No. 1052

PORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office 28 MAY 1954)

of writing Report 19th May, 1954 When handed in at Local Office 19th May, 1954 Port of KIEL

ok. Survey held at KIEL Date. First Survey 19th January Last Survey 17th May 1954 (No. of Visits 57)

on the Machinery of the ~~Wood~~ or Steel M.V. "ESSO KÖBENHAVN"

Gross 12062 Vessel built at Newcastle By whom Palerms' Co. Ld. When (Year) 1930 (Month) 11

Net 7146 Engines made at Kiel By whom Fried.Krupp A.G. When 1930

Rule 1496 Boilers, when made (Main) ~~1930~~ (Donkey) 1930

n Boilers - Owners Dansk Esso A/S Owners' Address (if not already recorded in Appendix to Register Book.)

" - Managers - Port Copenhagen Voyage

key Boilers 2 (WT) If Surveyed Afloat or in Dry Dock both

ssure— DB 2 (State name of Dock.) Kieler Howaldtswerke A.G.

Boilers WT 200 lb

y Boilers DB 100 lb

port No. Port

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

HULL	MACHINERY
+ 100 A 1 10,53	CS. + LMC 9,52
ss Kel.-9,52	DBS 10,53
2 Dks.and web frames	TS(CL) p 12,51 s 9,52
Cruiser Stern	Machinery aft
Long. framing	
bracketless system	
Carrying petroleum in bulk	

ars of Examination and Repairs (if any) Damage repairs, LMC, DBS, TS and El.Inst.

Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the pairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides d in the body of the report, should be briefly summarised at the end of the report. State also the dates and any letters respecting this case

ases where the Surveyor has not made a special damage report he is required to state whether he offered his s for this purpose, and why they were declined yes, not required

ge report made by anyone else? If so, by whom? yes, Underwriter's Surveyor

veyor personally go inside each Main Boiler separately and make a thorough examination at this time? -

" Donkey " " " yes

for what reasons -- What parts of the Boilers could not be thus thoroughly examined? --

l means, in the absence of internal examination, were adopted by the to assure himself of the thorough efficiency of these parts of each Boiler? -

date of internal examination of each boiler DB(WT) and waste heat p+s WT+ p+s Waste heat blrs.17.3.54 re-examined 6.4.54 Present condition of funnel(s) good

veyor examine the Safety Valves of the Main Boilers? - To what pressure were they afterwards adjusted under steam? -

veyor examine the Safety Valves of the Donkey Boilers? 2 WT + Waste Heat yes To what pressure were they afterwards adjusted under steam? WT boiler to 200 lbs/□" Waste Heat Boilers to 100 lbs/□"

veyor examine all the manholes, doors and their fastenings of the Main Boilers? - , and of the Donkey Boilers? -

veyor examine the drain plugs of the Main Boilers? - , and of the Donkey Boilers? -

veyor examine all the mountings of the Main Boilers? - , and of the Donkey Boilers? yes

w shafts now been drawn and examined? yes Has it a continuous liner? yes Is an approved oil retaining appliance fitted at the after end? -

w been changed? yes starbd. If so, state reasons cracked at fwd. end of cone Has the shaft now fitted been previously used? no Has it a continuous liner? yes

ed oil retaining appliance fitted at the after end? - State date of examination of Screw Shaft p.8.3.54, s.26.2.54, re-examined p+s 22.+23.3.54 State the wear down in the

h rewooded Is electric light and/or power fitted? yes If so, did the Surveyor examine the generators, motors, switchgear cables and fuses? yes

lation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? yes

s, when referred to by numbers, should be counted from forward. Auxiliary machinery should be referred to by position in Machinery Space.

y is not complete, state what arrangements have been made for its completion and what remains to be done Complete.

NE FOR DAMAGE STATED TO HAVE been sustained by mine explosion on the 25th December, 1953 in the Belt, Denmark, causing flooding of Engine Room.

. placed in dry dock, p+s propellers, screw shafts, stern bushes, stern tubes, sea connections and fastenings opened out, and found or placed in good order.

llowing machinery parts have now been opened out, examined and found or placed in good condition.

ain engine cylinder covers, liners, jackets, pistons, rods, crossheads, guides, columns, bed plates, , thrust and intermediate shafts together with their bearings and engine seatings.

ain engine driven scavenge pumps in their entirety.

xiliary oil engines in their entirety.

engine driving generator.

tarting air compressors, and steam driven air compressor (air coolers tested).

d. aft aux. oil engine (installed).

