

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY.

No. 10016

Received at London Office

3 NOV 1927

of writing Report 14 October 1927 When handed in at Local Office

19 Port of

AMSTERDAM

in Survey held at AMSTERDAM

Date, First Survey 14 May 1925 Last Survey 18 October 1927

Number of Visits 6

835 on the ~~Single~~ ~~Triple~~ ~~Quadruple~~ Screw vessel

"ELAX"

Tons Gross 7400
Net

at Amsterdam

By whom built Nederl. Schipsb. My.

Yard No. 184 When built 1927

ines made at Amsterdam

By whom made Werkspoor

Engine No. - When made 1927

Boilers made at Amsterdam

By whom made Werkspoor

Boiler No. - When made 1927

Horse Power 3500

Owners Anglo-Saxon Petroleum Co. Ltd.

Port belonging to London

Horse Power as per Rule 1200

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes

le for which vessel is intended

ENGINES, &c.—Type of Engines

Diesel Type

2 or 4 stroke cycle Single or double acting

Mean pressure in cylinders 500/454

Diameter of cylinders 32 1/4"

Length of stroke 59"

No. of cylinders 6

No. of cranks 6

of bearings, adjacent to the Crank, measured from inner edge to inner edge 43 1/4"

Is there a bearing between each crank Yes

Revolutions per minute 90

Flywheel dia. 10' 0"

Weight 9 tons

Means of ignition Compression

Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 21 1/4"

Crank pin dia. 21 1/4"

Crank Webs

Mid. length breadth 41"

Mid. length thickness 13 3/8"

shrink

Thickness parallel to axis 13 1/8"

Thickness around eye hole 9 3/4"

Intermediate Shafts, diameter as per Rule 22"

as fitted 22"

Thrust Shaft, diameter at collars as per Rule 22"

as fitted 22"

Screw Shaft, diameter as per Rule 18 1/4"

as fitted 18 1/4"

Is the tube shaft fitted with a continuous liner Yes

Liners, thickness in way of bushes as per Rule 1/8" x 1"

as fitted 1/8" x 1"

Thickness between bushes as per rule 1/32"

as fitted 1/32"

Is the after end of the liner made watertight in the

or boss Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length

liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive tight fit

liners are fitted, is the shaft lapped or protected between the liners

Is an approved Oil Gland or other appliance fitted at the after

the tube shaft United States propeller

Length of Bearing in Stern Bush next to and supporting propeller 6' 2 1/4"

Pitch 16 3/4"

No. of blades 4

Material Bronze

whether Moveable Solid

Total Developed Surface 95 sq. feet

d of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Thickness of cylinder liners 65.2 x 45.50

Are the cylinders fitted with safety valves Yes

Are the exhaust pipes and silencers water cooled or lagged with

ducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine to funnel

g Water Pumps, No. 2. 300 x 300 Tm. Off action

Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Pumps worked from the Main Engines, No. 2

Diameter 12 1/4 Tm.

Stroke 300 Tm.

Can one be overhauled while the other is at work Yes

connected to the Main Bilge Line

No. and Size Two 8 x 10 1/4 x 10" and 6 x 4 x 10"

How driven Steam driven

Pumps, No. and size One 8 x 10 1/4 x 10"

Lubricating Oil Pumps, including Spare Pump, No. and size 2 - 2 1/2 x 1 1/2 x 1 1/2

independent means arranged for circulating water through the Oil Cooler Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Machinery Spaces 6 of 3 1/2"

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

s, &c. Pump room 20" 2 1/2"

duplex 50" 2 1/2"

Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

ndent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two 1 x 4 1/2" and 1 x 6 1/2"

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes

Are the Bilge Suctions in the Machinery Spaces

easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

ea Connections fitted direct on the skin of the ship Yes

Are they fitted with Valves or Cocks Both

fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

each fitted with a Discharge Valve always accessible on the plating of the vessel Yes

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

es pass through the bunkers

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

es pass through the deep tanks

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

angement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

ent to another Yes

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

r Compressors, No. 2

No. of stages 3

Diameters 65/50 - 150

Stroke 550

Driven by m. shaft

y Air Compressors, No. 2

No. of stages 3

Diameters 300 cub ft

Stroke One

Driven by Steam

Auxiliary Air Compressors, No. 1

No. of stages 1

Diameters 100 cub ft

Stroke 1

Driven by 4 S.C.S.A. Diesel motor

ing Air Pumps, No. 1

Diameter 10"

Stroke 1

Driven by 4 S.C.S.A. Diesel motor

Engines crank shafts, diameter as per Rule 18 1/4"

as fitted 18 1/4"

18 1/4" (3 - 1 cylinder and 1 - 3 cylinders) 4 S.C.S.A. Diesel

EICEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

Internal surfaces of the receivers be examined Yes

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

e drain arrangement fitted at the lowest part of each receiver Yes

Pump room 20" 2 1/2"

duplex 50" 2 1/2" Tm. dia. 4 0 1/2" Cofferdam 40" 3" 20" 2 1/2" and 10" 3"

essure Air Receivers, No. 3

Cubic capacity of each 20 cub ft

Internal diameter 51 1/2"

Thickness 1 1/2"

Range of tensile strength 51/50 tons

lap welded or riveted longitudinal joint

Material Steel

Working pressure by Rules 925 lb

Air Receivers, No. 4

Total cubic capacity 1848 cub ft

Internal diameter 63"

