

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 17 When handed in at Local Office 17.5 1943 Port of Glasgow 19 MAY 1943  
 No. in Survey held at Glasgow Date, First Survey 26.2.1942 Last Survey 11.5.1943  
 Reg. Book 37505 on the S/S. "Empire Favour" (Number of Visits 24) Tons {Gross 7056  
 Net 4917  
 Built at Dundee By whom built Caledon S.B. & F. Co. Ltd Yard No. 441 When built 1945  
 Engines made at Glasgow By whom made Duncan Stewart & Co. Ltd Engine No. 217 When made 1943  
 Boilers made at Dundee By whom made Caledon S.B. & F. Co. Ltd Boiler No. B.S. 100 When made 1945  
 Registered Horse Power 2500 Owners Ministry of War Transport Port belonging to Dundee  
 Nom. Horse Power as per Rule 510 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which vessel is intended

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute  
 Dia. of Cylinders 24 1/2" - 39" - 70" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 14 1/4" Crank pin dia. 14 3/4" Crank webs Mid. length breadth 22" Thickness parallel to axis 9"  
as fitted Mid. length thickness 9" shrunk Thickness around eye-hole 6 3/8"  
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as fitted  
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as fitted Is the {tube / screw} shaft fitted with a continuous liner {  
 as fitted  
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the  
 as fitted propeller boss. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner.  
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive.  
 If two liners are fitted, is the shaft lapped or protected between the liners. Is an approved Oil Gland or other appliance fitted at the after end of the tube  
 at. If so, state type. Length of Bearing in Stern Bush next to and supporting propeller.  
 Propeller, dia. Pitch No. of Blades Material whether Moveable Total Developed Surface sq. feet  
 Feed Pumps worked from the Main Engines, No. none Diameter - Stroke - Can one be overhauled while the other is at work -  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work yes  
 Feed Pumps {No. and size Pumps connected to the Main Bilge Line {No. and size How driven How driven  
 Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size  
 Are two independent means arranged for circulating water through the Oil Cooler 1 Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps:—In Engine and Boiler Room  
 In Pump Room In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes.  
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges.  
 Are all Sea Connections fitted direct on the skin of the ship. Are they fitted with Valves or Cocks  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates. Are the Overboard Discharges above or below the deep water line.  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel. Are the Blow Off Cocks fitted with a spigot and brass covering plate.  
 What Pipes pass through the bunkers. How are they protected.  
 What pipes pass through the deep tanks. Have they been tested as per Rule.  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times.  
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one  
 compartment to another. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from.

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers  
 Which Boilers are fitted with Forced Draft. Which Boilers are fitted with Superheaters.  
 No. and Description of Boilers. Working Pressure.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED?  
 IS A DONKEY BOILER FITTED? If so, is a report now forwarded?  
 Can the donkey boiler be used for domestic purposes only.  
 PLANS. Are approved plans forwarded herewith for Shafting. Main Boilers. Auxiliary Boilers. Donkey Boilers.  
 (If not state date of approval)  
 Superheaters. General Pumping Arrangements. Oil fuel Burning Piping Arrangements.

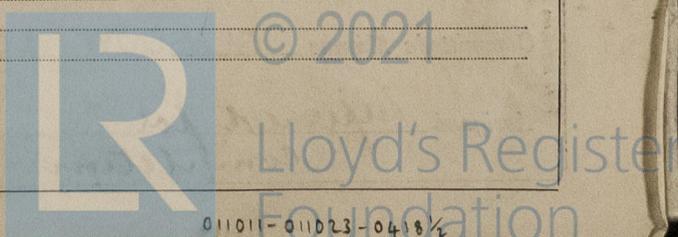
### SPARE GEAR.

Has the spare gear required by the Rules been supplied only as per list attached  
 State the principal additional spare gear supplied

The foregoing is a correct description.  
**DUNCAN STEWART & CO. LTD.**

Frank B. Hendley  
 Director

Manufacturer.



NOTE.—The words which do not apply should be deleted.

Dates of Survey while building  
 During progress of work in shops -- 1942 Feb 26 Jun 8 Sep 9 Oct 9 23 Nov 10 Dec 22 1943 Jan 19 22 Feb 1.5.17.23 Mar 1.10.19.24 Apr 2.13.31.29 May 3.4.11  
 During erection on board vessel ---  
 Total No. of visits 24

Replace MP-2A-3 -43  
 Dates of Examination of principal parts - Cylinders HP & LP 5-2-43 Slides 1-2-43 Covers 9-9-42  
 Pistons 9-9-42 Piston Rods 19-3-43 Connecting rods 23-2-43  
 Crank shaft 17-2-43 Thrust shaft Intermediate shafts  
 Tube shaft Screw shaft Propeller  
 Stern tube Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections  
 Completion of pumping arrangements Boilers fixed Engines tried under steam  
 Main boiler safety valves adjusted  
 Crank shaft material J. steel Identification Mark LLOYD L 11385 17-2-43 \* Thrust shaft material Identification Mark  
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark  
 Screw shaft, material Identification Mark Steam Pipes, material Test pressure Date of Test

Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150° F.  
 Have the requirements of the Rules for the use of oil as fuel been complied with  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo If so, have the requirements of the Rules been complied with  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with  
 Is this machinery duplicate of a previous case yes If so, state name of vessel Armingtons, Whitwell, LMS 519. GL Rpt No 66911  
 General Remarks (State quality of workmanship, opinions as to class, &c.)

