No. 1792

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. 1661 No. in Register Book 2920

S.S. WILLIAM H. DANIELS.

Makers of Engines MESSRS MACCOLL & POLLOCK LTD.

Works No. 325.

Makers of Main Boilers MESSRS MACCOLL & POLLOCK LTD.

Works No. 325.

Makers of Donkey Boiler —

Works No. —

MACHINERY.

No. 2

THE BRITISH CORPORATION FOR THE SURVEY AND REGISTRY OF SHIPPING.

Report No. 1661 No. in Register Book 2920

Received at Head Office 24/8/23

Surveyor's Report on the New Engines, Boilers, and Auxiliary Machinery of the Single ~~Triple~~ ~~Twin~~ ~~Quadruple~~ Screw Steamer "William H. Daniels"

Official No. 147764 Port of Registry Middlesbrough.

Registered Owners The Eastern Steamship Co Ltd (A. B. Mackay, Mgr)

Engines Built by Messrs MacColl & Pollock Ltd.

at Sunderland.

Main Boilers Built by Messrs MacColl & Pollock Ltd.

at Sunderland.

Donkey " "

at —

Date of Completion 23rd May 1923.

First Visit 1-12-22 Last Visit 23-5-23 Total Visits 56

RECIPROCATING ENGINES.

Works No. 325 No. of Sets One Description Triple Expansion Surface Condensing

No. of Cylinders each Engine Three No. of Cranks Three

Diars of Cylinders 16"-27"-44" Stroke 33"

Cubic feet in each L.P. Cylinder 29

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

" " " each Receiver? No

Type of H.P. Valves, Piston Valve (Inside Admission)

" 1st I.P. " Trick Valve "D" Type.

" 2nd I.P. " —

" L.P. " Ordinary "D" Valve.

" Valve Gear Stephenson's Link Gear.

" Condenser Circular Four Flow Cooling Surface 782 sq. ft.

Diameter of Piston Rods (plain part) 4¼" Screwed part (bottom of thread) 3.036"

Material " Ingot Steel.

Diar. of Connecting Rods (smallest part) 4¼" Material Scrap Iron

" Crosshead Gudgeons 4⅝ Length of Bearing 4" Material Scrap Iron

No. of Crosshead Bolts (each) 4 Diar. over Thrd. 1⅞" Thrds. per inch 6 Material Steel

" Crank Pin " " 2 " 2¼" " 6 " "

" Main Bearings 6 Lengths 8⅜"×8¾" dia.

" Bolts in each 2 Diar. over Thread 2¼" Threads per inch 6 Material Steel

" Holding Down Bolts, each Engine 39 Diar. 1¼" No. of Metal Chocks 39.

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

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

If not, how are they fitted? —

Connecting Rods, Forged by Reay & Usher Ltd, Hylton.

Piston " " J. Spencer & Sons, Newburn-on-Tyne.

Crossheads, " Reay & Usher Ltd, Hylton.

Connecting Rods, Finished by MacColl & Pollock Ltd.

Piston " " " " "

Crossheads, " " " " "

Date of Harbour Trial 18th May 1923.

" Trial Trip 23rd May 1923.

Trials run at Whitley

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

If so, what was the I.H.P.? 833 Revols. per min. 114

Pressure in 1st I.P. Receiver, 49 lbs., 2nd I.P., lbs., L.P., 10 lbs., Vacuum, 25 ins.

Speed on Trial 7.5.

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

Builders' estimated I.H.P. Revols. per min.

Estimated Speed

B.C.
2018
270 LBS.
B.H.
20-3-23.

Seal mark stamped on H.P. Cylinder

TURBINE ENGINES.

Works No. Type of Turbines

No. of H.P. Turbines No. of I.P. No. of L.P. No. of Astern

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

Is Single or Double Reduction Gear employed?

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

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

,, ,, I.P. ,, ,,

,, ,, 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 Revols. per min. S.H.P.

Turbine Spindles forged by

,, Wheels forged or cast by

Reduction Gear Shafts forged by

,, Wheels forged or cast by

DESCRIPTION OF INSTALLATION.

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

Revols. 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 Revols. 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 In one length. Angle of Cranks 120°

Diar. by Rule 8·59" Actual 8¾" In Way of Webs 8⅞"

" of Crank Pins 8¾" Length between Webs 8¾"

Greatest Width of Crank Webs 16¼" Thickness 5½"

Least " " 12½" " 5½"

Diar. of Keys in Crank Webs 1¼" Length 4"

" Dowels in Crank Pins ⅞" Length 3½" Screwed or Plain Screwed.

