

REPORT OF SURVEY FOR REPAIRS, &c, OF ENGINES AND BOILERS

Received at London Office 5th June 1953. When submitted in at Local Office 5.6.53 Port of BILBAO.

Survey held at Bilbao Date First Survey 16-4-52 Last Survey 7-5-53. (No. of Visits 25)

on the Machinery of the Wood, Iron or Steel S.S. "CABO TORINANA" (Name of Vessel)

Gross 1506 Vessel built at Grangemouth By whom Grngem'th & Greenock Dockyard When 1903-11

Net 909 Engines made at Stockton By whom Blair & Co. Ltd. When 1903

Boilers, when made (Main) (Donkey) Owners Ybarra & Co. Owners' Address (if not already recorded in Appendix to Register Book.)

Managers Port Seville Voyage If Surveyed Afloat or in Dry Dock Dry dock - Nervion. (State name of Dock.)

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

CHARACTER: Date of this Survey and of Periodical Surveys. Years assigned now expired. Machinery and Boiler Surveys (including date of N.E., if any)

RECLASS LMC. - T.S. - O.F. CONVERSION 4,40 ss. Bbo2nd No. 3-7, 28

Reasons for Examination and Repairs (if any) RECLASS LMC. - T.S. - O.F. CONVERSION

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

Present condition of funnel(s) New

To what pressure were they afterwards adjusted under steam?

Yes No

Has it a continuous liner? Yes No

State date of examination of Screw Shaft 13-10-52

State the wear down in the

Complete Reclass LMC.

Vessel placed in dry dock. Propeller, sea connections and their fastenings

examined. Screw shaft drawn, examined and new liner fitted. Stern bush rewooded.

All the machinery (main and auxiliaries) were taken ashore and also complete

pump installation at engine and boiler room, repaired and refitted on board.

in Engine:-

Cylinders, pistons, slide valves and faces, connecting rods top and bottom

and bearings, guides and shoes, crank shaft, thrust shaft (new now fitted), intermediate

shafts, pumps attached to main engine, pumps lever, condenser internally and under

steam; also valves, cocks, pipes and strainers of the pumping arrangements examined and

found or placed in satisfactory condition.

Thrust shaft was found with a big longitudinal crack and has been rejected.

(P. T. O.)

Observations, Opinion, and Recommendation:-

The machinery of this vessel is in good condition and eligible in my opinion to

reclass with fresh record of LMC 5,53 and TS(CL) seen 10,52. "Fitted for oil fuel 5,53

T.P. above 150°F.

Rec. LMC & TS. Pts. 10,000

O.F. Conversion Pts. 2,000

Received by me,

FRIDAY - 3 JUL 1953

+ LMC 5,53

CERTIFICATE WRITTEN

Fitted for oil fuel 5,53, T.P. above 150°F.

002816-002824-01703

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

This office

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

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation

Port of BILBAO

Continuation of report No.

dated 5th June, 1953 on the

S.S. "CABO TORINANA"

Auxiliary Engines:-

Ballast-bilge, feed-general service and sanitary pumps, feed injector opened out, examined, general overhauled and found or placed in satisfactory condition.

Boilers:-

Both main boilers lagging removed, shells scaled and coated. Boilers opened out and examined internally and externally together with their mountings, doors and safety valves and found or placed in satisfactory condition.

Safety valves adjusted under steam to 160 lbs. per square inch according with the last pressure record in the R.B.

Donkey Boiler has now been removed.

All main steam pipes and auxiliary steam pipes over 3" bore (copper)

annealed and tested to 2 W.P.

Electric Installation:-

Steam engine and generator, both have been taken ashore, dismounted, examined and general overhauled. Main switchboard has been renewed and tested according with the Rule requirements. Cables and fuses boxes examined and general overhauled, renewing electric cables in considerable extension.

On completion of repairs insulation megger tested and electric installation tried under working condition and found in order.

OIL FUEL CONVERSION:-

Vessel has now been arranged to burning oil fuel according with approved plan and Secretary's letters, dated 17-11-52 and 7-1-53.

Oil fuel and settling tanks have been also constructed in accordance with the approved plan (Please see Hull Report).

Air, sounding and overflow pipes have been tested hydraulically as per Rules. The new funnel has been fitted without damper.

Steam smothering installation has been fitted in boiler room, and under boilers and in way of burning plant and O.F. tanks. Steam supply for steam smothering and O.F. pressure and transfer pumps are controlled from casing top.

On completion the installation has been examined under working condition and found in order.

REPAIRS NOT DONE FOR WEAR AND TEAR:-

Main Engine:-

H.P. piston rod skimmed up and neck and gland bushes renewed.