P.T.O.

Observations, Opinion, and Recommendation:—

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, etc.)

achinery of this vessel as now seen, is in good order and eligible, in my opinion, to remain as classed fresh records of + LMC 5,54, DBS 5,54, TS(CL)P 3,54, S(N) 3,54.

OIL ENGINES CONTINUOUS SURVEY

e (per Section 23) DBS	£ 20 0 0	Fees applied for
achinery addition	25 0 0	
mage & Repair Fee (if any) incl.LMC (per Section 23.)	275 0 0	Received by me,
expenses (if chargeable)	£ 16 0 0	
y fee 16.5.54	5 5 0	

N. Chambers, K. Thomber

Engineer Surveyor to Lloyd's Register of Shipping.

tee's Minute TUESDAY 22 JUN 1954

d

+LMC 5,54

P+S 3,54 DBS 5,54

Strbd.S(N) 3,54 SPS 5,54

CERTIFICATE WRITTEN.

Is a Certificate required? If so, to be sent to

Insert Character of Ship and Machinery precisely as in the Register Book

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003298-003306-0227 1/2

All fresh and salt water cooling pumps, bilge and general service and sanitary pumps, feed water, air and sea circulating pumps, L.O. service and stand-by pumps, O.F.transfer, O.F. pressure and delivery pumps, fan engines.
Fresh water and L.O. coolers, O.F. and feed water heaters and aux. condenser tested.
All starting air receivers tested.
All steam pipes, valves and connections tested, and cascade tank.
All valves, cocks, pipes and strainers of pumping arrangement.
Windlass and steering gear.
Both O.F. daily service tanks and their fittings.

DBS:

P+S W.T. donkey boilers and p+s waste heat boilers examined internally and externally together with their mountings, manholes, doors and their fastenings, and found or placed in good order. Safety valves of all boilers adjusted under steam to the above stated pressure. O.Fl burning appliances examined under working conditions.
Steam smothering arrangement verified. Control rods checked.

REPAIRS ON DAMAGE ACCOUNT

P+S main engines and all pumps and auxiliary machinery completely dismantled, repaired and re-assembled. All cylinder covers tested and found good.
All pistons dressed, rings partly renewed. S.M.E. No. 3 piston rod stub and No.6 piston replaced by spare.
P+S main engines minor cracks at stiffening ribs in way of water spaces of all cylinders m
10 tie lugs for the vertical joints of the cylinder blocks of both main engines, partly br
away or cracked, now permanently repaired by facing remaining portions of lugs and fitting steel brackets, or metalocking and fitting steel washers, All cylinder blocks tested hydraulically on completion of repairs and found good.
All crosshead pins dressed, bearings and guides adjusted.
Stbd. M.E. No. 4 inbd. column foot broken away, now permanently repaired by machining column in way of fracture and fitting a new cast steel foot, welded to straps which are be to remaining part of column.
Port M.E. crankshaft examined in lathe for truth, all pins and journals machined true, all bearings remetalled.
Stbd. M.E. crankshaft, cracked at bolted web of No. 4 throw, a new throw forged and shrunk the sound journal, all crankpins and journals machined true, all bearings remetalled. (Forging Rpt. for the new crank throw attached herewith.) New dial of crank journals 447 mm, pins 448 mm.
P+S main engine camshafts and vertical shafts taken in lathe and examined for truth, all journals dressed, bearings adjusted.
All moving parts and crankshaft realigned.
Stbd. M.E. bedplate, 3 webs of No. 4 bearing stool cracked, repaired by metalocking and by fitting of bolted steel doubling plates.
Stbd. M.E. after cross girder of bed plate cracked, repaired by metalocking and by fitting of bolted steel doubling plates and two tie rods.
Minor cracks on all scavenge pump cylinder casings permanently repaired by Metalock.

