

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

No. 15169

(Received at London Office TUE. 26 OCT. 1915)

Date of writing Report 23rd Oct. 1915 When handed in at Local Office 25/10/15 Port of West Hartlepool
No. in Reg. Book 1798 Survey held at West Hartlepool Date, First Survey 26th July Last Survey 17th Oct 1915
on the Machinery of the Wood, Iron or Steel S.S. SPIRAL Master C. J. Petersen
Tonnage { Gross 1341 Vessel built at Christiania By whom Nylands Værktøst When 1906
Net 810 Engines made at Christiania By whom Nylands Værktøst When 1906
Registered Horse Power 160 Boilers, when made (Main) 1906 (Donkey) 1906
No. of Main Boilers 2 Owners A. Casper Esen & Co. (Navy) Port West Hartlepool Voyage Norway
No. of Donkey Boilers 1 If Surveyed Afloat or in Dry Dock Gray Dry Dock Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).
Steam Pressure in Main Boilers 180
in Donkey Boilers 80

Last Report No. _____ Port L.M.C.
Particulars of Examination and Repairs (if any) L.M.C.
(Periodical Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and, besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.)
In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined? not asked Was a damage report made by anyone else? If so, by whom? Lloyd's Register only.
Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? yes.
Do. " Donkey " " " yes.
If this was not done, state for what reasons? _____

And what parts of the Boilers could not be thus thoroughly examined? _____
Also what 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? _____
Did the Surveyor examine the Safety Valves of the Main Boiler? yes. To what pressure were they afterwards adjusted under steam? 180 lbs
Did the Surveyor examine the Safety Valves of Donkey Boiler? yes. To what pressure were they afterwards adjusted under steam? 80 lbs
Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? yes. , and of the Donkey Boiler? yes.
Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? (none) , and of the Donkey Boiler? (none)
Did the Surveyor examine the drain plugs of the Main Boilers? (none) , and of the Donkey Boiler? yes.
Did the Surveyor examine all the mountings of the Main Boilers? yes. , and of the Donkey Boiler? yes.
Has screw shaft now been drawn and examined? yes. Is it fitted with continuous liner? yes. or two liners? _____ or is it without liners? _____
Has shaft now been changed? yes. If so, state reasons Too small for Classification with present propeller & steam pressure.
Has the shaft now fitted new? yes. Has it a continuous liner? yes. or two liners? _____ or is it without liners? _____
State the distance between lignum vitae of stern bush and top of after bearing of screw shaft? rewooded.

the Survey is not complete state what arrangements have been made for its completion and what remains to be done?
Vessel placed in dry dock. Machinery entirely removed except Donkey Boiler.
The Engines have been entirely taken assunder, the Cylinders, pistons, Condenser & all pumps & shafting examined throughout propeller & all screws & valves & piping examined.
The Main Boilers stripped of all cleaning & coating & all the mountings removed to be overhauled in the shops.
Donkey Boiler stripped of lagging & all its mountings removed & sent to shops for overhaul & examination & testing.
Auxiliary Engines similarly sent to shop & overhauled & put in good working condition & replaced & tried.
The following repairs & tests carried out.

General Observations, Opinion, and Recommendation:— The Machinery of this Vessel
(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery, boilers, working pressures, &c.: thus, for example, B.S. 9, 11, B.&M.S. 9, 11, or L.M.C. 9, 11, any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.):
is now in good & Efficient working condition Eligible in our opinion to Have the Notation of L.M.C. 10/15 in the Register Book & propeller shaft New 10/14

Survey Fee (per Section 28) £ _____ Fees applied for 25/10/15
Special Damage or Repair Fee (if any) £ 7 7 0 Received by me 29/10/15
(per Section 28) £ 2 2 0
Travelling Expenses (if chargeable) £ _____
Committee's Minute FRI. 29 OCT. 1915
Assigned L.M.C. 10/15

MACHINERY CERTIFICATE
WEST HARTLEPOOL
Lloyd's Register Foundation

S.S. SPIRAL

ENGINES — Bed plate broken seriously at after end & also low at forward end. New bed plate fitted & coupled up to Condenser.

five of the main bearing bushes re-metalled in lower half & crank shaft bedded. Condenser stripped of all brimms & tube plates, tubes tested & partly renewed tube plates re-pointed & tested.

Air & circulating pumps all opened & examined & made efficient.

Feed & Bilge pumps opened & examined. New feed valves fitted & the

Air Vessels & Valve boxes tested by Hyd. pressure to 400 lbs

Exhaust pipe & columns & guides examined & put in good order

Cylinders & Valves All cylinders stripped of lagging & mountings & examined & escape valves made workable.

Piston & rods. All pistons opened out & cleaned & examined, the rods all trued up & neck & gland bushes fitted & spindles trued.

Slide Valves removed & examined & piston valve overhauled. The

Valve gear (Brennan's) thoroughly overhauled & replaced.

Shafting — Crank shaft put in lathe & trued up & bedded.

Thrust shaft bent, now heated & fired & annealed & trued up new thrust block fitted, all tunnel shafting trued up & couplings faced & set in line. Propeller shaft renewed & both propellers fixed out to out & stern bush renewed.

Sea valves All seaweats & valves opened & examined & put in order

Bilge directing & tank valves overhauled, discharge valves same & put in good order Ballast & feed donkey engines made good & worked well. Steering engine overhauled & worked well.

Main Boilers Examined internally & externally, drilled as required & tested by Hydraulic pressure to 360 lbs all the pipes

& mountings tested by Hyd. pressure, new lower doors fitted

Boilers covered with composition & cleaning iron. New springs fitted to Safety Valves, & approved Emergency Valve fitted. Stop Valve quick closing type & piston overhauled. Donkey Boiler mountings tested to 400 lbs Hyd.

Pipes. Main steam pipes (original) annealed & tested to 360 lbs.

All pressure pipes & valves tested by Hydraulic pressure to 400 lbs.

Donkey Boiler — Donkey Boiler stripped of mountings & cleaning drilled as required & examined internally & externally

Shell partly cut out in way of doorway & stop Valve, now efficiently repaired by riveted plate in sheen on plan & tested by Hydraulic pressure to 160 lbs. a new blow down valve fitted with bolted cover.

The machinery & boilers have been well secured, a baffle plate fitted between port Boiler & bunker in thimbles.

The Safety Valves of the Main & Donkey Boilers have been adjusted under steam to their working pressure.

W. Lloyd & J. J. J.