\* In addition, all the original identification marks are stamped on each forging, as per reports attached.  
 The materials and workmanship are good.  
 The engines have been constructed under special survey and in accordance with the M.S. specification. Upon satisfactory completion of fitting in the vessel and of trials they will, in my opinion, be eligible for classification and the record L.M.C. (with date).

All the requirements of the specification for engines working with superheated steam have been complied with except that insulation under cylinders has been omitted to enable them to be lifted for transport. Insulation to be fitted after erection in the vessel.

These engines will be stored at the L.M.S. London Road Mineral Station, Glasgow.

For installation of this machinery see Dundee report No. 9497  
 Thrust, Intermediate and Screw shafting see Newcastle on Tyne report No. 103008. also London letter of the 9/11/45.  
 G. S. Murdoch Glasgow - 1945

The amount of Entry Fee ... £ 6 : :  
 Special ... £ 50 : 5 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 18 MAY 1943  
 When received, 19

S. L. Davis  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 18 MAY 1943 20 NOV 1945

Assigned Refused for completion

DUNCAN STEWART & CO. LD  
 LIST OF SPARES FOR ENGINE N° 146.217

DESCRIPTION	DRAWING N°	ITEM	N° OFF	REMARKS
MAIN BEARING BOLTS WITH FEATHER.	4A	C	2	
MAIN BEARING BOLT NUTS TOP BRIGHT.	4A	D	2	
MAIN BEARING BOLT NUTS BOTTOM BLACK.	4A	E	2	
CONNECTING ROD, BOTTOM END BUSH TOP HALF.	8	B	1	
CONNECTING ROD, BOTTOM END BUSH BOTTOM HALF.	8	C	1	
CONNECTING ROD, BOTTOM END BOLTS.	8	D	2	
CONNECTING ROD, BOTTOM END BOLT NUTS.	8	E	2	
CONNECTING ROD, SET PINS 5/8 DIA. AS DETAILED.	8	G	2	
CONNECTING ROD, BOTTOM END LINERS	8	J	2 SETS	BRASS & TIN.
CONNECTING ROD, TOP END LINERS.	8	K	2 SETS	BRASS & TIN
CONNECTING ROD, TOP END HALF BUSH	8	L	2	
CONNECTING ROD BOLTS, TOP END	8	N	2	
CONNECTING ROD, TOP END BOLT NUTS.	8	O	2	
JUNK RING STUDS & NUTS WITH SPLIT PIN	9	K	6	
JUNK RING STUD WASHERS.	9	L	6	
H.P. COVER STUDS & NUTS.	9	M	3	
M.P. & L.P. COVER STUDS & NUTS.	9	N	3	
RINGS FOR H.P. PISTON.	9	V	1 SET	SUPPLIED BY CAMPBELL & BANKS.
M.P. CASING COVER STUDS & BRIGHT NUTS.	9A	G	3	
H.P. CASING COVER STUDS & BRIGHT NUTS	9A	H	3	
H.P. PISTON VALVE PACKING RINGS, TOP.	10	E	1 SET.	SUPPLIED BY CAMPBELL & BANKS.
H.P. PISTON VALVE PACKING RINGS, BOTTOM.	10	F	1 SET.	SUPPLIED BY CAMPBELL & BANKS.
KINGHORN VALVES FOR AIR PUMP.	12	E	6 SETS	
KINGHORN VALVES FOR BILGE PUMP VALVE CHESTS.	16	J	2 SETS	To accompany 1st entry report
VALVE SEAT FOR BILGE PUMP VALVE CHESTS.	16	K	2	
VALVE GUARD FOR BILGE PUMP VALVE CHESTS.	16	L	2	
VALVE STUD WITH NUT & SPLIT PIN FOR BILGE PUMP CHESTS.	16	M	2	
METALLIC PACKING FOR PISTON RODS.	-	-	1 SET OF	UNITED STATES WEARING PARTS METALLIC PACKING CO. J. W. KIRKHAM, LTD
T & K TYPE MECHANICAL LUBRICATORS	-	-	-	5 SIGHT FEED GLASSES 1 FILING GLASS.

