

No. 2240

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 2280 No. in Register Book 3665

" " "

S.S. KOS VII

Makers of Engines Smiths Dock Co Ltd

Works No. 335

Makers of Main Boilers Blair No (1926) Ltd

Works No. 0.205

Makers of Donkey Boiler ✓

Works No. ✓



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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

18th December 1929

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ~~Single Triple~~ ^{Single Triple} Screw ~~Whaler~~ ^{Whaler}
"K O S. VII"

Official No.

Port of Registry

Candefjord

Registered Owners

Hoalgangsrudskøper Rosnes A/S.

Engines Built by

Swathe Skib Ltd.
South Bank-on-Las.

at

Main Boilers Built by

Bjelln. Co (1926) Ltd.
Stockton-on-Las.

at

Donkey

at

Date of Completion

6-29.

First Visit

25-2-29

Last Visit

19-6-29.

Total Visits

30



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RECIPROCATING ENGINES.

Works No. **335** No. of Sets **1** Description **Triple expansion. 3 Cyls.**

No. of Cylinders each Engine **3**No. of Cranks **3**Diams of Cylinders **14"-23"-39"**Stroke **24"**Cubic feet in each L.P. Cylinder **16.6**

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

Diameter of Piston Rods (plain part)

Screwed part (bottom of thread)

Material "

Diam. of Connecting Rods (smallest part)

Material

" Crosshead Gudgeons

Length of Bearing

Material

No. of Crosshead Bolts (each)

Diam. over Thrd.

Thrds. per inch

Material

" Crank Pin " " " "

" Main Bearings

Lengths

" Bolts in each

Diam. over Thread

Threads per inch

Material

" Holding Down Bolts, each Engine

Diam.

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 **Brown Bros.**

Piston " "

Crossheads, " "

Connecting Rods, Finished by **Smiths Ship Co.**

Piston " "

Crossheads, " "

Date of Harbour Trial **13-6-29.**" Trial Trip **19-6-29.**Trials run at **In North Sea.**Were the Engines tested to full power under Sea-going conditions? **yes.**

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

Revs. per min. **149**Pressure in 1st I.P. Receiver, **60** lbs., 2nd I.P.,lbs., L.P., **10.5** lbs., Vacuum, **25"** ins.Speed on Trial **no speed taken**

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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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

same as HOS I

HOS I



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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

same as "HOS. I"

Diar. of Screwed Stays Approved Threads per Inch

" " in Boilers

Material "

Thickness of Combustion Chamber Walls Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Tops

Diar. of Stays Approved Threads per Inch

" " in Boilers

Material "

Thickness of Combustion Chamber Bottoms Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Backs

Diar. of Stays Approved Threads per Inch

" " in Boilers

Material "

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

Thickness of Combustion Chamber Bottoms

No. of Rivets over each Wing Channel

Centre

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Diam. of Screwed Stays Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

Pitch of Screwed Stays in O.C. Sides

Diam. " " Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Backs

Diam. " " 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

None as HOS.

VERTICAL DONKEY BOILERS

No. of Boilers
Type
Greatest Int. Diam.
Height
Height of Boiler Crown above the Grate
Are Boiler Crowns Flat or Dished?
Internal Radius of Dished Heads
Thickness of Plates
Description of Beams in Boiler Crowns
Diam. of Rivet Holes
Pitch
Width of Overlap
Height of Firebox Crown above the Grate
Are Firebox Crowns Flat or Dished?
External Radius of Dished Crowns
Thickness of Plates
No. of Crown Stays
Diam. / Material
External Diam. of Firebox at Top
Thickness of Plates
Bottom
No. of Water Tubes
Ext. Diam.
Material of Water Tubes
Size of Manhole in Shell
Dimensions of Compressing Ring
Heating surface each Boiler
Grate surface

SUPERHEATERS



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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

Diar. / W. of or Diam. of

Internal Diar.

Thickness

How are Joints secured?

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Diar. / W. of or Diam. of

Internal Diar.

Thickness

How are Joints secured?

Date of Hydraulic Test

Test Pressure

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MAIN STEAM PIPES.

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

1
copper.
S. D. "
4 1/2"
1/2 W.T.
braked.
6-6-29.
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

STEAM EVAPORATORS

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

Description of Apparatus

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

Description of Apparatus

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

Description of Apparatus

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

Description of Apparatus



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

Installation fitted by
% and Description of Dynamometer
Meters of Dynamometer
Capacity
Current Alternating or Continuous
Single or Double Wire System
Location of Dynamometer
 " *Main Switch Board*
 " *No. of Circuits to which switches are attached on Main Switch Board*
 " *Particulars of these Circuits*

Circuit	Number of Lights	Number of Motors	Number of Pumps	Number of Fans	Number of Other Appliances	Size of Cable	Current	Capacity	Particulars of these Circuits

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

Amperes 110 110 110 110 110 110 110 110 110 110

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 Screws 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?

Ohms,

Is the Installation supplied with a Voltmeter?

" " " an Ampere Meter

Date of Trial of complete Installation 19-6-19. Duration of Trial

Chris.

Have all the requirements of Section 42 been satisfactorily carried out? *y/s.*

It is recommended that this Report be approved
and the Minutes read in the Commission of Engineers and Builders as far as can be seen and
is the Workmanship throughout thoroughly satisfactory

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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 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.

as ascertained by ^{me} from personal examination

K O S. VII
J. D. Stephenson

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

Fees—

MAIN BOILERS.		£	s.	d.
H.S.	<i>2292</i> Sq. ft.	:	:	
G.S.	<i>55-7</i> "	:	:	
DONKEY BOILERS.				
H.S.	Sq. ft.	:	:	
G.S.	"	:	:	
		£	:	:
ENGINES				
L.P.O.	<i>16-6</i> Cub. ft.	:	:	
		£	:	:
Testing, &c.	...	:	:	
		£	:	:
Expenses	...	:	:	
Total		£	:	:

It is submitted that this Report be approved,

Gas Barr for Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the *23rd* December 1929



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Fees advised

Fees paid

Robert Murray

Secretary.

GENERAL CONSTRUCTION

MAINTENANCE	100.00	100.00
REPAIRS	50.00	50.00
...
Total	150.00	150.00

It is submitted that this report be approved.

Approved by the Committee for the Class of M.B.S. on the 15th day of 1911

[Handwritten Signature]

K.O.S. VII

[Handwritten Signature]

[Handwritten Signature]



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