|----|----|
| | | £ | s. | d. |
| H.S. | <i>2256</i> | Sq. ft. | : | : |

| | | | | |
|------|-------------|---|---|---|
| G.S. | <i>64.6</i> | " | : | : |
|------|-------------|---|---|---|

DONKEY BOILERS.

| | | | | |
|------|----------|---------|---|---|
| H.S. | <i>✓</i> | Sq. ft. | : | : |
|------|----------|---------|---|---|

| | | | | |
|------|----------|---|---|---|
| G.S. | <i>✓</i> | " | : | : |
|------|----------|---|---|---|

| | | |
|---|---|---|
| £ | : | : |
|---|---|---|

ENGINES.

| | | | | |
|--------|--------------|----------|---|---|
| L.P.O. | <i>23.65</i> | Cub. ft. | : | : |
|--------|--------------|----------|---|---|

| | | |
|---|---|---|
| £ | : | : |
|---|---|---|

| | | |
|------------------|---|---|
| Testing, &c. ... | : | : |
|------------------|---|---|

| | | |
|---|---|---|
| £ | : | : |
|---|---|---|

| | | |
|--------------|---|---|
| Expenses ... | : | : |
|--------------|---|---|

| | | | |
|-----------|---|---|---|
| Total ... | £ | : | : |
|-----------|---|---|---|

It is submitted that this Report be approved.

J. D. Adams
 Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the 13th June 1928

Fees advised

Fees paid



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