

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Received at London Office

14 DEC 1936

Date of writing Report 9th Feb. 1936 When handed in at Local Office 10 Port of BREMEN  
 Date, First Survey 8th February 1936 Last Survey 23rd Nov. 1936  
 Reg. Book. 8579 on the STEEL SC. TRAWLER NORTHERN DUKE (Number of Visits 27)  
 Tons { Gross 655  
 Net 243  
 Built at WESERMÜNDE By whom built DEUTSCHE SCHIFF UND MASCHINENBAU A.G. WERK: SEEBECK Yard No. 559 When built 1936  
 Engines made at WESERMÜNDE By whom made DESCHIMAG, WERK: SEEBECK Engine No. 1436 When made 1936  
 Boilers made at WESERMÜNDE By whom made DESCHIMAG, WERK: SEEBECK Boiler No. 760 When made 1936  
 Registered Horse Power 167 Owners MAC LINE LTD Port belonging to LONDON  
 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which Vessel is intended FISHING

**ENGINES, &c.**—Description of Engines ONE TRIPLE EXP. STEAM ENG. WITH L.P. TURBINE D.R. GEARED. Revs. per minute 120  
 Dia. of Cylinders 380 x 610 x 1000 Length of Stroke 660 No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 2.09 Crank pin dia. 2.20 Crank webs Mid. length breadth 140 Thickness parallel to axis 140  
 as fitted 2.10 Crank webs shrunk Mid. length thickness 100 Thickness around eye-hole 100  
 Intermediate Shafts, diameter as per Rule 2.06 Thrust shaft, diameter at collars as per Rule 2.17  
 as fitted 2.10 as fitted 2.20  
 Tube Shafts, diameter as per Rule 2.30 Screw Shaft, diameter as per Rule 2.40 Is the { tube } shaft fitted with a continuous liner { yes  
 as fitted 2.30 as fitted 2.40 { screw }  
 Bronze Liners, thickness in way of bushes as per Rule 14 Thickness between bushes as per Rule 10.5 Is the after end of the liner made watertight in the  
 as fitted 15 as fitted 12  
 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 one length  
 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 fit tightly  
 If two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after end of the tube  
 aft no If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 1100  
 Propeller, dia. 3490 Pitch 3340 No. of Blades 4 Material cast iron whether Moveable no Total Developed Surface 46.5 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 80 Stroke 325 Can one be overhauled while the other is at work yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 80 Stroke 325 Can one be overhauled while the other is at work yes  
 Feed Pumps { No. and size 1 1000 diam 190 x 127 Pumps connected to the { No. and size 1 4000 diam 152 x 152 1 Ejector  
 How driven steam Main Bilge Line { How driven steam  
 Ballast Pumps, No. and size 1 1000 diam 152 Lubricating Oil Pumps, including Spare Pump, No. and size 1 1000 diam 152 x 152  
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room 1 of 60, 1 of 70 from Ejector  
 In Pump Room no In Holds, &c. in open from hold 1 of 60, 1 of 70, in main fish hold  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 of 150 Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 1 of 70 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 and valve shut Are they fitted with Valves or Cocks valves & cocks  
 Are they sized 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 above  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes  
 What Pipes pass through the bunkers none How are they protected no  
 What pipes pass through the deep tanks none Have they been tested as per Rule no  
 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 no Is it fitted with a watertight door no worked from no

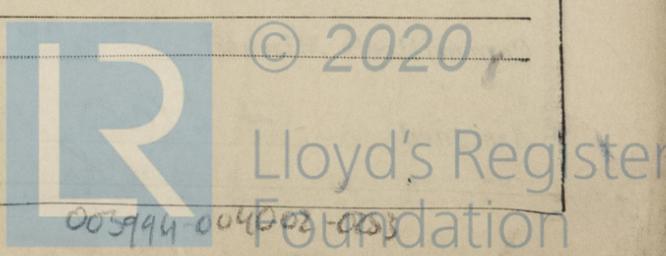
**MAIN BOILERS, &c.**—(Letter for record 5) Total Heating Surface of Boilers 250 m<sup>2</sup> 2691 1/2  
 Is Forced Draft fitted no No. and Description of Boilers one Multitubular Boiler Working Pressure 228 lbs  
**IS A REPORT ON MAIN BOILERS NOW FORWARDED?** yes  
**IS A DONKEY BOILER FITTED?** no If so, is a report now forwarded? no  
 Is the donkey boiler intended to be used for domestic purposes only no  
**PLANS.** Are approved plans forwarded herewith for Shafting 25.11.35, 18.11.35 Main Boilers 8.11.35 Auxiliary Boilers no Donkey Boilers no  
 (If not state date of approval)  
 Superheaters 24.12.35 General Pumping Arrangements 11.2.36 Oil fuel Burning Piping Arrangements no

