

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

(Received at London Office \_\_\_\_\_)

Date of writing Report 27<sup>th</sup> Nov. 1948 When handed in at Local Office \_\_\_\_\_ Port of Amsterdam

Survey held at Amsterdam Date. First Survey 2<sup>nd</sup> June Last Survey 20<sup>th</sup> Nov. 1948  
(No. of Visits 28)

On the Machinery of the Wood, Iron or Steel S.S. Bengkalis  
Gross 6453 Vessel built at Rotterdam By whom My. Feyenoord When 1910  
Net 4025 Engines made at Rotterdam By whom My. Feyenoord When 1910  
Main Boilers 4 Boilers, when made (Main) 1917 (Donkey)  
Owners N.V. Stoom. Mij. Nederland Owners' Address \_\_\_\_\_  
(If not already recorded in Appendix to Register Book.)  
Managers \_\_\_\_\_ Port Amsterdam Voyage \_\_\_\_\_  
# Surveyed Afloat AND in Dry Dock A.D.M.  
(State name of Dock.) Javakade

Report No. \_\_\_\_\_ Port \_\_\_\_\_  
Particulars of Examination and Repairs (if any) L.M.C.  
Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the cause of Repairs, if any, 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 stated at the end of the report. State also the dates and initials of any letters respecting this case.

CHARACTER. * for Special Survey. Date of last Survey and of Periodical Surveys.	Years assigned now expired.	Machinery and Boiler Surveys (Including date of N.B., if any)
<u>100 A1 8,47</u>		
<u>Examd 8,47</u>		<u>B.S. 8,47 (1948)</u>
<u>Ams</u>		<u>T.S. seen 8,47</u>
<u>(Classification contemplated)</u>		
		<u>Rated for oil fuel</u>
		<u>RMC</u>

Where 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 \_\_\_\_\_  
Damage report made by anyone else? If so, by whom? \_\_\_\_\_  
Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? yes  
" Donkey " " " \_\_\_\_\_

State for what reasons \_\_\_\_\_ What parts of the Boilers could not be thus thoroughly examined? \_\_\_\_\_  
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? \_\_\_\_\_

Latest date of internal examination of each boiler from 23-6-48 to 20-10-48 all boilers Present condition of funnel(s) good  
Surveyor examine the Safety Valves of the Main Boilers? yes To what pressure were they afterwards adjusted under steam? 180 lbs.  
Surveyor examine the Safety Valves of the Donkey Boilers? \_\_\_\_\_ To what pressure were they afterwards adjusted under steam? \_\_\_\_\_  
Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? yes 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? yes and of the Donkey Boilers? \_\_\_\_\_  
Screw shaft now been drawn and examined? yes Has it a continuous liner? yes Is an approved oil retaining appliance fitted at the after end? no  
Shaft now been changed? no If so, state reasons \_\_\_\_\_ Has the shaft now fitted been previously used? \_\_\_\_\_ Has it a continuous liner? \_\_\_\_\_  
Approved oil retaining appliance fitted at the after end? \_\_\_\_\_ State (date of examination of Screw Shaft 20-10-48 State the wear down in the bush LV renewed Is electric light and/or power fitted? yes If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? yes  
Insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? yes

Engine parts, when referred to by numbers, should be counted from forward.  
If survey is not complete, state what arrangements have been made for its completion and what remains to be done. This vessel, being since 3,41 under Society's Supervision (Classification Contemplated) has now been submitted for a Complete Lineary Survey. On this occasion First Entry Reports have been prepared, which are forwarded with. As this vessel is 30 years old, no more plans of the machinery were available. At our request a plan of shafting and a photostat-copy of the Boiler plan have been made and are forwarded with. A plan of Bilge-, Ballast- & Oil fuel Pumping Arrangement is in preparation and will be forwarded in due course.

Shaft placed in drydock; tailshaft drawn, transported to workshop, liner slightly ground over whole length on lathe, examined and found in satisfactory condition. Propeller, stern tube, stern bush and stern gland in good condition. Gland packing replaced and gland- & neck bush renewed. Connections opened out, examined and found or made in order.  
Please see continuation sheet.

