

REPORT ON MACHINERY.

No. 1645.6.

Port of Amsterdam Received at London Office THUR. 19 FEB 1903

No. in Survey held at Latt. Kommand Date, first Survey 23rd June 1902 Last Survey 12th of January 1903
Reg. Book. Steel Screw Two Charles (Number of Visits 9)

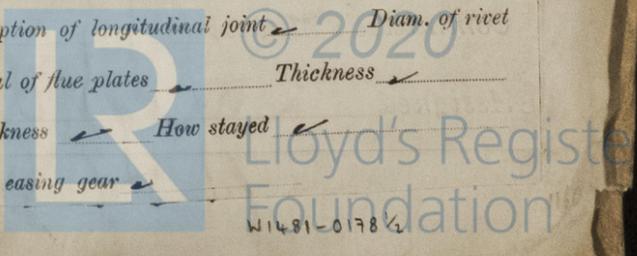
Master N. S. Built at Latt Kommand By whom built J. Meijer Tons 1-1903
Engines made at South Shields By whom made G. T. Gray & Co. when made 1897
Boilers made at South Shields By whom made J. T. Attingham when made 1897

Registered Horse Power _____ Owners Charles Maxwell Port belonging to London
Nom. Horse Power as per Section 28 39. Is Refrigerating Machinery fitted Is Electric Light fitted No

ENGINES, &c.—Description of Engines Surface Condensing Compound Engines No. of Cylinders two No. of Cranks two
Dia. of Cylinders 14 x 30 Length of Stroke 21 Revs. per minute 110 Dia. of Screw shaft as per rule 6.16 Material of steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight
in the propeller boss Yes If the liner is in more than one length are the joints burned No 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 No If two
liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 24"
Dia. of Tunnel shaft as per rule 5.84 Dia. of Crank shaft journals as per rule 6.16 Dia. of Crank pin 5.84 Size of Crank webs 21 x 8 1/4 Dia. of thrust shaft under
collars 5.84 Dia. of screw 7.1 Pitch of screw 15 No. of blades 4 State whether moveable No Total surface ?
No. of Feed pumps One Diameter of ditto 2 Stroke 10 Can one be overhauled while the other is at work No
No. of Bilge pumps One Diameter of ditto 2 Stroke 10 Can one be overhauled while the other is at work No
No. of Donkey Engines One Sizes of Pumps 4 1/2 x 2 1/4 x 4 duplex No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Three In Holds, &c. One in each hold

No. of bilge injections One sizes 3 1/2 Connected to condenser or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes 1"
Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves and Cocks
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the discharge pipes above or below the deep water line Yes
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 are carried through the bunkers All steam pipes How are they protected Running through a steel tubing
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes
When were stern tube, propeller, screw shaft, and all connections examined in dry dock While fitting Is the screw shaft tunnel watertight No
Is it fitted with a watertight door No worked from built under special survey in 1898 by Messrs. Attingham & Co. Is forced draft fitted No

BOILERS, &c.— (Letter for record _____) Total Heating Surface of Boilers 6810 Working Pressure 110 lbs Tested by hydraulic pressure to 220 lbs
No. and Description of Boilers _____ Date of test 22nd Dec 1902 Can each boiler be worked separately Yes Area of fire grate in each boiler _____ No. and Description of safety valves to
each boiler two direct spring Area of each valve 4.908 Pressure to which they are adjusted 115 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers on woodwork 10" Mean dia. of boilers _____ Length _____ Material of shell plates _____
Thickness _____ Range of tensile strength _____ Are they welded or flanged _____ Descrip. of riveting: cir. seams _____ long. seams _____
Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____
Per centages of strength of longitudinal joint _____ Working pressure of shell by rules _____ Size of manhole in shell _____
Size of compensating ring _____ No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____
Length of plain part _____ Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____
Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
Material of stays _____ Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____
Material _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____
Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
Thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____
Diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
Pitch across wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and
thickness of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of Stays in each _____
Working pressure by rules _____ Superheater or Steam chest; how connected to boiler _____ Can the superheater be shut off and the boiler worked
separately _____ Diameter _____ Length _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet
holes _____ Pitch of rivets _____ Working pressure of shell by rules _____ Diameter of flue _____ Material of flue plates _____ Thickness _____
If stiffened with rings _____ Distance between rings _____ Working pressure by rules _____ End plates: Thickness _____ How stayed _____
Working pressure of end plates _____ Area of safety valves to superheater _____ Are they fitted with easing gear _____



