

REPORT ON MACHINERY.

No. 13237

Received at London Office

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Date of writing Report 22nd March 1913 When handed in at Local Office

10

Port of Hamburg

No. in Survey held at Kiel
Reg. Book.Date, First Survey 18th Oct. 1911Last Survey 18th March 1913

53 Tons on the Steel Twin Screw Motor Vessel "Hagen"

(Number of Visits 25)

Gross 5960

Net 3145

Master Curtin Built at Kiel

By whom built Fried. Krupp A.G. Germaniawerk

When built 1913

Engines made at Kiel

By whom made Fried. Krupp A.G. Germaniawerk

when made 1913

Boilers made at —

By whom made —

when made —

Registered Horse Power 450

Owners Deutsch Amerika Petroleum Ges. Port belonging to Hamburg

Nom. Horse Power as per Section 28 450

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Twin Screw two cycle Diesel Motors No. of Cylinders 6 12 No. of Cranks 6 12

Dia. of Cylinders 18 1/16" Length of Stroke 3 1/2" Revs. per minute 120 Dia. of Screw shaft 11 3/4" Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube without liner Is the after end of the liner made water tight

in the propeller boss If the liner is in more than one length are the joints burned 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 If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 48"

Dia. of Tunnel shaft 10 5/8" Dia. of Crank shaft journals 12 3/16" Dia. of Crank pin 12 3/16" Size of Crank webs 7 1/4 x 17 1/2" Dia. of thrust shaft under

collars 11 1/8" Dia. of screw 11 1/6" Pitch of Screw 9" No. of Blades 4 State whether moveable yes Total surface 42 sq. ft.

No. of Feed pumps — Diameter of ditto — Stroke — Can one be overhauled while the other is at work —

No. of Bilge pumps 4 Diameter of ditto 4 5/16" Stroke 8" Can one be overhauled while the other is at work yes

No. of Donkey Engines 5 Sizes of Pumps See specifications No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 off 2 3/4", 1 off 3 1/2" from engr. well, 1 off 3 1/2" from In Holds, &c. 14 off 8", 18 off 6" from Summer tanks, 2 off 6" from

Pump room, 4 off 6" from Cofferdam 2" 28 3, 3 off 5" from Cofferdam 2" 1, 1 off 5" from aft Peak, 1 off 5" from Fore Peak 3 off 3" from

No. of Bilge Injections 1 sizes 6" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes, 3 1/2"

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 & 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 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 are carried through the bunkers none How are they protected —

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

Dates of examination of completion of fitting of Sea Connections 21. 11. 12 of Stern Tube 21. 11. 12 Screw shafts and Propellers 21. 11. 12

Is the Screw Shaft Recess watertight yes Is it fitted with a watertight door yes worked from main deck eng. room.

BOILERS, &c.—(Letter for record —) Manufacturers of Steel no Boilers fitted.

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Please see continuation sheet attached.*

The foregoing is a correct description,
Fried. Krupp Aktiengesellschaft
Essen-Mania Ward
Manufacturer.

Dates of Survey while building

During progress of work in shops - -	18/10, 20/11, 6/12, 19/11, 23/1, 14/2, 26/2, 9/3, 28/3, 14/4, 1/5, 10/5, 23/5, 31/5, 7/6, 24/6, 14/7, 9/8, 28/8, 20/9, 8/10, 3/10, 24/10, 1/11, 19/11
During erection on board vessel - - -	5/12, 10/12, 30/12, 19/12, 4/1, 11/1, 4/2, 14/2, 22/2, 28/2, 4/3, 12/3, 19/3
Total No. of visits	35

Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Cylinders 23/1, 14/2, 14/2, 14/2 Slides _____ Covers _____ Pistons 12/4, 23/5, 7/8, 12 Rods 23/5 12

Connecting rods 1/5 12 Crank shaft 7/6 12 Thrust shaft 7/6 12 Tunnel shafts 10/5 12 Screw shaft 14/6 12 Propeller 9/8 12

Stern tube 16/7 12 Steam pipes tested _____ Engine and boiler seatings 31/10 12 Engines holding down bolts 31/10 12

Completion of pumping arrangements 14/2 13 Boilers fixed _____ Engines tried under working condition _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material of Crank shaft Steel Identification Mark on Do. 3561 XX 2582 XX Material of Thrust shaft Steel Identification Mark on Do. 3376 XX 2045 XX

Material of Tunnel shafts Steel Identification Marks on Do. 1123 MB 3324 XX Material of Screw shafts Steel Identification Marks on Do. 1113 MB 3375 XX 2045 XX

Material of Steam Pipes _____ Test pressure _____

General Remarks (State quality of workmanship, opinions as to class, &c. *Material and workmanship of these Diesel Oil Engines are of very best description, the general outfit is very ample. The Forgings certificates of shaping will be found attached. The pumping arrangements both for bulk oil cargo and bilges, double bottom and engine room, Bunkers, Peak tanks and oil fuel tanks are very complete. I attended to a satisfactory trial trip on the 12th March when the Vessel was ballasted to her light load line, the engines developing 1200 HP when running at 140 revolutions per minute and 11 knots. The full power astern revolutions were 130 and about 10 knots. The lowest number of revolutions attained was 32-33. The machinery of this Vessel having been constructed under Special Survey in accordance with the Society's Rules, I beg to recommend that they be classed **LMC 3,13** and Oil Engines be entered in the Register Book, and that a Certificate to this effect be issued.*

The amount of Entry Fee ..	£ 65:	When applied for.
Special ..	872:	11.3.13
Donkey Boiler Fee ..	45:	When received,
Travelling Expenses (if any) ..	280:	15.3.13

Committee's Minute

TUE. APR. 1--1913

Assigned

+ LMC 3.13

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



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MACHINERY CERTIFICATE
WRITTEN.

Certificate (if required) to be sent to Hamburg Office.

(The Surveyor is requested not to write on or below the space for Committee's Minute.)