" rings renewed.

" connecting rod top end bronze bearing renewed and bottom end remetalled.

" ahead and astern guides plained.

" cylinder column repaired with efficient bolted patch.

" slide valve refaced.

" false face removed, plained and refitted.

" spindle built up in way of packing, skimmed up and neck and gland bushes renewed.

" slide valve spindle guide bearing and quadrant slippers renewed.

" eccentric sheave renewed.

" eccentric straps bronze bearing shell renewed.

" rods top end bearings renewed.

" drag-link bearings renewed.

(Continued)

Rpt. 9a.

Port of

BILBAO

Continuation of Report No. 11405 dated 5th June, 1953.

on the

S.S. "CABO TORINANA"

Main Engine (Cont'd)

M.P. cylinder rebored.

" piston ring carrier and rings renewed.

" rod renewed.

" connecting rod top end bronze bearing renewed and bottom end remetalled.

" ahead and after guides plained.

" slide valve spindle built up in way of packing and neck and gland bushes renewed.

" slide valve spindle guide bearing and quadrant slippers renewed.

" eccentric rods top end bearings renewed.

" drag-link bearings renewed.

" eccentric straps bronze bearing shell renewed.

L.P. Piston ring renewed.

" rod skimmed up and neck and gland bushes renewed.

" connecting rod bottom end remetalled.

" ahead and astern guides plained.

" slide valve spindle built up in way of packing and neck and gland bushes renewed.

" slide valve spindle guide bearing and quadrant slippers renewed.

" eccentric rods top end bearings renewed.

" drag-link bearings renewed.

" eccentric straps bronze bearing shell renewed.

-Crankshaft journals, pins and coupling faces machined. Coupling holes reamed and new bolts fitted. Main bearings remetalled and crankshaft rebored. Main bearing bolts made good.

-Air pump, piston rod renewed and neck and gland bushes rebored, piston packing rod renewed, suction and discharge valves made good.

-Main circulating pump cylinder rebored and piston renewed, piston rod skimmed up and neck and gland rebushed.

--Feed pumps plunger renewed, neck and gland bushes adjusted, safety valve made good.

-Bilge pump plunger skimmed up and neck and gland bushes renewed, 2 suction and discharge valve chest renewed.

-Pumps lever gudgeon made sound and four link bearings renewed.

-Main condenser tubes removed and cleaned, all packing wood bushes renewed and about 30 tubes renewed; both water end lower part efficiently repaired, one cover renewed.

-Main engine all fastening down bolts and chocks renewed.

Main Engine turning gear-

Turning gear engine general overhauled.

Main Engine reversing gear-

A new reversing steam engine has now been fitted.

Feed Pump-

Steam and water cylinders rebored, Steam piston rings and water

(Continued)

12 JUN 1953

Port of BILBAO

Continuation of Report No. 11405 dated 5th June, 1953.

on the

S.S. "CABO TORIÑANA"Feed Pump (Cont'd)

piston renewed. Crank shaft bearings renewed.

Ballast-bilge Pump-

Water end cylinder renewed.

Crank shaft bearing renewed.

False injection-

False injection valve chest renewed.

Port Boiler-

New lagging fitted.

Auxiliary steam valve chest renewed.

Main feed valve chest renewed.

Safety valve seats renewed.

Collision checks renewed.

Starboard furnace jack up.

8 combustion chamber back screw stays renewed in port furnace.

46 plain tubes and 1 stay tube renewed in port furnace.

46 plain tubes and 1 stay tube renewed in starboard furnace.

Manholes flanges built up by E.W. and doors adjusted.

Starboard Boiler-

New lagging fitted.

Auxiliary steam valve chest renewed.

Main feed valve chest renewed.

Collision checks renewed.

4 combustion chamber back screw stays renewed in port furnace
and 8 in starboard furnace.

Both furnaces jack up.

46 plain tubes renewed in port furnace.

46 " " " " starboard furnace.

Manholes built up by E.W. and doors adjusted.

Smoke boxes up take and funnel renewed or made good.

All furnaces fronts have been renewed and arranged to burning
oil fuel.Shafting-

Thrust shaft renewed. Marks:- LLOYD'S No. 9122 - A.E. 29-7-52 - T.L. 30-10-52.

Thrust blocks bearings and shoes remetalled.

Thrust shaft couplings reamerred and new bolts fitted.

All shafting realignment.

Five tunnel shaft bearings remetalled.

Stern tube-

Packing gland renewed.

Other minor repairs effected.

Oil fuel conversion approved plans returned herewith. Two pressure
pumps have been fitted instead of three as shown on the plan.