No. of Bolts each Coupling 6 Diar. at Mid Length 2" Diar. of Pitch Circle 12¼"

Greatest Distance from Edge of Main Bearing to Crank Web ¼"

Type of Thrust Blocks Horse Shoe Type.

No. " Rings 4

Diar. of Thrust Shafts at bottom of Collars 8¾" No. of Collars 4"

" " Forward Coupling 8⅜" At Aft Coupling 8⅜"

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 9·8" (9·767) Actual 10" At Couplings 8½"

Are Propeller Shafts fitted with Continuous Brass Liners? Yes.

Diar. over Liners 11" Length of After Bearings 3'-4"

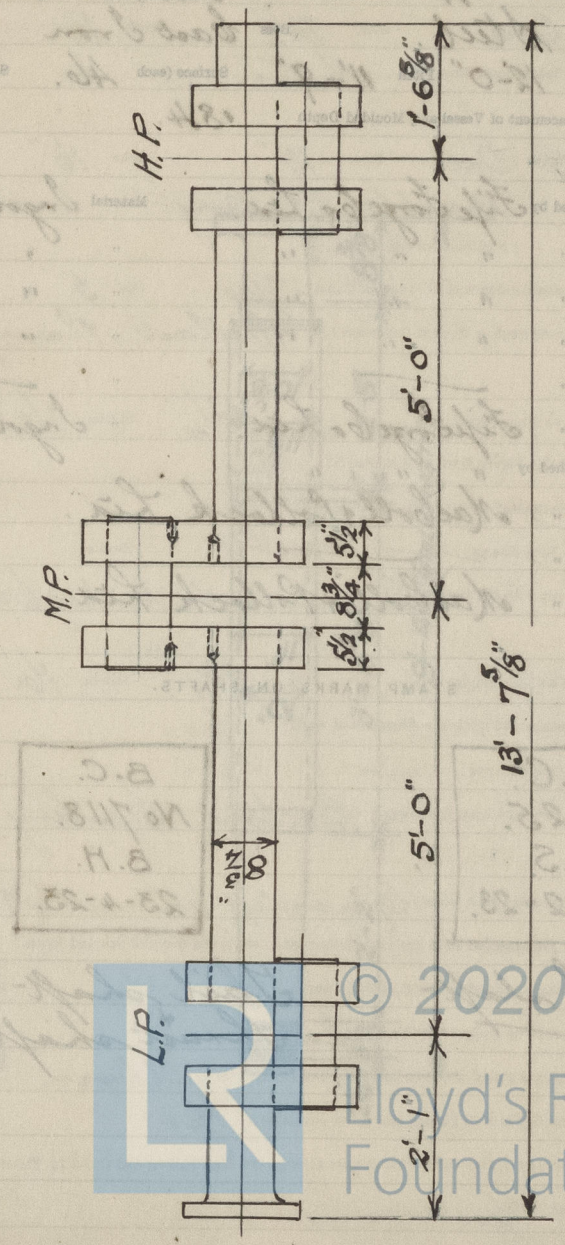
Of what Material are the After Bearings composed? Lignum Vitae.

Are Means provided for lubricating the After Bearings with Oil? No

" " to prevent Sea Water entering the Stern Tubes? —

If so, what Type is adopted? —

SKETCH OF CRANK SHAFT.



No. of Blades each Propeller 4 Fitted or Solid? Fitted.

Material of Blades Steel. Boss Cast Iron

Diar. of Propellers 12'-0" Pitch 11'-9" Surface (each 46. S. ft.

Coefficient of Displacement of Vessel at ⅔ Moulded Depth .84.

Crank Shafts Forged by Fife Forge Co Ltd. Material Ingot Steel

" Pins " " " " " " " "

" Webs " " " " " " " "

Thrust Shafts " " " " " " " "

Intermed. " " " "

Propeller " " Fife Forge Co Ltd. " Ingot Steel.

Crank " Finished by " " "

Thrust " " MacColl & Pollock Ltd.

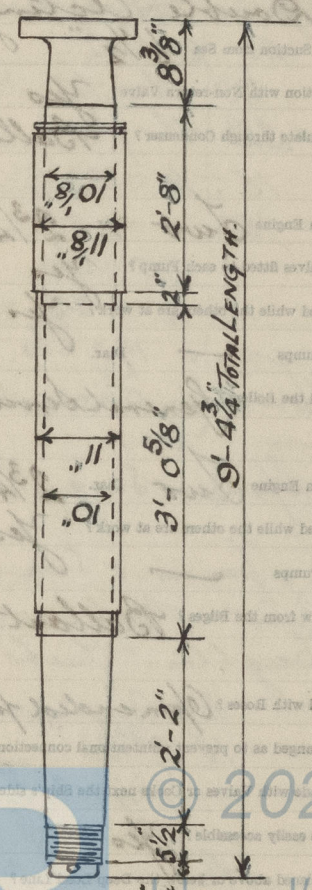
Intermed. " "

Propeller " " MacColl & Pollock Ltd.

