

20 JUN 1927

Rpt. 13.

No. 16524

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 10.6.1927 When handed in at Local Office 10 Port of Rotterdam

No. in Survey held at Rotterdam Date, First Survey 7.12.26 Last Survey 9.6.1927  
 Reg. Book. (Number of Visits 18)

on the Steel Single Screw Motor Tanker GOLDMOUTH Tons { Gross  
 Net

Built at Rotterdam By whom built My. Tjenwoord Yard No. 802 When built

Owners Anglo Saxon Petroleum Co Port belonging to London

Electric Light Installation fitted by Messrs. Myrnesen & Co Contract No. When fitted 1927

**System of Distribution** Two wire system

**Pressure of supply for Lighting** 110 volts, **Heating** - volts, **Power** 110 volts.

**Direct or Alternating Current, Lighting** direct current **Power** direct current

If alternating current system, state frequency of periods per second -

Has the **Automatic Governor** been tested and found efficient when the whole load is suddenly thrown on or off Yes

**Generators**, do they comply with the requirements regarding rating Yes, are they compound wound Yes  
 are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator -

Where more than one generator is fitted are they arranged to run in parallel Yes, is an adjustable regulating resistance fitted in series with each shunt field Yes

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes

**Position of Generators** In Engine room near the switchboards  
 is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes  
 if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators - and -, are the generators protected from mechanical injury and damage from water, steam or oil Yes  
 are their axes of rotation fore and aft Yes

**Earthing**, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes

**Main Switch Boards**, where placed In Engine room near the generators  
 If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard -

**Switchboards**, are they placed in accessible positions, free from inflammable gases and acid fumes Yes  
 are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards - and -  
 are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework -  
 and is the frame effectively earthed - Are the fittings as per Rule regarding:— spacing or shielding of live parts Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches Yes

**Main Switchgear**, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches for each generator a double pole quick linked trip switch for equalizer and main pole, and auto. mate minimal single pole quick linked switch for the positive pole, and for each outgoing circuit a double pole quick linked trip switch and double pole fuse.

**Instruments on main switchboard** 5 ammeters 4 voltmeters - synchronising device for paralleling purposes.

**Earth Testing**, state what means are provided at the main switchboard for indicating the state of the insulation of the system two earth lamps on the switchboard for lighting and two earth lamps on the switchboard for power

**Switches, Circuit Breakers and Fusible Cut-outs**, do these comply with the requirements of the Rules Yes

**Joint Boxes Section and Distribution Boards**, is the construction, protection, insulation, material, and position of these as per rule Yes

**Cables:** Single, twin, concentric, or multicore Single are the cables insulated and protected as per Tables IV or V of the Rules Yes

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load 3 Volts

**Cable Sockets and other connections,** are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes

**Paper Insulated Cables.** If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound Yes

**Cable Runs,** are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage Yes

**Support and Protection of Cables,** state how the cables are supported and protected In cables lead covered, in all other places lead covered and armoured. The cables on deck laid in iron tracks on engine room surrounded and secured by iron clips

If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables run in separate grooves —. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII Yes

**Refrigerated Chambers,** if lights are fitted, are the cables and fittings in accordance with the special requirements Yes

**Joints in Cables,** state if any, and how made, insulated, and protected No joints

**Watertight Glands and Deck Tubes,** are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes

**Bushes in Beams and Non-watertight Partitions,** where wear-wound cables pass through beams and non-watertight partitions, are the holes efficiently bushed Yes state the material of which the bushes are made lead or hard wood

**Earthing Connections,** state what earthing connections are fitted and their respective sectional areas —

—, are their connections made as per Rule —

**Alternative Lighting,** are the groups of lights in the propelling machinery space arranged as per Rule Yes

**Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven —

**Navigation Lamps,** are these separately wired Yes, controlled by separate switch and separate fuses Yes, are the fuses double pole Yes, are the switches and fuses grouped in a position accessible only to the officers on watch Yes, has each navigation lamp an automatic indicator as per Rule Yes

**Secondary Batteries,** are they constructed and fitted as per Rule —

**Fittings,** are all fittings on weather decks, in storerooms and engine rooms and where exposed to drip or condensed moisture, watertight Yes, are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected —, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected —, how are the cables led —

where are the controlling switches situated —

**Searchlight Lamps, No. of** —, whether fixed or portable —, are their fittings as per Rule —

**Arc Lamps,** other than searchlight lamps, No. of —, are their live parts insulated from the frame or case —, are their fittings as per Rule —