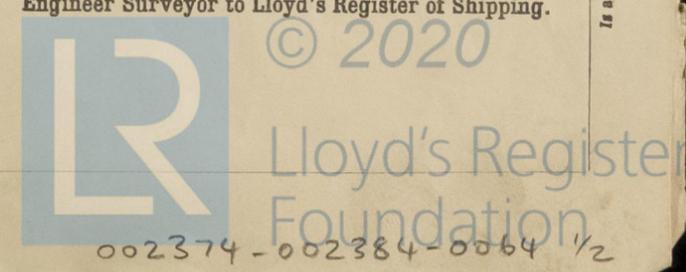
General Observations, Opinion, and Recommendation: The machinery is in a good condition.  
(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, BS 9,11, B&MS 9,11 \*LMC 9,11 or \*LMC 140 lb., FD, &c.)  
We are of opinion that this vessel is eligible for classification in the Register Book with record of L.M.C. 11,48 with notation of Tailshaft (CL) seen 10,48

Item "main injection pipe" to be deleted from S.R. list.

Fee (per Section 29) on 1<sup>st</sup> Entry Report 4  
Total Damage or Repair Fee (if any) \_\_\_\_\_ £ : :  
Printing expenses (if chargeable) \_\_\_\_\_ £ : :  
Fees applied for \_\_\_\_\_  
Received by me, \_\_\_\_\_

[Signature]  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_  
dated \_\_\_\_\_  
L.M.C. 11,48  
S (CL) 10,48



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

machinery of the 5/5 "BENGKALIS"

The main engine has been entirely opened out; all parts as cylinders with cyl. covers, pistons & rods, slide valves & rods with valve chests, connecting rods with top & bottom ends, guides & guide shoes, link motion - & reverse gear, crankshaft with eccentric sheaves & straps and main bearings examined and found or brought in efficient condition.

The following repairs carried out: HP & LP piston rods (forming one piece with crosshead) renewed (being bent), new crosspins fitted in all 3 connecting rods and top end brasses renewed, HP slide valve chest bored out and slide valve rings renewed, N<sup>o</sup> 5 & 6 main bearings re-metalled. Crankshaft clock gaged and found readings satisfactory.

Thrust block opened out, examined and found with thrust shaft and horse shoes in good condition; both thrust block bearings re-metalled.

Intermediate shafting with bearings examined and found in satisfactory condition; N<sup>o</sup> 7 & 8 plummer blocks re-metalled. Alignment of shafting verified and found good.

All auxiliaries, set forth below, were opened out, all parts examined and found or made in order:

Main circulating centrif. pump with both steam engines - Main condensate pump (Duplex horizontal) - Both Chapman's feed pumps (steam cyl. of Forw. pump bored out & piston renewed) - Steam turbo. feed pump (all blades of Curtis wheel & guide blades renewed) - Duplex Ballast pump - Duplex Sanitary pump (entirely renewed) - Duplex Emergency Bilge pump (being the former vegetable oil pump) - ME driven Bilge pump (ram piston type) - Duplex Fuel oil transfer pump - Both Weir's fuel oil burning pumps - Aft dynamo engine - Centre dynamo engine - Forw. dynamo engine (small turbo-generator) - Both Fan engines.

Main condenser opened out, all tubes & ferrules renewed, hydr. tested, examined and found in good condition. Auxiliary condenser examined, hydr. tested and found in order.

Both fuel oil heaters opened out, examined, coils hydr. tested and found in good condition.

Evaporator dismantled and examined, casing & coils hydr. tested and found in sound condition; evaporator afterwards tried under steam and safety valves adjusted.

All valves and pipes of Bilge-, Ballast- & Oil fuel pumping arrangement examined and found or made in order. A new cast iron main circulating injection pipe has been fitted. Fire extinguishing arrangement examined, found or made in order, and tried on completion.

All 4 main boilers have been examined internally and externally (insulation stripped) and found in a satisfactory state of upkeep. 244 plain tubes renewed in Port Aft boiler (upkeep repairs).

Boilers afterwards hydr. tested with satisfactory results. Their mountings and safety valves were opened out, examined and found or made in order. New insulation has been fitted.

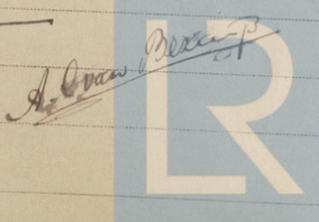
Steel main steam pipes & principal auxiliary steam pipes examined, and tested as per Rule.

On completion the boilers have been tried under steam and found with the fuel oil burning plant in good working condition; the safety valves were adjusted under steam.

ELECTRICAL EQUIPMENT: Please see Report 13.

On completion of the survey the machinery has been tried under steam for several hours and found in good working condition.

*J. J. J. J.*



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