

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office  
NEWCASTLE-ON-TYNE.

When handed in at Local Office 28/9/45 Port of 1945  
 Date, First Survey Aug. 29<sup>th</sup> Last Survey Aug. 10<sup>th</sup> 1945  
 (Number of Visits 100) Gross 13830  
 Tons Net 7401  
 No. in Survey held at Wallsend on Tyne  
 Reg. Book. on the Loan Se. WHALE FACTORY "NORTHVAL"  
 Built at Haverton Hill on Tyne. By whom built Furness S.B. Coy. Ls  
 Yard No. 388. When built  
 Engines made at Wallsend on Tyne By whom made N.E. MAR. ENG. CO. (1938) Ls Engine No. 3115 When made 1945.  
 Boilers made at ditto By whom made ditto Boiler No. 3115 When made 1945  
 Owners NORWEGIAN SHIPPING & TRADE MISSION. Port belonging to LARVIK  
 Registered Horse Power 1356. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes  
 Nom. Horse Power as per Rule 1356. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes  
 Trade for which Vessel is intended Ocean going Whale Factory

Revs. per minute 76  
 NGINES, &c. Description of Engines 3 Cyl Triple Expn.  
 Dia. of Cylinders 24 1/2 + 39 + 70 Length of Stroke 48" No. of Cylinders 6. No. of Cranks 6.  
 Crank shaft, dia. of journals as per Rule 13.98" as fitted 14 3/4" Crank pin dia. 14 3/4" Mid. length breadth shrunk Thickness parallel to axis 9" Mid. length thickness 6 3/8" Thickness around eye-hole 6 3/8"  
 Intermediate Shafts, diameter as per Rule 13.2" as fitted 15 1/2" Body: 14 1/2" at ends Thrust shaft, diameter at collars as per Rule 14.74 + 52 for Sea Navys Is the tube screw shaft fitted with a continuous liner Yes  
 Tube Shafts, diameter as per Rule 24.75" as fitted 16" Is the after end of the liner made watertight in the propeller boss Yes  
 Bronze Liners, thickness in way of bushes as per Rule 13/16" as fitted 13/16" Thickness between bushes as per Rule 1 1/16" Is the after end of the liner made watertight in the propeller boss Yes  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner An one piece  
 If the 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 a tight fit.  
 If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube  
 Propeller, dia. 17-0" Pitch VARYING No. of Blades 4. Material M. Brz whether Moveable No Length of Bearing in Stern Bush next to and supporting propeller 5-4"  
 Feed Pumps worked from the Main Engines, No. Nil. Diameter 4" Stroke 27" Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2. Diameter 4" Stroke 27" Can one be overhauled while the other is at work Yes  
 Pumps connected to the Main Bilge Line No. and size 250 lpm/hr. How driven By Steam. 110 lpm/hr.  
 Ballast Pumps, No. and size 2 x 13 1/2" x 16 1/2" x 26" Lubricating Oil Pumps, including Spare Pump, No. and size  
 Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room 1 of 4" at aft end; 4 of 3 1/2"; 1 of 2 1/2" to d. bin. cofferdam.  
 In Pump Room In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 in 1 1/2" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 6" dia.  
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks with both.  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line below  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate except AUX. COND. DISCHARGE.  
 What Pipes pass through the bunkers Have they been tested as per Rule  
 What pipes pass through the deep tanks Yes  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 Is the arrangement 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 compartment to another Yes Is the Shaft Tunnel watertight NONE FITTED. MACHY. AFT. Is it fitted with a watertight door worked from 21996 sq. ft.  
 Total Heating Surface of Boilers 22,136 sq. ft. all 8 Bbls 21996 Bbls 7920 sq. ft.

MAIN BOILERS, &c.—(Letter for record S.) Which Boilers are fitted with Forced Draft All eight Boilers Which Boilers are fitted with Superheaters all 8 Bbls  
 No. and Description of Boilers 8. S.B. Working Pressure 220 lbs/sq. in. 21996 Bbls 7920 sq. ft.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes. for both 16" dia & 15" dia.  
 IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded?  
 Can the donkey boiler be used for domestic purposes only  
 PLANS. Are approved plans forwarded herewith for Shafting 8-12-44 Main Boilers 7-9-44 Auxiliary Boilers Donkey Boilers  
 Superheaters N.E. Mar. Standard General Pumping Arrangements 22-6-45 Oil fuel Burning Piping Arrangements 22-6-45.

