

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office NOV 30 1939

Date of writing Report 13/11 1939 When handed in at Local Office 19 Port of Copenhagen
 No. in Survey held at Odense Date, First Survey 22/8 39 Last Survey 8/11 39
 Reg. Book. 31/54 on the Motor Tank vessel "OVATELLA" Tons {Gross 6316.50
 Net 3636.55

Built at Odense By whom built Odense Kaalskibvægt Yard No. 81 When built 1939
 Owners The Anglo Texan Petroleum Co. Port belonging to London
 Electrical Installation fitted by A. Danish Electric Ltd. Copenhagen Contract No. When fitted 1939
 Is vessel fitted for carrying Petroleum in bulk yes Is vessel equipped with D.F. yes E.S.D. yes Gy.C. No Sub.Sig. No

Have plans been submitted and approved yes System of Distribution 2 conductors insulated Voltage of supply for Lighting 110
 Heating 110 Power 110 Direct or Alternating Current, Lighting direct Power direct If Alternating Current state frequency Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off yes Are turbine emergency governors fitted with a
 trip switch as per Rule yes 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 No, 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 None Have certificates of

test for machines under 100 kw. been supplied yes and the results found as per rule yes Are the lubricating arrangements and the construction
 of the generators as per rule yes Position of Generators starboard side of engine room

 , 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 starboard side of engine room

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 "Intersolun" and slate, 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 yes 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 a 2 pole pole
circuit breaker and a fuse on each pole

and for each outgoing circuit a 2 pole pole circuit breaker and a fuse on each
pole

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 2
 ammeters 2 voltmeters synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the
 equaliser connection Earth Testing, state means provided 2 sets of earth lamps

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type yes, are all fuses labelled as per Rule yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection yes, have they been tested under working conditions yes. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule yes. 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 3.5 lb, 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 exposed ends yes with insulating compound yes 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 no, if so, are they adequately protected yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit yes. State how the cables are supported and protected lead covered & the wire braided cables are supported by steel clips, on deck and elsewhere when found necessary run in conduit. Are all lead sheaths, armouring and conduits effectually bonded and earthed yes. Refrigerated chambers, are the cables and fittings as per Rule yes. 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 effectively 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 yes and method of control yes. 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. 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 lighting of pump rooms effected by lamps fitted inside gaslight steel boxes with sight glasses in the pump room casings and where are the controlling switches fitted on the switch board in the clean room, are all fittings suitably ventilated yes, are all fittings and accessories constructed and installed as per Rule yes. Searchlight Lamps, No. of yes, whether fixed or portable yes, are their fittings as per Rule yes. 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 yes. 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 yes and vertically yes. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing yes. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule yes. Control Gear and Resistances, are they constructed and fitted as per Rule yes. Lightning Conductors, where required are they fitted as per Rule yes. 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 yes. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type yes. 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 megger 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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	20	110	182	390	1-cyl. Steam engine		
	1	20	110	182	400	2-cyl. 4-cyl. oil engine	heavy oil	> 150° C
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Size of Strands.	In the Circuit.	Rule.			
MAIN GENERATOR	20	1	120	182	177	10	RUBBER	lead covered
" " EQUALISER	20	1	120	182	177	18	"	and steel wire braided - when necessary laid in conduit or screened by steel plate.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS								
Plugs off H.	1	10	12	38	34	"	"	"
Engine room	1	10	38	38	16	"	"	"
Accommodations off K.	1	16	32.8	48.7	38	"	"	"
Pantry	1	25	41	63	122	"	"	"
Clean room	1	10	6.0	38	142	"	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	16		48.2	34	"	"	"
NAVIGATION LIGHTS	23	2.5	2	15.5	13	"	"	"
LIGHTING AND HEATING								

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Engine turning gear	1	7.5	1	35	50	77.6	25	"
Lathe or pump	1	3.5	1	10	30	38	14	"
Grinding machine	1	3						
Turning lathe	1	1.5						
Drilling machine	1	2	1	35	45	77.6	54	"
Oil pump supply pump	1	2						
Distilling pump	1	2.1						
Ventilating fan midship	1	2.2	1	10	17	38	27	"

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.

D.E.C.

DANIEL ELLIOTT & SONS

Electrical Engineers.

Date 16-11-1939

COMPASSES.

Minimum distance between electric ~~generators~~ or motors and standard compass 30'

Minimum distance between electric ~~generators~~ or motors and steering compass 33'

The nearest cables to the compasses are as follows:—

A cable carrying 4 Ampères 13 feet from standard compass 10 feet from steering compass.

A cable carrying 2 Ampères 15 feet from standard compass 9 feet from steering compass.

A cable carrying 0.1 Ampères 8 feet from standard compass 8 feet from steering compass.

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

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

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

Builder's Signature.

Date

Is this installation a duplicate of a previous case No If so, state name of vessel

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

and power installation herein described has been fitted in accordance with the Society's Rules, the approved plans and the Surveyor's letter E dated 12/7/39. The material is of good description throughout and the workmanship of high quality. On completion the whole installation was tested under working conditions and as per Rules and found satisfactory. The vessel has now been laid up and in order to complete the survey the whole installation will have to be tested again under working conditions in order that the compasses may be adjusted and the effect noted of switching on and off circuits, motors or in their vicinity.

Noted

5/12/39

Total Capacity of Generators 40 Kilowatts.

The amount of Fee ... £ 560.-
Travelling Expenses (if any) £ : :
When applied for, 21-11-39
When received, 19-12-39

Christie
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

No action

(MADE IN ENGLAND.)
2m.10.38.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

FILED DEC 1939



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