

REC'D NEW YORK JUN 26 1953

REPORT ON STEAM TURBINE MACHINERY. No. 4472

Received at London Office. 31 JUL 1953

Report. 23, June 1953 When handed in at Local Office. 19 Port of Boston, Massachusetts
Survey held at Lynn, Mass. Date, First Survey 24, April Last Survey 7, May 1953
On the TANKER "ANDROS VENTURE"
By whom built Davie S.B. & Rep. Co. Yard No. 595 When built
made at Lynn, Mass. By whom made General Electric Co. Turbine No. 97873 When made 1953
made at By whom made Boiler No. When made
Horse Power at Full Power 13,750 Owners Port belonging to
Horse Power as per Rule 12,500 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes
which Vessel is intended Carrying Petroleum in bulk.

M TURBINE ENGINES, &c.—Description of Engines. Two 12,500 H.P. Cross Compound Marine Propulsion Units.
Ahead one ~~Direct coupled~~ to one propelling shafts. No. of primary pinions to each set of reduction gearing two
Astern one double reduction geared
led to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute;
Direct Current Generator
ng power for driving Propelling Motors, Type
Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to one propelling shafts.

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.
.94	29.54	1				1.65	34.24	1	.70 & .98	38.17	2
.76	18.46	1				2.05	35.04	1	2.975 av.	40.03	1
.89	18.72	1				2.75	36.44	1			
1.05	19.04	1				3.63	38.20	1			
1.24	19.42	1				4.91	40.70	1			
1.49	19.92	1				6.29	43.46	1			
1.84	20.62	1				7.79	46.46	1			
2.21	21.36	1				10.25	51.25	1			

H.P. 6330
e Power at each turbine I.P. -
gear output L.P. 6170
shaft) H.P. 4" & 4-1/2" Pitch Circle
t diameter at journals I.P. 1st pinion H.P. 10,042 1st reduction wheel
L.P. 6-1/2" & Diameter 2nd pinion L.P. 12.967 main wheel
6-1/2" 20.333 155.0
between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion H.P. 86.158 1st reduction wheel 762
H.P. none L.P. 5.25 1st pinion H.P. 14-1/2" 1st reduction wheel 15" main wheel 34"
arks 1st H.P. 6.695 Pinion Shafts, diameter at bearings External 1st H.P. 8.0" 13.0" diameter at bottom of pinion teeth { 1st H.P. 9.584"
meter 2nd H.P. 9.0" L.P. 9.0" 9-1/4" 1st H.P. 8.0" 13.0" diameter at bottom of pinion teeth { 1st H.P. 12.511"
ure. 1st H.P. 9.0" L.P. 9.0" 9-1/4" 1st H.P. 8.0" 13.0" diameter at bottom of pinion teeth { 1st H.P. 12.511"
its, diameter at bearings { 1st 9.0" 9-1/4" 1st H.P. 8.0" 13.0" diameter at bottom of pinion teeth { 1st H.P. 12.511"
main 24.0" 26.8" Generator Shaft, diameter at bearings
ed with. e Shafts, diameter as per rule Thrust Shaft, diameter at collars as per rule Tube Shaft, diameter as per rule
ed with. as fitted (Fwd. end of L.S. Gear shaft) 11.75 11.75 as fitted
diameter as per rule Is the { tube { shaft fitted with a continuous liner { as per rule
as fitted Is the { screw { shaft fitted with a continuous liner { as fitted
between bushes as per rule Is the after end of the liner made watertight in the propeller boss If the liner is in more than one length are the junctions
as fitted
73. n 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
cordance 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
satisfac nce fitted at the after end of the tube shaft Length of Bearing in Stern Bush next to and supporting propeller
ameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet.
of trial ew, are arrangements made so that steam can be led direct to the L.P. Turbine Yes Can the H.P. Turbine exhaust direct to the
then sta No. of Turbines fitted with astern wheels L.P. only Feed Pumps No. and size
How driven
ted to the Main Bilge Line { No. and size
How driven
s, No. and size
Lubricating Oil Pumps, including Spare Pump, No. and size
ndent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
l size:—In Engine and Boiler Room

Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room
size Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes
ctions 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
nnctions fitted direct on the skin of the ship Are they fitted with Valves or Cocks
efficiently 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
ted 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
er of Shippi through the bunkers How are they protected
through the deep tanks Have they been tested as per rule
cks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
t 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
mother Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

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BOILERS, &c.— (Letter for record) Total Heating Surface of Boilers Working Pressure
Is Forced Draft fitted No. and Description of Boilers
Is a Report on Main Boilers now forwarded? If so, is a report now forwarded?
Is { a Donkey } Boiler fitted? Main Boilers Auxiliary Boilers Donkey Boilers
an Auxiliary
Plans. Are approved plans forwarded herewith for Shafting (If not state date of approval) Oil Fuel Burning Arrangements
Superheaters General Pumping Arrangements
Spare Gear. State the articles supplied:—
Std. list as specified by American Bureau of Shipping rules for turbines and reducing

The foregoing is a correct description,

L.E. Grube Turbine Engineering Division
General Electric Co.

April 24 May 6-7, 1953
Dates of Survey { During progress of work in shops -- }
while { During erection on board vessel -- }
building { Total No. of visits }
three
Dates of Examination of principal parts—Casings April 24 Rotors April 24 Blading April 24 Gearing
Wheel shaft Thrust shaft Intermediate shafts Tube shaft Screw shaft
Propeller Stern tube Engine and boiler seatings Engine holding down bolts
Completion of pumping arrangements Boilers fixed
Main boiler safety valves adjusted Thickness of adjusting washers HP 122,000 PSI Identification Mark
Rotor shaft, Material and tensile strength O.H. Steel LP 123,000 PSI Identification Mark
Flexible Pinion Shaft, Material and tensile strength O.H. Steel HS HP 165,500 LS HP 149,000 PSI Identification Mark
Pinion shaft, Material and tensile strength O.H. Steel HS LP 160,000 LS LP 148,250 PSI Identification Mark
1st Reduction Wheel Shaft, Material and tensile strength O.H. Steel HS HP 110,000 PSI Identification Mark
Wheel shaft, Material O.H. Steel Identification Mark Thrust shaft, Material Identification Mark
Intermediate shafts, Material Identification Marks Tube shaft, Material Identification Marks
Screw shaft, Material Identification Marks 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
Is this machinery a duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been completed under S
Survey in accordance with approved plans. The forgings and castings were tested by A. B.
Surveyors and for particulars of tests, please refer to the attached report. The workman
and materials are good. The turbines and gears have been tried out in the shop under no
conditions and found satisfactory. The unit has been forwarded to the Davie Shipbuilding
Repairing Co., Ltd., Levis, Quebec, Can.

Copy of Rpt. sent to Intl. Office

Certificate (if required) to be sent to:
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	£	Inclusive:	When applied for,
Special	£	fee to be	19
Donkey Boiler Fee	£	charged	When received,
Travelling Expenses (if any)	£	later.	19
		\$2.00	

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JUL 15 1953

FRIDAY 11 JUN 1954

Assigned Transmit to London

See Mtl. FE. Rpt.



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