### SPARE GEAR.

Has the spare gear required by the Rules been supplied yes  
 State the principal additional spare gear supplied 2 bottom end bearings, 1 set of air pump valves, 6 piston bolts, 6 cylinder cover studs & nuts, 2 safety valve springs.

The foregoing is a correct description,  
 Deutsche Schiff- und Maschinenbau Aktiengesellschaft

Manufacturer.



*ppa Koefer*  
*W. J. Meyer*

1936  
 Feb 8. March 24. July 7. 27. 31. Aug. 4. 7. 14. 21. 25. 28. 31. Sept 8. 28. Oct 2. 13. 16. 20. 23. 29.

Dates of Survey while building  
 During progress of work in shops - - - Nov. 3.  
 During erection on board vessel - - - Oct. 29. Nov. 3. 6. 10. 13. 17. 20. 23  
 Total No. of visits 27

Dates of Examination of principal parts—Cylinders 16. 20. 23/10.36 Slides 3. 11. 36 Covers 16. 20. 23. 10/36  
 Pistons 3. 11. 36. Piston Rods 3. 11. 36 Connecting rods 29. 10. 36  
 Crank shaft 8. 9. 36. Thrust shaft 28. 7. 36 Intermediate shafts 4. 8. 36  
 Tube shaft ✓ Screw shaft 4. 8. 36 Propeller 28. 8. 36  
 Stern tube 27. 7. 36 Engine and boiler seatings 23. 10. 36 Engines holding down bolts 10. 11. 36  
 Completion of fitting sea connections 28. 8. 36  
 Completion of pumping arrangements 23. 11. 36 Boilers fixed 29. 10. 36 Engines tried under steam 23. 11. 36  
 Main boiler safety valves adjusted 20. 11. 36 Thickness of adjusting washers P.M. 35.92 Fresh 31.42 Length 15.2  
 Crank shaft material *I.M. Steel* Identification Mark *A.C. 8.9.36* Thrust shaft material *I.M. Steel* Identification Mark *G.B. 28.7.36*  
 Intermediate shafts, material *I.M. Steel* Identification Marks *A.C. 4.8.36* Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material *I.M. Steel* Identification Mark *A.C. 4.8.36* Steam Pipes, material *Steel* Test pressure 50 kg/cm<sup>2</sup> Date of Test 10. 11. 36  
 Is an installation fitted for burning oil fuel *no* Is the flash point of the oil to be used over 150°F. ✓  
 Have the requirements of the Rules for the use of oil as fuel been complied with ✓  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ✓ If so, have the requirements of the Rules been complied with ✓  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓  
 Is this machinery duplicate of a previous case *yes* If so, state name of vessel *NORTHERN PRIDE*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *This Machinery has been built under special survey in accordance with the approved plans, the Secretary's letters, and in conformity with the requirements of the Rules. The materials used in the construction are made at works recognised by the Committee and tested by the Port Surveyors. Materials & workmanship are of good quality. During a 5 hours trial trip all the machinery has been tested under full working and manœuvring condition, with and without surtine, and found satisfactory in all respects.*  
*This machinery is eligible in my opinion to be classed in the Port Reg. Book with records of: \* LMC M.36. Tail Shaft CL.*

Certificate to be sent to *Mariner Office*

The amount of Entry Fee ... *RM* 60.- : When applied for,  
 Special ... *RM* 835.- : 23. 11. 1936  
 Donkey Boiler Fee ... £ : When received,  
 Travelling Expenses (if any) £ 120 : 8. 12. 36

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

Committee's Minute **FRI. 18 DEC 1936**

Assigned *+ LMC 11.36*  
*(Sh 1) CL*