STAMP MARKS ON SHAFTS.

B.C. 8625. R.S. 10-2-23.	B.C. No 7118. B.H. 23-4-23.
Crank shaft	Tail shaft Thrust shaft.

SKETCH OF PROPELLER SHAFT.



PUMPS, ETC.

No. of Air Pumps One Diar. 14½" Stroke 16"

Worked by Main or Independent Engines? Main

No. of Circulating Pumps One Diar. 10" Stroke 16"

Type of " Double Acting

Diar. of " Suction from Sea 6½"

Has each Pump a Bilge Suction with Non-return Valve? Yes Diar. 5"

What other Pumps can circulate through Condenser? Ballast Pump.

No. of Feed Pumps on Main Engine Two Diar. 2¾" Stroke 16"

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 Service Donkey 6"×8½"×18"

No. of Bilge Pumps on Main Engine Two Diar. 2¾" Stroke 16"

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 Donkey.

Are all Bilge Suctions fitted with Roses? Open ended pipes with Mud Boxes.

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.

Works No. 325.

No. of Boilers Two Type Marine Multitubular

Single or Double-ended Single

No. of Furnaces in each Two

Type of Furnaces Deighton's Corrugation Withdrawable

Date when Plan approved 23-12-22.

Approved Working Pressure 180 lbs. /□"

Hydraulic Test Pressure 320 lbs /□"

Date of Hydraulic Test 18-4-23.

„ when Safety Valves set 18-5-23.

Pressure at which Valves were set 180 lbs.

Date of Accumulation Test 18-5-23.

Maximum Pressure under Accumulation Test 190 lbs.

System of Draught Howden's Forced Draught (H.A.)

Can Boilers be worked separately? Yes.

Makers of Plates J. Spencer & Sons, Newburn-on-Tyne

„ Stay Bars J. Spencer & Sons.

„ Rivets Rivet Bolt & Nut Co

„ Furnaces Deighton. Tube Co

Greatest Internal Diar. of Boilers 11'-10"

„ „ Length „ 10'-9 25/32"

Square Feet of Heating Surface each Boiler 1346.3 □'.

„ „ Grate „ „ 38.09 □'.

No. of Safety Valves each Boiler 1 Pair Rule Diar. 2.56" Actual 2 3/4"

Are the Safety Valves fitted with Easing Gear? Yes

No. of Pressure Gauges, each Boiler One No. of Water Gauges One

„ Test Cocks „ Three „ Salinometer Cocks One.

Mark stamped on 2 Main Boilers

B.C. TEST.
No. 3094.
320 LBS.
W.P. 180 „
B.H.
18-4-23.

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

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

Are these Pipes connected to Boilers by Cocks or Valves? Cocks.

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

No. of Strakes of Shell Plating in each Boiler Two

" Plates in each Strake One

Thickness of Shell Plates Approved 1"

" " in Boilers 1"

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 7/8"

" inside " 1"

Are Longitudinal Seams Hand or Machine Riveted? Machine riveted

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

No. of Rivets in a Pitch 5

Diar. of Rivet Holes 1 1/16" Pitch 7.58"

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 Two.

Are these Seams Hand or Machine riveted? Hand.

Diar. of Rivet Holes 1 1/8" Pitch 3 3/4"

No. of Rows of Rivets in Back End Circumferential Seams Two.

Are these Seams Hand or Machine Riveted? Machine

Diar. of Rivet Holes 1 1/8" Pitch 3 3/4"

Size of Manholes in Shell 16" × 12"

Dimensions of Compensating Rings 2'-5" × 2'-3"

Thickness of End Plates in Steam Space Approved $1\frac{7}{64}$"

" " " " " in Boilers $1\frac{7}{64}$"

Pitch of Steam Space Stays 1'-6" + 1'-8" Horiz × 1'-2¾ Vertical

Diar. " " " " Approved 6-2¾ 4-2⅞ Threads per Inch 6.

" " " " " in Boilers do " 6.

Material of " " " Steel Bar.

How are Stays Secured? Nuts (Outside & Inside)

Diar. and Thickness of Loose Washers on End Plates — Ordinary washers.

