

Report of Survey for Repairs, &c., of Engines and Boilers.

No. 3896

Date of writing Report 29th May 1940 When handed in at Local Office 29th May 1940 Port of GALVESTON, TEXAS.
Survey held at Houston & Galveston, Texas. Date, First Survey 1/6/40 Last Survey 9/5/1940.
on the Machinery of the T.S. M/V "KROSSFORD" (No. of Visits 617)

Gross 9323 Vessel built at Odense By whom Odense Staalskibebygger A.P. When 1935 9
Net 5550 Engines made at Copenhagen By whom Akt. K. Nielsen & Wain When 1935
Main Boilers Owners Skibsaktieselsk. "Delfron" (Donkey) 1935
Donkey Boilers Managers Signal Bergesen Owners' Address -
Pressure - (if not already recorded in Appendix to Register Book.)
Main Boilers If Surveyed Afloat or in Dry Dock Both Port Stavanger Voyage -
Donkey Boilers 180 lbs. (State name of Dock) Todd Gal. U.D. Inc., Shell Ref. Dock, Bolivar Roads.

Report No. Port Part C.S.
Particulars of Examination and Repairs (if any) Limit Survey
Special Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the nature and extent of examinations and subsequent repairs. Repairs on the cause of which must be stated should be separated from repairs due to other causes; and being detailed in the body of the report, should be briefly summarised at the end of the report. State also the initials of any letters respecting this case.
Cases where the Surveyor has not made a special damage report he is required to state whether he has performed his services for this purpose, and why they were declined. Dam. Rpt issued, Copy furnished
damage report made by anyone else? If so, by whom? See. In. to Nor. und.
Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? ☒

Donkey " No.
was not done, state for what reasons? DBS 7.39 assigned (as per letter from Sect. London).
at parts of the Boilers could not be thus thoroughly examined? ☒
at special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? ☒

Present condition of funnel(s) ☒
Surveyor examine the Safety Valves of the Main Boiler? ☒ To what pressure were they afterwards adjusted under steam? ☒
Surveyor examine the Safety Valves of Donkey Boiler? ☒ To what pressure were they afterwards adjusted under steam? ☒
Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? ☒ and of the Donkey Boilers? ☒
Surveyor examine the drain plugs of the Main Boilers? ☒ and of the Donkey Boilers? ☒
Surveyor examine all the mountings of the Main Boilers? ☒ and of the Donkey Boilers? ☒
Shafts examined in place with propeller off. Is it fitted with continuous liner? ☒
Shaft now been drawn and examined? No Is it fitted with continuous liner? ☒
Shaft now been changed? ☒ If so, state reasons ☒
Shaft now fitted been previously used? ☒ Has it a continuous liner? ☒
Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? ☒

of examination of Screw Shaft ☒ State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft P 1/16" S 1/8"
line parts, when referred to by numbers, should be counted from forward. Is electric light and/or power fitted? ☒
the Surveyor examine the generators, motors, switchgear, cables and fuses? ☒
Insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? ☒

Survey is not complete, state what arrangements have been made for its completion and what remains to be done. To complete the Survey, intermediate & screw shafts also temporary repaired to the main engine supercharging chain drive lower housing being specially examined before the end of 10.41. - (C.S. case).
Now Done, For Part C.S.

Examined - Main engine, Port Nos 3, 5, Starb. Nos 1, 7. Cylinders, piston, valves, gears, cover, connecting rod, top end, bottom end bristles & cranks pin.
Port No 3 crankshaft journal & bearing.
Port & Starboard Superchargers & gearing, intermediate shafts also propellers (removed) & fastenings. (See Contin.)

General Observations, Opinion, and Recommendation: This vessel's machinery, so far as alteration required, 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 also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, B.S. 9, 11, B.M.S. 9, 11, & L.M.C. 9, 11, or L.M.C. 140 lb., F.D., &c.)
is now seen, is in order & eligible in my opinion to be classed and to have record of +LMC, CS (with date) as the Survey has been completed, subject to the intermediate screw shafts, also temporary repairs to the main engine supercharging chain drive lower housing being specially examined before the end of October 1940 (10.41).

Age or Repair Fee (if any) £ 40.00 Fees applied for 9/5/1940 WK
Expenses (if chargeable) £ 1.50 Received by me, 15/5/1940
NEW YORK JUN 5 - 1940
Engineer Surveyor to Lloyd's Register of Shipping.
Lloyd's Register Foundation

Port of GALVESTON Continuation of Report No. 3895 dated 29th May 40 on the

"M/V KROSS FONN."

Now Done for Part C.S (Contd.).

All the foregoing found or now placed in order as under.

