

Report on Steam Turbine Machinery. No. 115222

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Received at London Office 23 JUN 1947
Survey held at RUGBY. Date, First Survey 18.9.46. Last Survey 13.6.47.
On the (TURBINE GEARED) GENERATING SETS FOR TURBO-ELECT S.S. "HYALINA" -
NEWCASTLE-ON-TYNE. By whom built SHAW HUNTER WIGHAM RICHARDSON Yard No. 1453. When built 1947.
Boilers made at RUGBY. By whom made MESSRS B.T.H. CO. LTD. Engine No. P2828. When made 1947.
Made at By whom made ANGLO SAXON PETROLEUM CO. LTD. Boiler No. When made.
Use Power at Full Power Owners. Port belonging to.
Use Power as per Rule Is Refrigerating Machinery fitted for cargo purposes. Is Electric Light fitted.
which Vessel is intended - OIL TANKER.

TURBINE ENGINES, &c.—Description of Engines. Two SINGLE REDUCTION GEARED IMPULSE TURBINES -
Ahead. ONE PER SET. Disconnected, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing ONE -
bines. Behind. Disconnected, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing ONE -
led to. Generating Current Generator phase period per second 550. Kilowatts 220. Volts at 1000. revolutions per minute;
ing power for driving Propelling Motors, Type. Direct Current Generator rated 550. Kilowatts 220. Volts at 1000. revolutions per minute;
Kilowatts. Volts at. revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

H. P.			I. P.			L. P.			ASTERN.		
HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
4.2.7.	14.56	14.16									
.98.	13.62.										
1.2.	14.06.										
1.47.	14.6.										
1.89.	15.44.										
1.91.	13.78.										
2.8.	20.96.										
3.82.	23.0.										

team. Use Power at each turbine H.P. 550 K.W. Revolutions per minute, at full power, of each Turbine Shaft H.P. 8000. 1st reduction wheel. 1000.
S.S. 39. Sift diameter at journals H.P. 3. Pitch Circle Diameter 1st pinion 3.0367 1st reduction wheel 31.2624 Width of Face 1st reduction wheel 5 1/2" 2".
S.S. 39. between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 10 1/4" 1st reduction wheel 10 1/4".

S.S. 152. Pinion Shafts, diameter at bearings 5. 1st 3 1/2" 2nd 3.6451
Shafts, diameter at bearings 1st 5" diameter at wheel shroud 1st 2-4" Generator Shaft, diameter at bearings 5".
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BOILERS & Letter for record Total Heating Surface of Boilers

Is Forced Draft fitted No. and Description of Boilers

Is a Report on Main Boilers now forwarded? Working Pressure

Is a Donkey
an Auxiliary Boiler fitted? If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only?

Plans ~~are approved plans forwarded herewith for Shaping~~ Main Boilers Auxiliary Boilers Donkey Boilers

~~Superheaters~~ General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied? **YES**

State the principal additional spare gear supplied. **One set of bearings including set of pads and cage for Michell pump - One set of bearings and bushes for Main governor and cage for Michell Thrust on Donm Spindle - Three Steam Control Valves, Spindles, Pads, Spindle liners - One set of gland packing with Springs - One set of diaphragm packing Springs of gear for bearing spindles - Seal down gauges.**

The foregoing is a correct description, **THE BRITISH THOMSON-HOUSTON CO., LTD.**

Dates of Survey while building	During progress of work in shops -	1946: Sept. 18 th 25 th Oct. 4 th 9 th 17 th Nov. 29 th December 3 rd 10 th
	During erection on board vessel -	1947: Jan. 23 rd 29 th Feb. 28 th MAR. 12 th 14 th 19 th April 2 nd 11 th 16 th 23 rd 4 th 25 th
Total No. of visits		27 in shops -

Dates of Examination of principal parts	PORT: 30.5.47	STARBOARD: 13.6.47	Rotors: 30.5.47	Blading: 30.5.47	Gearing: 30.5.47
Wheel shaft	30.5.47	13.6.47	13.6.47	13.6.47	13.6.47
Propeller	30.5.47	13.6.47	13.6.47	13.6.47	13.6.47

Completion of fitting sea connections ☒ Completion of pumping arrangements ☒ Boiler fitted ☒ Engine tried under steam ☒

Main boiler safety valves adjusted ☒ Thrust shaft adjusting washers ☒ Engine tried under steam ☒

Rotor shaft, Material and tensile strength **FORGED NICKEL STEEL - 40 TONS TENSILE -**

Pinion shaft, Material and tensile strength **FORGED STEEL - 48 TONS TENSILE -**

1st Reduction Wheel Shaft, Material and tensile strength **FORGED STEEL - 40 TONS TENSILE -**

Wheel shaft, Material **40 TON STEEL -**

Identification Mark **PORT: LLOYD'S. S.4296. F.2508. JWB**

Identification Mark **STARBOARD: LLOYD'S. S.4385. F.2505. JWB**

Thrust shaft, Material ☒ Identification Mark ☒

Shaft Material ☒ Identification Mark ☒

Steam Pipes, Material ☒ Identification Mark ☒

Date of test ☒

Installation fitted for burning oil fuel ☒

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? ☒

Is the notation for ice strengthening desired, state whether the requirements in this respect have been complied with? ☒

Is this machinery a duplicate of a previous case? **YES -** If so, state name of vessel **TURBO-ELECT S.S. "HELICINA"**

General Remarks. (State quality of workmanship, opinions as to class, &c.)

These generator sets have been constructed under Special Bureau in accordance with Rule requirements and approved plans - The steel used in the construction was made at an approved works - Workmanship is good and the sets have been tested under full and over load conditions with satisfactory results - Subsequently the machines were opened up for inspection after the running and all parts found in good condition - After re-assembly the sets were despatched to the vessel for installation in the vessel -

The operation of the Governors from "full" to "over" load condition and the emergency trip gear was checked and all found satisfactory.

This machinery is, in our opinion, eligible for inclusion in the class when satisfactorily installed.

The amount of Entry Fee	£	When applied for
Special	£	19
Donkey Boiler Fee	£	When received
Travelling Expenses (if any)	£	19

Committee's Minute **FRI. 16 APR 1948**

Assigned **See F.E. mch. rpt.**

J. W. Bell.
Engineer Surveyor to Lloyd's Register of Shipping.