

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

14 MAY 1947

Date of writing Report... 3.5.47 When handed in at Local Office... 12 May 47 Port of... BELFAST

No. in Survey held at WARRENPOINT & BELFAST Date, First Survey 18 SEPT. 46 Last Survey 30 APRIL 1947

Reg. Book. 87577 on the TWIN SCREW VESSEL MV "JUANITA BEAZLEY" Tons Gross 1236 Net 677

Built at WARRENPOINT By whom built WARRENPOINT SHIPYARD Co. Yard No. T102 When built 1947

Owners ANGLO ECUADORIAN OILFIELDS LD. Port belonging to LONDON

Electrical Installation fitted by WARRENPOINT SHIPYARD Co. Contract No. T102 When fitted 1947

Is vessel fitted for carrying Petroleum in bulk YES Is vessel equipped with D.F. NO E.S.D. NO Gy.C. NO Sub.Sig. NO

Have plans been submitted and approved YES System of Distribution TWO WIRE Voltage of supply for Lighting 110

Heating - Power 220 Direct or Alternating Current, Lighting DC Power DC If Alternating Current state periodicity - Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off YES Are turbine emergency governors fitted with a

trip switch as per Rule - Generators, are they compound wound YES, are they level compounded under working conditions YES

if not compound wound state distance between generators - and from switchboard - Where more than one generator is fitted are they

arranged to run in parallel YES, are shunt field regulators provided YES Is the compound winding connected to the negative or positive pole

POSITIVE Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates of

test for machines under 100 kw. been supplied SEE REMARKS and the results found as per rule - Are the lubricating arrangements and the construction

of the generators as per rule YES Position of Generators IN ENGINE ROOM COMPARTMENT

is the ventilation in way of generators satisfactory YES, are they clear of inflammable material YES, if situated

near unprotected combustible material state distance from same horizontally - and vertically - are the generators protected from mechanical

injury and damage from water, steam and oil YES, are the bedplates and frames earthed YES and the prime movers and generators in metallic

contact YES Switchboards, where are main switchboards placed NEAR GENERATORS

are they in accessible positions, free from inflammable gases and acid fumes YES, are they protected from mechanical injury and damage from water, steam

and oil YES, if situated near unprotected combustible material state distance from same horizontally - and vertically - what insulation

material is used for the panels MICANISED BARS, if of synthetic insulating material is it an Approved Type YES, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the frame effectually earthed YES

Is the construction as per Rule YES, including accessibility of parts YES, absence of fuses on the back of the board YES, individual fuses

to pilot and earth lamps, voltmeters, etc. YES, locking of screws and nuts YES, labelling of apparatus and fuses YES, fuses on the "dead"

side of switches YES Description of Main Switchgear for each generator and arrangement of equaliser switches T.P. CIRCUIT BREAKER

FITTED WITH O.L. & RC TRIPS

and for each outgoing circuit DP. SWITCH & FUSES

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule - Instruments on main switchboard 4

ammeters 2 voltmeters - synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection YES Earth Testing, state means provided EARTH LAMPS

Switches, Circuit Breakers and Fuses, are they as per Rule ADMIRALTY PATTERN ADMIRALTY PATTERN, are all fuses labelled as

per Rule YES If circuit breakers are provided for the generators, at what overload current did they open when tested FULL LOAD, are the reversed current

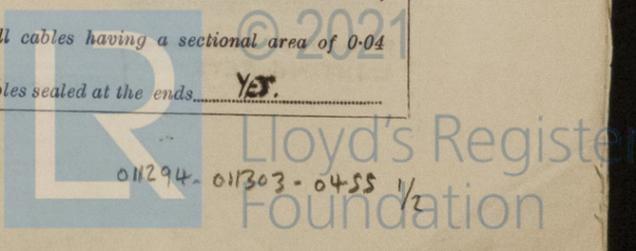
protection devices connected on the pole opposite to the equaliser connection YES, have they been tested under working conditions, and at what current

did they operate 20 AMPS Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule ADMIRALTY PATT.

Cables, are they insulated and protected as per the appropriate Tables of the Rules YES, if otherwise than as per Rule are they of an approved type YES,

state maximum fall of pressure between bus bars and any point under maximum load 4.5 VOLTS, are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets YES Are paper insulated and varnished cambric insulated cables sealed at the ends YES



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with insulating compound - or waterproof insulating tape YES. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. YES, are cables laid under machines or floorplates. YES, if so, are they adequately protected. YES. Are cables in machinery spaces, galleys, laundries, etc., lead covered. YES or run in conduit. - State how the cables are supported and protected. PYROTENAX & L.C. CLIPPED.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. YES. Refrigerated chambers, are the cables and fittings as per Rule. -

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. YES, where unarmoured cables pass through beams, etc., are the holes effectually bushed. YES and with what material. LEAD. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. YES. Emergency Supply, state position. -

and method of control. -

Navigation Lamps, are they separately wired. YES. controlled by separate double pole switches. YES. and fuses. YES. Are the switches and fuses in a position accessible only to the officers on watch. YES, is an automatic indicator fitted. YES. Secondary Batteries, are they constructed and fitted as per Rule. YES, are they adequately ventilated. YES.

what is the battery capacity in ampere hours. 300

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. YES. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. NO, if so, how are they protected. -

and where are the controlling switches fitted. - , are all fittings suitably ventilated. YES.

are all fittings and accessories constructed and installed as per Rule. YES. Searchlight Lamps, No. of - , whether fixed or portable. - , are their fittings as per Rule. - Heating and Cooking, is the general construction as per Rule. YES.

are the frames effectually earthed. YES, are heaters in the accommodation of the convection type. - Motors, are all motors constructed and installed as per Rule. YES and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. YES, if situated near unprotected combustible material state minimum distance from same horizontally. - and vertically. - Are

motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment. YES.