" " Riveted " " " —

Width " " Doubling Strips " —

Thickness of Middle Back End Plates Approved — $\frac{13}{16}$"

" " " " " in Boilers — $\frac{13}{16}$"

Thickness of Doublings in Wide Spaces between Fireboxes — 6⅜ Horiz × 8⅜ Vert

Pitch of Stays at " " " " — 6⅜" Horiz × 8⅜ Vert

Diar. of Stays Approved $1\frac{3}{4}$" (1-2") Threads per Inch — 9.

" " in Boilers $1\frac{3}{4}$" (1-2") " — 9.

Material " Steel. —

Are Stays fitted with Nuts outside? Nuts (Outside & Inside).

Thickness of Back End Plates at Bottom Approved $\frac{13}{16}$"

" " " " " in Boilers $\frac{13}{16}$"

Pitch of Stays at Wide Spaces between Fireboxes 12¾" × 8⅜"

Thickness of Doublings in " " —

Thickness of doubling at bottom back plate = 9/16

Thickness of Front End Plates at Bottom Approved $\frac{27}{32}$"

" " " " " in Boilers $\frac{27}{32}$"

No. of Longitudinal Stays in Spaces between Furnaces One.

Diar. of Stays Approved 2¾" Threads per Inch 6

" " in Boilers 2¾"

Material " Steel

Thickness of Front Tube Plates Approved 27/32"

" " " " in Boilers 27/32"

Pitch of Stay Tubes at Spaces between Stacks of Tubes 8¾" Vert × 13½" Horiz

Thickness of Doublings in " " "

" Stay Tubes at " " " 5/16"

Are Stay Tubes fitted with Nuts at Front End? Yes.

Thickness of Back Tube Plates Approved 51/64"

" " " in Boilers 51/64"

Pitch of Stay Tubes in Back Tube Plates 8¾" × 9"

" Plain " 4⅜ × 4½"

Thickness of Stay Tubes 5/16" (Top Row 3/8").

" Plain " 8 WG.

External Diar. of Tubes 3¼"

Material " Lapwelded - Iron.

Thickness of Furnace Plates Approved 17/32"

" " " in Boilers 17/32"

Smallest outside Diar. of Furnaces 3'-4 13/16"

Length between Tube Plates 7'-2"

Width of Combustion Chambers (Front to Back) 2'-9 3/32"

Thickness of " " Tops Approved 23/32"

" " " in Boilers 23/32"

Pitch of Screwed Stays in C.C. Tops 9⅞" × 10⅛"

Diar. of Screwed Stays Approved 1 3/4" Threads per Inch 9

" " " in Boilers 1 3/4" 9.

Material " " Steel Bar

Thickness of Combustion Chamber Sides Approved 11/16"

" " " " in Boilers 11/16"

Pitch of Screwed Stays in C.C. Sides 9" x 9 7/8"

Diar. " " Approved 1 3/4" Threads per Inch 9

" " " in Boilers do do

Material " " Steel

Thickness of Combustion Chamber Backs Approved 43/64"

" " " " in Boilers 43/64"

Pitch of Screwed Stays in C.C. Backs 10" x 8 3/8"

Diar. " " Approved 1 5/8 & 1 3/4. Threads per Inch 9

" " " in Boilers do — 9

Material " " Steel.

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

Thickness of Combustion Chamber Bottoms 15/16"

No. of Girders over each Wing Chamber 4.

" " " Centre " —

Depth and Thickness of Girders 2-7/8" Plates x 7 7/8" Deep.

Material of Girders Steel

No. of Stays in each Two

No. of Tubes, each Boiler 178

Size of Lower Manholes 16" x 12"

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	One			
Material	S.D. Copper			
Brazed, Welded or Seamless	Seamless			
Internal Diar.	3¾"			
Thickness	7. S.W.G.			
How are Flanges secured ?	Brazed.			
Date of Hydraulic Test	14-5-23			
Test Pressure	400 lbs.			
No. of Lengths	One			
Material	S.D. Copper			
Brazed, Welded or Seamless	Seamless			
Internal Diar.	3¾"			
Thickness	7. S.W.G.			
How are Flanges secured ?	Brazed			
Date of Hydraulic Test	14-5-23			
Test Pressure	400 lbs.			
No. of Lengths				
Material				
Brazed, Welded or Seamless				
Internal Diar.				
Thickness				
How are Flanges secured ?				
Date of Hydraulic Test				
Test Pressure				

EVAPORATORS.