Note: The repairs of all cracks mentioned above have been carried out satisfactorily, the repairs are efficient and are recommended as permanent, in agrrement with the Ow

P+S main engine bed plates re-aligned, bed plate chocks and holding down bolts renewed.
Stbd. thrust bearing cover (cracked) renewed.
P+S thrust shaft journals, collars and flanges machined true and faced, bearings and pads remetalled.
P+S intermediate shafts examined in lathe for truth and straightened, all journals machine true, flanges faced.
Port forward plummer block bearing remetalled, port after and all (3) starbd. plummer bloc casings together with bearings renewed.
Port screw shaft liner machined true, flange faced.
Stbd. screw shaft cracked at forward end of cone, renewed. New shaft's marks: LLOYD'S 7868, LK. 4.4.50 LK. ES. 28.4.54 ES(Cert. No. 7868 attached herewith).
P+S propeller blades faired at the tips.
Port stern tube tested and found good, lignum vitae renewed. Starbd. stern tube,cracked,re LLOYD'S TEST KEL 5 atm. ES 15.3.54, ES. Lignum vitae renewed.
P+S stern frame bosses, built up by welding and rebored to correct misalignment of stern tu due to explosion damage. The centre of the hole in the port stern frame has moved approx. 2 mm and that of the starbd. approx. 8 mm.
All bolt holes of coupling flanges of crank, thrust, intermediate and screw shafts reamed.
All coupling bolts renewed.
P+S shaft driven L.O. service pump casings renewed and pumps thoroughly overhauled.
All attached crosshead L.O. pumps thoroughly overhauled.
P+S aux. engine cylinder covers and jackets dressed and hydraulically tested, all pistons rings renewed. Both crankshafts, all journals machined true, pins dressed. All journal be of port engine and all journal and crank pin bearings of starbd. engine remetalled.
P+S bedplates (cracked) renewed.
P+S air compressor cylinders, pistons and valves dressed, crankshaft pins and journals dres bearings adjusted. P+S bedplates renewed. Both air cooler casings renewed, coolers tested.
Generator steam engine thoroughly overhauled, crankcase, bedplate and governor casing renew
Steam driven air compressor thoroughly overhauled, entablature and governor casing renewed.
All shaft driven and all independent pumps thoroughly overhauled, a number of cracked water ends renewed, all pumps hydraulically tested.
All O.F. and feed water heaters, auxiliary condenser, L.O. and fresh water coolers tested.
Aux. condenser retubed and water box renewed.
2 O.F. heater casings, cracked, renewed.
Port L.O. cooler retubed.
3 sea water and 2 bilge water filters renewed.
Several lengths of steam pipes, several connections and several steam valves renewed.
Several lengths of bilge, salt and fresh water cooling, L.O. and O.F. transfer lines renewe or repaired.
A number of valves, covers, studs, valve cones, lids and spindles renewed.
All piping, valves and fittings hydraulically tested on completion of repairs.
Steering gear and windlass thoroughly overhauled.
Sundry minor repairs effected.

BOILER REPAIRS ON DAMAGE ACCOUNT

Port W.T. boiler	18 baffle plates and 51 water tubes in way renewed.
Starbd. W.T. boiler	22 baffle plates and 72 water tubes in way renewed.

Brick work and insulation of both boilers repaired and partly renewed.

P+S waste heat boiler shells lifted, water space and thimble tubes thoroughly cleaned, examined and found good. 2 feed check valves renewed.

All (4) boilers hydraulically tested on completion of repairs and left in good order.

ELECTRICAL INSTALLATION:

All cables and fittings in way of engine room, boiler room and on deck renewed, Main switchboard renewed in accordance with approved plan No. 933, dated 5.4.1954. All generators, motors and their control gear rewound and reinsulated, and megger tested prior and on completion of the high potential test. The electrical installation throughout the vessel megger tested on completion of repairs and left in good order.

Main and auxiliary machinery, including pumping arrangement, windlass and steering gear examined under working conditions on completion of repairs and left in good order.

ELECTRICAL ADDITIONS:

One DC compound wound generator 230 V, 260 A, 60 KW, 500 RPM, No. 554212, type 425/2e of Hansa Motorenfabrik, Gustav Altmann, Hamburg-Bahrenfeld, has now been additionally installed in the vessel and connected to the new switchboard in accordance with the Rules, and examined on completion under full and overload working conditions and in parallelum. Makers' works test attached herewith.

MACHINERY ADDITIONS

One reconditioned 2 cylinder, 2 SCSA heavy oil engine No. 1087 made by Messrs. Möller & Jochumsen, A/S of Horsens, developing 90 BHP at 500 RPM, driving the above generator has now been satisfactorily installed together with the necessary pipe lines and fittings and examined on completion under working conditions with good results. Copy of Rpt. 10 issued at Copenhagen attached herewith.

As all parts of the machinery, boilers and electrical installation have been examined during damage repairs, it is considered that the Owners are entitled to the record of LMC 5,54.

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