

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

(Received at London Office)

AUG 10 1937

Date of writing Report 6/8 37 When handed in at Local Office 6/8 37 Port of Oslo

No. in Reg. Book. 21236 Survey held at Oslo Date, First Survey 15/4 Last Survey 24/7 1937

1034 on the Machinery of the Wood, Iron or Steel Twin screw motor ship " BENJAMIN FRANKLIN " (No. of Vessels 37)

Gross Tonnage 3960 Net Tonnage 984 Vessel built at St. Nazaire By whom Ch. & Atel de St. Nazaire When 1927 6
 Engines made at St. Nazaire By whom C. & Atel de St. Nazaire When 1927
 Boilers when made (Main) (Donkey) 1927
 Owners A/S Ganger Rolf Owners' Address Oslo
 Managers Fred Olsen & Co. (if not already recorded in Appendix to Register Book) Port Oslo Voyage U.S.A. Pacific Coast
 If Surveyed Afloat or in Dry Dock fl. dock. (State name of Dock.) Akers mek. Verksted A/S

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

CHARACTER. for Special Survey Date of last Survey and of Periodical Surveys.	Year assigned or now required.	Machinery and Boiler Surveys (including date of N.R., if any).
+100 A1		CL 4.35
with freeboard 8,36		+LMC CS 8,36 5,35
Oslo. no. 2-35		DBS 3,36 +Lloyd's RMC 11,36 for temp. 320F.

Particulars of Examination and Repairs (if any)

Periodical 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 account of damage (the cause of which must be stated) should be separated from Repairs due to other causes; and ideas being detailed in the body of the report, should be briefly summarised at the end of the report. State also the names and initials of any letters respecting this case.

Where the Surveyor has not made a special damage report he is required to state whether he has offered his services for this purpose, and why they were declined.

Has a damage report made by anyone else? If so, by whom? Yes

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? Yes

Did the Surveyor personally go inside each Donkey Boiler separately and make a thorough examination at this time? Yes

Where a thorough examination was not done, state for what reasons? Yes

What parts of the Boilers could not be thus thoroughly examined? Yes

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? Yes

State the latest date of internal examination of each boiler 19/7/37

Did the Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam? 114 lb.

Did the Surveyor examine the Safety Valves of Donkey Boiler? Yes To what pressure were they afterwards adjusted under steam? 114 lb.

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes and of the Donkey Boilers? Yes

Did the Surveyor examine the drain plugs of the Main Boilers? Yes 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 the screw shaft now been drawn and examined? Yes, both Is it fitted with continuous liner? Yes Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? Yes

Has the shaft now been changed? Yes If so, state reasons both

Has the shaft now fitted been previously used? Yes Has it a continuous liner? Yes Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? Yes

State the date of examination of Screw Shaft both 13/7/37 State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft 1/16" +

Engine parts, when referred to by numbers, should be counted from forward. Is electric light and/or power fitted? Yes

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done.

The main engines of this vessel were now completely repaired (see Limit List).

The main engines were completely dismantled and all parts removed ashore for a close examination and thorough cleaning.

The engines were re-erected in the engine shops and were subsequently refitted on board. The tail shafts were drawn in and examined with intermediate and thrust shafting and the whole length of shafting was early lined up. The stern bushes were re-wooded.

The main engine seatings were in the meantime renewed, in accordance with the approved plan (Secretary's Minute M 30/10/36) see hull report.

On completion of the repair the main engines were tested, firstly alongside the repairers' quay for several days and subsequently a 3 hours full speed trial was carried out, during which the whole of the machinery worked satisfactorily.

At the same time as the repairs the engines were now converted to the airless injection system.

General 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 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.)

It is recommended that this vessel's machinery remain as now classed in the Society's Register Book. Record of Tail shaft seen 7,37 and +LMC CS 7,37. Engines rebuilt 7,37. DBS 7,37.

Fee (per Section 29) £r. : : Fees applied for 30/7 1937
 Damage or Repair Fee (if any) (per Section 29.) £s. 1:482: : Received by me, P. Perlgin-Rol
 Expenses (if chargeable) £s. 18: :
 Attendance fee £s. 40: :
 Committee's Minute FRI 20 AUG 1937

Engineer Surveyor to Lloyd's Register of Shipping. P. Perlgin-Rol
 Without stamp
 DBS 7,37
 CERTIFICATE WRITTEN
 Lloyd's Register Foundation
 W340-0060(112)

Insert Character of Ship and Machinery precisely as in the Register Book. Is a Certificate required? If so, to be sent to this office.

M/S " BENJAMIN FRANKLIN "

The fuel pumps were supplied complete by Messrs. Burmeister & Wain, Copenhagen.

The oil fuel pipes were examined and tested by hydraulic pressure, before fitting.

The following actual renewals were now effected:-

Both bedplates, supplied by N.V. Wilton-Fyerwood & Schiedam,

Both crankshafts, supplied by Messrs. Burmeister & Wain, the forging report is enclosed herewith.

All main bearings were re-metalled, Both flywheels renewed.

Thrust shafts skimmed off in lathe over coupling flanges.

All cylinder covers and all cooling water jackets renewed.

4 pistons renewed, 9 pistons repaired, plugs being fitted in the top of same.

44 top end brasses and 6 guide shoes re-metalled.

4 bottom-end brasses re-metalled, 1 crosshead pin renewed, all pins skimmed up in lathe.

Both chains for cam shaft drive renewed. Both chain wheels were renewed. Valve gear overhauled.

1 main engine vertical stay bolt renewed, being cracked at bottom end.

Further all piston rings renewed.

Cooling water and lubricating oil piping and fittings were overhauled and refitted.

The sea connections were opened up and examined.

Further examined all auxiliary engines, all on port side, complete with compressors and air bottles, all pumps and pumping arrangements, manoeuvring compressor, both starting air receivers, daily service tanks, and electric fittings.

The electric fittings, cables, control gear, generators and motors were tested for insulation resistance and found satisfactory.

Repairs:-No. 1 auxiliary engine crank shaft journals skimmed up in lathe, 2 gudgeon pins re-ground. Compressor cooling water coils annealed and tested. Valve gear on all engines repaired. A number of minor repairs to the auxiliary engines were also effected. Pumps overhauled, Cooling water, ballast and daily oil pump repaired.

On the conversion of the machinery to the mechanical injection the injection air receivers were now removed, except two which are used as emergency starting air receivers for the auxiliary engines.