Part of the above examination & the following repairs effected are alleged to be due to grounding at Saint Nazaire Roads, 28th Jan. 40, during a ballast voyage from Douglas, France to Panama.

Damage Repairs. (See Damage Report).

Starboard No. 7 Cylinder, (found badly leaking at the lower end of the water jacket in way of rubber sealing ring, grooved & corroded). The cylinder assembly unit conveyed to shops, the cover ground into a spare liner, a spare cylinder water jacket fitted & reconditioned unit placed on board as spare.

A complete new spare unit, comprising cover, liner & jacket now installed.

Side Connecting Bolt holes removed & new bolts fitted.

Port No. 3 Cylinder, (Cover found fractured on the underside, about 6" long, at the radius of curvature, well clear of valve pockets, fracture not actually leaking).

The cylinder unit now replaced by a complete spare unit from the fore hold, comprising a new liner & jacket & a previously used cover in good condition.

Side Connecting Bolt holes removed & new bolts fitted.

Also three gate valves in circulating line overhauled.

Stated due to heavy weather encountered various dates, Jan & Feb. 40, ballast voyage from Douglas to Panama.

Damage Repairs.

Port Nos 3 & 5, Starb No. 1, the white metal of the bottom end crown brass was found cracked & broken, and have now been re-metalled.

Machinery satisfactorily tested under working conditions upon completion of the repairs

(See Continuation) WX

"M/V KROSSFONN"Limitation Lureys.

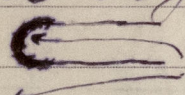
The Temporary repairs to the main engine Supercharging Chain drive housings now specially examined & found to continue sound & efficient.

The repaired items are a part of the housing enclosing the Supercharging Chain drive, primarily to form a lubricating shield & oil container and are not strength members of the engine.

Recommended repairs be further examined before end of October 1941.

Lee Cable & Secretary's letter dated 11th Apr. 40, H.

The port & Starboard intermediate & screw shafts now carefully examined in place with the propellers off, and all found in good order.

In compliance with a suggestion from the engine Builders the sharp edge at top of the screw shaft keyseat at forward end has been ground off to  3 1/4 in radius.
a 3 1/4 in. radius.

The Chief Engineer reports that the machinery has a critical range & vibrates rather heavily between 105 to 125 revolutions per minutes, but above and below this speed the machinery runs smoothly. The maximum revolutions are 142, & full revolutions under general conditions 139, whilst half speed is 90 to 98 Revs. per minute. Vibration can therefore be avoided except when actually manoeuvring down from full to half speed or vice versa.

New, three bladed, solid bronze propellers were fitted P.S., when the screw shafts were renewed in June 1939. It is now reported that these new propellers have reduced the consumption 2 tons per day, but have given 1 Knot less speed per hour as compared with the previous propellers fitted, also have tended to increase the shaft vibration. Accordingly at the request of the Charterers the previously used propellers, (i.e. working propellers prior to 6.39), which are also three bladed, solid bronze, have now been reinstalled, after satisfactory checking the fit on the shaft cone. (See Continuation)

Port of GALVESTON Continuation of Report No. 15896 dated 29th May 40. on the

The vessel again come under survey on account of rudder damage, and the chief engineer reported that during the run from Galveston to Houston & back to Galveston, the change of propellers had reduced the vibration somewhat, but of course was still present between 105 to 125 revs per min.

The master states that the vessel normally drydocks about every nine months, and it was accordingly recommended that the intermediate & screw shafts be again specially examined in about 18 months time, i.e. before end of October 1941.

Cert B1 issued, copy herewith.

Lynn Le. M/V Fernbrook, No. 24445 in R.B., Classed N.V.

It may be of interest to mention that this vessel was detained here for about 16 days, some six months ago, on account of both screw shafts being condemned & only one spare shaft available on board. I looked at these shafts out of interest but did not inquire as to the circumstances. The port shaft was deeply cracked at the forward end of the cone for $\frac{5}{8}$ of circumference, and the starb. shaft cracked $\frac{1}{16}$ " deep all around to 2" deep at keel seat.

It will be noted that the engine builders, also size & stroke of cylinders are the same, but number of cylinders and dimensions of vessels, etc are different.

WR.

line 839 Phil. Noted.

Saly. as now recommended.

limits on shafting to
expri 6/41 17/7/40.

GA

See Dr. Dorey's ltr. 16.7.40
re limits on intermediate
of screw shafts. 9/7/40.

Special for D. Dorey
Critical speed cone

limits on shafting to
expri 6/41 17/7/40.
Dorey's ltr. 16.7.40
re limits on intermediate
of screw shafts. 9/7/40.



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