**Motors,** are their working parts readily accessible Yes, are the coils self-contained and readily removable for replacement Yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material Yes, are they protected from mechanical injury and damage from water, steam or oil Yes are their axes of rotation fore and aft No, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type —, if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

**Control Gear and Resistances,** are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule Yes

**Lightning Conductors,** where lightning conductors are required, are these fitted as per Rule Yes

**Ships carrying Oil having a Flash Point less than 150° F.** Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings Yes

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office Yes

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE		
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	3	32 each	110	29/266	250	Diesel Engine			
AUXILIARY	1	14	110	127	440	Steam engine motor			
EMERGENCY	1	14	110	127	400	Steam engine			
ROTARY TRANSFORMER									

  

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Am. éres.	Approximate Length. (Lead in Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	40 mths	19	2.14 mths	100	16.00	Rubber	Lead covered and armoured
	EQUALISER CONNECTIONS	1	25 mths	19	2.13 mths	50	2.00	"	"
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS	2	35	19	1.33	50	16.00	"	"
	ENGINE ROOM	2	14	19	1.33	1	15.00	"	"
	BOILER ROOM	2	14	19	1.33	1	15.00	"	"
	ACCOMMODATION	2	25	19	2.13	40	80.00	"	"
	WIRELESS	2	10	19	1.33	25	120.00	"	"
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	14	19	1.33	1	16.00	"	"
	SIDE LIGHTS...	4	12	19	1.33	1	32.00	"	"
	COMPASS LIGHTS...	2	12	19	1.33	1	16.00	"	"
	POOP LIGHTS	2	12	19	1.33	1	40.00	"	"
	CARGO LIGHTS	2	12	19	1.33	1	30.00	"	"
	ARC LAMPS								
	HEATERS								

  

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Am. éres.	Approximate Length. (Lead in Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR	1	95	19	2.52	160	64.00	Rubber	Lead covered and armoured
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	1	25	19	1.33	10	20.00	"	"
	OIL FUEL TRANSFER PUMP	2	25	19	2.13	60	40.00	"	"
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR—								
	(a) MOTOR GENERATOR...								
	(b) MAIN MOTOR	2	220	19	1.83	240	110.00	"	"
	WORKSHOP MOTOR	1	6	19	1.05	10	30.00	"	"
	VENTILATING FANS								
	Coal pump	1	220	19	2.52	200	20.00	"	"
	Oil pump	2	6	19	1.05	24	25.00	"	"
	Generator	1	12	19	1.33	2	10.00	"	"
	Drilling Machine	1	4	19	1.33	16	30.00	"	"
	Water pump	1	50	19	1.83	104	120.00	"	"
	Hand lubricator								
	Oil pump	1	6	19	1.05	144	0.00	"	"

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All Conductors are of annealed copper conforming to British Standard Specification No. 7. *Yes*  
The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.  
The foregoing is a correct description.

*[Signature]* Electrical Engineers. Date *13<sup>th</sup> June 1927*

COMPASSES.

Distance between electric generators or motors and standard compass *80 ellb*

Distance between electric generators or motors and steering compass *85 ellb*

The nearest cables to the compasses are as follows:

A cable carrying *13* Amperes *9* feet from standard compass *9* feet from steering compass.

A cable carrying *25* Amperes *25* feet from standard compass *21* feet from steering compass.

A cable carrying *10* Amperes *25* feet from standard compass *21* 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 *every* course in the case of the standard compass, and *nil* degrees on *every* course in the case of the steering compass.

X Maatschappij voor Scheeps- en Werktuigbouw  
"FIJENOORD"  
*[Signature]* Builder's Signature. Date

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *MV TELENE*

General Remarks (State quality of workmanship, opinions as to class, &c. *This installation has been fitted in accordance with the Society's Rules and was found in a good working order when tried and in my opinion the Committee's approval.*)

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

*[Signature]*  
*23/6/27*

Total Capacity of Generators *124* Kilowatts.

The amount of Fee ... *£ 392.00* When applied for, *16/6 1927*  
Travelling Expenses (if any) £ *—* When received, *29.7.27*

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

Committee's Minute *FRI. 24 JUNI 1927*

Assigned *Elec light*

Im. 126.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)