DONKEY BOILER—		No.	Description	
Made at	By whom made		When made	Where fixed
Working pressure tested by hydraulic pressure to	No. of Certificate	Fire grate area	Description of safety valves	
No. of safety valves	Area of each	Pressure to which they are adjusted	If fitted with easing gear	By steam from main boilers can enter the donkey boiler
Diap. of donkey boiler	Length	Material of shell plates	Thickness	Range of tensile strength
Descrip. of riveting long seams	Diap. of rivet holes	Whether punched or drilled	Pitch of rivets	
Lap of plating	Per centage of strength of joint	Rivets Plates	Thickness of shell crown plates	Radius of do.
Diap. of stays	Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
joint	Thickness of furnace crown plates	Stayed by	Working pressure of shell by rules	
Working pressure of furnace by rules	Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of s

2nd of July 1902 till the 1st of January 1905

Eight Nine

Is the approved plan of main boiler forwarded herewith No

donkey " " " "

General Remarks (State quality of workmanship, opinions as to class, &c.)

For reference to this case please see the Rotterdam Surveyors Correspondence dated 2nd of June 1902 and Secretary's reply thereto, and Amsterdam Correspondence 4th of Sept 1st reply thereto of the 5th of Sept 1902. The second hand machinery originally fitted in a steam trawler named Rover has been placed on board the new steel screw tug Charles of which the first entry report is hereto affixed.

The engines were made by Mr G. T. Grey of South Shields in 1894 but not constructed under special survey of the Society's Surveyors and were reported to have been thoroughly overhauled by Messrs Richardsons Westgarth & Co of Sunderland. Upon opening out cylinders, pistons, valve faces, slide valves and rods for ditto were found in good condition and almost no wear or tear visible. Crankshaft lifted and found in a somewhat wasted condition, shaft on lathe and skimmed up, fairness ascertained found good. Shaft rebedded now good. Dimensions of shaft being under rules thickness working pressure reduced to 110 lbs. Pumps in good condition scrape the neckrings and glands of feed and bilge pumps which have to be renewed. Condenser tubes drawn and some of them partly renewed, Condenser tested under pressure & found tight. The whole of the link motion & eccentric straps to be readjusted. Thrust and propeller shafts

The amount of Entry Fee. . . £ 1 : 0 :
 Special £ 8 : 0 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ 2 : 8 : 5

When applied for, (Owners)
 6/14/03 London

When received, *RM*
 2/5/05

M. A. M.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

FRI. 27 MAR 1903

Committee's Minute

Assigned Lme 1,03 + 2B797 fitted 1,03

MACHINERY CERTIFICATE WRITTEN.

Port of Amsterdam Continuation of Report No. 26956 dated 15th of Feb 1905 on the

machinery steel screw tug Charles, in a more or less deteriorated condition, failed on the lathe and owing to the thickness (diam) being under rule requirements, working pressure reduced to 110 lbs pressure, recommended however notwithstanding the diameter being in conformity with the rules for the above mentioned working pressure, to renew the thrust and screw shaft which will be done in London. Propeller a good fit shaft. General pipe arrangement good, main, auxiliary steam and feed pipes tested to double the working pressure found good. Bilge suction and runs good. All seaconnections newly made and fitted according to rules, in good working condition. Main boiler.

Made by Messrs. Stritham & Co at South Shields under special survey of the Society's Surveyors for a working pressure of 130 lb. per sq. inch. was found after have been carefully cleaned and all tubes renewed in a thorough good condition and almost no wear or tear whatever. Boiler tested to 220 lbs found tight, meeting. The working pressure has only be reduced to 110 lbs on account of the shafting.

All boiler mountings have been renewed, safety valves ditto, the latter adjusted to 115 lbs pressure were found to be not in good working condition and have to be re-examined in London.

I am of opinion that this vessel's machinery is eligible to be recorded in the Register Book provided the thrust and screw shafts be renewed, the link motion from H & T.P engine with eccentric straps to be readjusted, neckrings of feed and bilge pumps to be renewed and glands of ditto to be rebushed. Safety valves of main boiler to be readjusted under steam.

when the thrust & screw shafts have been repaired the H & T.P engine with eccentric shafts has been adjusted, neck rings of bilge & feed pumps have been renewed & glands rebushed and the safety valves readjusted under steam
 Adviser London Surveyors

It is submitted that
this vessel is eligible for
THE RECORD. L.M.C. 103

† N.B. 7.97. fitted 1.03. pressure 110 lbs

p

Bale

25.3.03

L.L.

25.5.03



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Foundation