No. Type Tons per Day

Makers

Working Pressure Test Pressure Date of Test

Date of Test of Safety Valves under Steam

None fitted

FEED WATER HEATERS.

No. Type

Makers

Working Pressure Test Pressure Date of Test

FEED WATER FILTERS.

No. Type Gravitation Size

Makers Henry Watson & Sons.

Working Pressure Test Pressure 20 lbs Date of Test 3-4-23

LIST OF DONKEY PUMPS.

Feed Donkey 6"×8½"×18" G & J Weir Ltd.

Ballast " 9"×11"×10" Thos Lamont.

SPARE GEAR.

No. of Top End Bolts.	2	No. of Bot. End Bolts.	2	No. of Cylinder Cover Studs	6
„ Coupling Bolts	6	„ Main Bearing Bolts	2	„ Valve Chest „	6
„ Junk Ring Bolts	6	„ Feed Pump Valves	1 Set	„ Bilge Pump Valves	1 Set
„ H.P. Piston Rings		„ I.P. Piston Rings		„ L.P. Piston Rings	
„ „ Springs		„ „ Springs		„ „ Springs	
„ Safety Valve „	1	„ Fire Bars	for 1 Furnace	„ Feed Check Valves	
„ Piston Rods		„ Connecting Rods		„ Valve Spindles	
„ Air Pump Rods		„ Air Pump Buckets		„ Air Pump Valves	
„ Cir. „		„ Cir. „		„ Cir. „	
„ Crank Shafts		„ Crank Pin Bushes		„ Crosshead Bushes	
„ Propeller Shafts		„ Propellers		„ Propeller Blades	2
„ Boiler Tubes	6	„ Condenser Tubes	3	„ Condenser Ferrules	20.

OTHER ARTICLES OF SPARE GEAR:—

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

,, 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.

COMPARTMENT.	Temp. at beginning of Trial.	Temp. at end of Trial.	Time required to obtain this Result.	Rise of Temp. after hours.

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

ELECTRIC LIGHTING.

Installation Fitted by The Furness Shipbuilding Co Ltd.

No. and Description of Dynamos One 4½ K.W. Compound Wound.

Makers of Dynamos Messrs The Sland Forge & Eng Co Ltd.

Capacity " 45. Amperes, at 100 Volts, 400 Revols. per Min.

Current Alternating or Continuous Continuous

Single or Double Wire System Double Wire Insulated System

Position of Dynamos aft end of E.R. Starbd Side.

" Main Switch Board do.

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

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.
(1) Engineers & Crew.	18	16	15	7/.036	Approx 2000 Amps per □"	100%	600 Meg.
	2	32					
	3	120					
(2) Navigation & For^d Accom	5	32	16	7/.064.	Approx 700 Amps per □"	100%	600 Meg
	3	8					
	14	16.					
(3) Engine Room	12	16	10·2	7/.036	Approx 1400 Amps. per □"	100%	600 Meg.
	3	200					

Total No. of Lights 60 No. of Motors driving Fans, &c. — No. of Heaters —

Current required for Motors and Heaters —

Positions of Auxiliary ~~Switch~~ FUSE Boards, with No. of Switches on each "A" Engine Room entrance "B" Engineers "C" Crew space forward.

Are Cut-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits Yes.

On Aux. " " each Auxiliary Circuit Yes.

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. 3/.029 S.W.G., Largest, No. 7/.064 S.W.G.

How are Conductors in Engine and Boiler Spaces protected? Single wire armouring over lead case.

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

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp Wire armouring over lead case.

(2) " passing through Bunkers or Cargo Spaces do.

(3) " " Deck Beams or Bulkheads Water tight bulkhead glands thro W/T bulkheads & decks

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables is unimpaired? Yes.

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

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? 1.5 Meg Ohms.

Is the Installation supplied with a Voltmeter? Yes.

" " " an Ampere Meter? Yes.

Date of Trial of complete Installation 23rd May 1923 Duration of Trial 4 hrs.

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.

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. "William H. Daniels"

as ascertained by ~~me~~ from personal examination

Bryan Hodgson.

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

Fees—

			£	s.	d.
MAIN BOILERS.					
H.S.	2692·6	Sq. ft.	20	0	0
G.S.	76·18	,,			
DONKEY BOILERS.					
H.S.		Sq. ft.			
G.S.		,,			
		£			
ENGINES.					
L.P.C.	29.	Cub. ft.	24	10	0
		£			
Testing, &c.					
		£			
Expenses					
		Total ... £	44	10	0

It is submitted that this Report be approved,

J. H. Adam

Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the 5th Sept 1923

Fees advised

Fees paid

Secretary.