## SPARE GEAR.

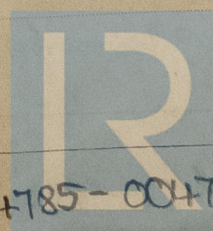
Has the spare gear required by the Rules been supplied Yes.  
 State the principal additional spare gear supplied 1. Propeller Shaft complete with nut; 1 Piston Rod with nut, 1 Valve spindle with nut, 2 Ecc. straps, 1 Guide Shoe complete, 2 Air Pump Rods, 50 plain Boiler tubes etc.

Dynamo auxiliary engine comply with Rules 1803  
 (See letter 10.7.45)

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.  
 The foregoing is a correct description.

J. H. Smith  
 DIRECTOR.

Manufacturer.



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Lloyd's Register  
Foundation

004785-004788-0199



During progress of work in shops - - - *(1944) Aug 29, Nov. 1, 2, 14, 15, 17, 20, 29 Dec. 1, 4, 5, 11, 15, 19, 29 (1945) Jan. 2, 18, 19, 31 Feb. 6, 8, 9, 15, 21, 22, 27, 28, 29, 30*  
 Dates of Survey while building *1, 6, 14, 23, 28, 29, 30* *Apr. 3, 5, 10, 11, 12, 13, 16, 17, 19, 20, 23, 24, 27, 30* *May 1, 2, 3, 4, 7, 10, 11, 14, 15, 16, 17, 18, 22, 23, 25, 28, 29, 30, 31* *June 1, 4, 5, 6, 7, 8, 11, 12, 13, 15, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29* *July 2, 4, 5, 6, 9, 10, 12, 20* *Aug. 10*  
 During erection on board vessel - - -  
 Total No. of visits *100*

Dates of Examination of principal parts—Cylinders *Pat 22-5-45* *Stbr 1-6-45* Slides *17-5-45* Covers *As Cylinders*  
 Pistons *17-5-45* Piston Rods *17-5-45* Connecting rods *17-5-45*  
 Crank shaft *Pat 23-3-45* *Stbr 27-4-45* Thrust shaft *Pat 14-3-45* *Stbr 6-3-45* Intermediate shafts *17-7-45 W. Hpl.*  
~~Tube shaft~~ Screw shaft *19-7-45 W. Hpl.* *30-7-45 W. Hpl.* Propeller *20/1/45* *24/1/45*  
 Stern tube *12/7/45* *16/7/45* Engine and boiler seatings *25/6/45* *25/5/45* *25/8/45* Engines holding down bolts *3/10/45* *24/10/45*  
 Completion of fitting sea connections *23/7/45*  
 Completion of pumping arrangements *23/11/45* Boilers fixed *27/8/45* *22/10/45* Engines tried under steam *21/10/45* *24/5/45*  
 Main boiler safety valves adjusted

Crank shaft material *OH. Forged Steel* Identification Mark *14-3-45 AN. 16-3-45 AN.* Thickness of adjusting washers *PORT ENG. STAR ENG. NEM. 3/15.* Thrust shaft material *OH. Forged Steel* Identification Mark *P. LLOYDS 544 REG*  
 Intermediate shafts, material *F. Stl* Identification Marks *3442.C.P.* *3448.C.P.* *3449.C.P.* *3448.C.P.* *3448.C.P.* Identification Mark *S. 3436CP.*  
 Screw shafts, material *F. Stl* Identification Mark *3442.C.P.* *3449.C.P.* Steam Pipes, material *S. DAVIES* Test pressure *660 lbs.* Date of Test *25-5-45*  
 Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*  
 Have the requirements of the Rules for the use of oil as fuel been complied with *Yes*  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *Yes* If so, have the requirements of the Rules been complied with *Yes*  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *Yes*  
 Is this machinery duplicate of a previous case *No* If so, state name of vessel *Yes*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The Machinery has been constructed under special survey in accordance with the approved plans and the Society's Rules, and the materials & workmanship are good. The Engines & Boilers have been sent to Haverton Hill in Tees for installing on board.*

Plans as per list  
 Forging reports, Steel analysis notes  
 Copies of certificates of 9 hour boiler



The amount of Entry Fee ... £ *6* : - :  
 Special *45% NWC. 9%* £ *133* : *18* :  
 Donkey Boiler *15% MDA 2%* £ : :  
 Travelling Expenses (if any) £ : :  
 Committee's Minute *FRI. 15 FEB 1946*  
 Assigned *Sir F.E. Mackay. rpb*

When applied for, *28 SEP 1945*  
 When received, *19*

*A Watt.*  
 Engineer Surveyor to Lloyd's Register of Shipping.