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. - Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule. SEE REMARKS. Control Gear and Resistances, are they constructed and fitted as per Rule. YES. Lightning Conductors, where required are they fitted as per Rule. - Ships carrying Oil having a Flash Point

less than 150° F. Have all the special requirements of the Rules for such ships been complied with. YES, are all fuses of the cartridge type. YES.

are they of an approved type. - Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. YES. Are the cables lead covered as per Rule. YES or PYROTENAX. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. YES, are they suitably stored in dry situations. YES. Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. YES.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	4	30	225	133	1100	OIL ENGINE.	OIL.	ABOVE 150° F.
LIGHTING	2	10	110	91	1000	MOTOR.	-	-
BATTERY CHARGE	1	2	33	60	1000	MOTOR.	-	-
EMERGENCY BATTERY CHARGER TRANSFORMER	1	360 WATT	14-20	15	1000.	PETROL ENGINE	PETROL	BELOW 150° F.

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	30	1	0.15	133	246	56	VC.	L.C.
" EQUALISE		1	0.15	-	246	28	VC.	L.C.
BATTERY CHARGING M.G. SET MOTOR	3	1	0.0045	15	15	10	RUBBER	L.C.
" " GENERATOR	2	1	0.04	60	104	10	VC.	L.C.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER (MOTOR	1575 HP.	1	0.04	62	104	26	VC.	L.C.
LIGHTING SETS (GENERATOR	10 KW.	1	0.1	91	191	26	VC.	L.C.

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS	1	0.01	26	31	28	VIR	L.C.
ENG. D.B. LIGHTING I.	1	0.0225	32	46	36	"	"
ENG. D.B. LIGHTING II	1	0.6	45	135	42	VC	"
		0.06					

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	0.01	26	31	56	VIR	L.C.
NAVIGATION LIGHTS	1	0.003	2	10	76	"	"
LIGHTING AND HEATING ACCOMMODATION DB.	1	0.01	22	46	26	"	"
GALLEY RANGE	1	0.04	100	104	48	V.C.	"
GALLEY URN.	1	0.0045	14	15	46	VIR	"
OIL HEATER.	1	0.0045	14	15	78	VIR	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
			No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
BALLAST PUMP.	1	10	1	0.0225	46	46	220	VIR	L.C.
BILGE PUMPS.	2	8	1	0.01	32	31	130	"	L.C.
WINDLASS.	1	25	1	0.1	100	191	380	PYROTENAX	L.C.
STEERING GEAR.	1	2	1	0.003	9	10	56	VIR	L.C.
CAPSTAN	1	14	1	0.04	55	104	54	V.C.	L.C.
DOMESTIC REFRIG.	1	2	1	0.003	9	10	75	VIR	L.C.
FRESH WATER PUMP.	2	0.5	1	0.003	26	10	40	VIR	L.C.
OIL FUEL TRANSFER PUMP.	1	0.75	1	0.003	37	10	78	VIR	L.C.
CARGO PUMPS.	2	35	1	0.15	135	246	180	V.C.	L.C.
MAIN ENGINE ELECTRIC STARTER	4	-	2	0.1	-	450	44	V.C.	L.C.
AUX ENGINE	6	-	1	0.1	-	225	50	V.C.	L.C.

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.  
 All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.  
 The foregoing is a correct description.

*See Remarks.* Electrical Engineers. Date \_\_\_\_\_

COMPASSES.

Minimum distance between electric generators or motors and standard compass 25 FEET.

Minimum distance between electric generators or motors and steering compass 20 FEET.

The nearest cables to the compasses are as follows:—

A cable carrying 0.15 Ampères LED INTO feet from standard compass LED INTO feet from steering compass.

A cable carrying 2 Ampères 10 feet from standard compass 6 feet from steering compass.

A cable carrying \_\_\_\_\_ Ampères \_\_\_\_\_ feet from standard compass \_\_\_\_\_ feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power YES.

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted YES.

The maximum deviation due to electric currents was found to be NIL degrees on ANY course in the case of the standard compass, and NIL degrees on ANY course in the case of the steering compass.

Builder's Signature. Date \_\_\_\_\_

Is this installation a duplicate of a previous case YES. If so, state name of vessel MV "PETRONAVE I"

Plans. Are approved plans forwarded herewith NO. If not, state date of approval 21-12-45.

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith SEE

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) \_\_\_\_\_

NOTE: During the construction of this vessel, the Builders The Warrenpoint Shipyard Co Ltd went into liquidation. The owners with direct labour carried on and launched the vessel. Messrs Barland and Wolf completed her at Belfast. Neither the Liquidators for Warrenpoint Shipyard Co nor Messrs Barland and Wolf are in a position to sign on behalf of the Builders. Owing to the generators and essential motors being mainly ex. Admiralty stock and in view of the above circumstances it has not so far been possible to obtain maker's test certificates for these items.

The electrical equipment of this vessel has been fitted on board under special survey, tested under full working conditions and found satisfactory. The materials and workmanship are good.

Total Capacity of Generators 120 Kilowatts.

The amount of Fee ... £ 42 : - : When applied for, 12 May 1947.

Travelling Expenses (if any) £ 1 : 12/6 : When received, \_\_\_\_\_ 19\_\_\_\_\_

*R. J. Hutchinson.*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 27 JUN 1947

Assigned See F.E. Welch. rpt.

5014.33—TRANSFER. (MADE AND PRINTED IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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