Thickness 1 1/2"

Range of tensile strength 51/50 tons

lap welded or riveted longitudinal joint

Material Steel

Working pressure by Rules 462 lb

e for vacuum gear, number 1. Capacity 22 cub ft

Internal diameter 30"

Thickness 1 1/2"

2 for dry vacuum 342

Internal diameter 30"

Thickness 1 1/2"

002374-002384-0125

IS A DONKEY BOILER FITTED? *Yes (two)*

PLANS. Are approved plans forwarded herewith for Shifting (If not, state date of approval) *Refused*

If so, is a report now forwarded? *Yes, sent now.*

SPARE GEAR

4 top end bolts and nuts, 2 bottom end bolts and nuts, 2 main bearing bolts, 2 sets of coupling bolts, 1 set of fuel and oil pump valve, 1 set of piston springs, a quantity of assorted bolts and nuts, 1 three throw crankshaft, 2 sets crosshead bars, 2 bottom end bars, 1 complete 1st main bearing bar, 6 miles and exhaust valve bars with valve and springs complete. Plans see further list attached.

The foregoing is a correct description,

WERKSPUOR

Dates of Survey while building	During progress of work in shops	During erection on board vessel	Total No. of visits	Manufacturer
	1/15, 2/10, 19/25	1/15, 2/10, 19/25	60	
Dates of Examination of principal parts	Cylinders 1/15, 2/10, 19/25	Covers 1/15, 2/10, 19/25	Pistons 1/15, 2/10, 19/25	Rods 1/15, 2/10, 19/25
Crank shaft 28/16	Flywheel shaft 5/11-26	Thrust shaft 9/15-26	Intermediate shafts 11/3-26	Connecting rods 28/15-26
Screw shaft 15-24	Propeller 25/3-24	Stern tube 10/3-24	Engine seatings 8/16-24	Engines holding down bolts 9/16-24
Completion of fitting sea connections 25/3-24	Completion of pumping arrangements 3/10-24	Engines tried under working conditions 18/10-24	Identification Marks 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500	
Crank shaft, Material Steel	Thrust shaft, Material Steel	Tube shaft, Material Steel	Is the flash point of the oil to be used over 150° F. <i>Yes</i>	Is this machinery duplicate of a previous case <i>Yes</i>
Identification Mark 1403	Identification Mark 1404	Identification Mark 1405	Identification Mark 1406	Identification Mark 1407
Identification Mark 1408	Identification Mark 1409	Identification Mark 1410	Identification Mark 1411	Identification Mark 1412
Identification Mark 1413	Identification Mark 1414	Identification Mark 1415	Identification Mark 1416	Identification Mark 1417
Identification Mark 1418	Identification Mark 1419	Identification Mark 1420	Identification Mark 1421	Identification Mark 1422
Identification Mark 1423	Identification Mark 1424	Identification Mark 1425	Identification Mark 1426	Identification Mark 1427
Identification Mark 1428	Identification Mark 1429	Identification Mark 1430	Identification Mark 1431	Identification Mark 1432
Identification Mark 1433	Identification Mark 1434	Identification Mark 1435	Identification Mark 1436	Identification Mark 1437
Identification Mark 1438	Identification Mark 1439	Identification Mark 1440	Identification Mark 1441	Identification Mark 1442
Identification Mark 1443	Identification Mark 1444	Identification Mark 1445	Identification Mark 1446	Identification Mark 1447
Identification Mark 1448	Identification Mark 1449	Identification Mark 1450	Identification Mark 1451	Identification Mark 1452
Identification Mark 1453	Identification Mark 1454	Identification Mark 1455	Identification Mark 1456	Identification Mark 1457
Identification Mark 1458	Identification Mark 1459	Identification Mark 1460	Identification Mark 1461	Identification Mark 1462
Identification Mark 1463	Identification Mark 1464	Identification Mark 1465	Identification Mark 1466	Identification Mark 1467
Identification Mark 1468	Identification Mark 1469	Identification Mark 1470	Identification Mark 1471	Identification Mark 1472
Identification Mark 1473	Identification Mark 1474	Identification Mark 1475	Identification Mark 1476	Identification Mark 1477
Identification Mark 1478	Identification Mark 1479	Identification Mark 1480	Identification Mark 1481	Identification Mark 1482
Identification Mark 1483	Identification Mark 1484	Identification Mark 1485	Identification Mark 1486	Identification Mark 1487
Identification Mark 1488	Identification Mark 1489	Identification Mark 1490	Identification Mark 1491	Identification Mark 1492
Identification Mark 1493	Identification Mark 1494	Identification Mark 1495	Identification Mark 1496	Identification Mark 1497
Identification Mark 1498	Identification Mark 1499	Identification Mark 1500		

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines of this vessel have been constructed under supervision of the Engineer Surveyor to Lloyd's Register and have been tested under full working conditions and found to be in good order. The vessel is in my opinion suitable to be licensed + R.M.C. 10.24*

The amount of Entry Fee	...	£ 42
Special	...	£ 1560
Donkey Boiler Fee	...	£ 201.60
Travelling Expenses (if any)	...	£ 196.80
Committee's Minute	...	£ 88.40

When applied for, 19...
When received, 7.11.24

F. W. Bennett
Engineer Surveyor to Lloyd's Register of Shipping.

STEEL. *Dorman Long*
The South Durham Iron Works
Has the Steel been tested as required by the Rules? *Yes.*