

NON-PROPELLED BUCKET DREDGER

Rpt. 4b/4f REPORT ON INSTALLATION OF INTERNAL COMBUSTION MACHINERY
(Inst) (Sheet 1)

Received London
2. 11. 66

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

Ship's Name "STEENBOK" Port GREENOCK
Processing Number: LR 652111 Date of completing rpt. 5.1.66 Rpt. No. 27804
Gross tons 736.62 Place of survey, if different from above Port Glasgow

No. of visits: ~~In shops~~ First date Last date
On ship 32 First date 27/5/65 Last date 23/12/65

Owners South African Railways Port of registry Durban

Ship built by Ferguson Bros. (Port Glasgow) Ltd. Yard No. 443 When 1965 12

Main engines made by Mirrlees National Ltd. Engine No. 6054/1 When 1965 12

Gearing made by Gear No. When

~~Aux/donkey~~
~~Boilers made by~~ Boiler No. When

Machinery installed by Ferguson Bros. (Port Glasgow) Ltd. When 1965 12

Particulars of service of ship if limited for classification } 100AL Dredger for Service in Durban Harbour and within harbour limits from Walvis Bay on West Coast to Portugese East African Border on East Coast.

Particulars of vegetable oil or other special cargo notation if required

If ship is to be classed for navigation in ice, state whether class 1, 2 or 3

Is ship an oil tanker? Domestic Is/refrigerating machinery fitted? Yes

If so, is it for cargo purposes? Type of refrigerant Freon 12

Is the refrigerating machinery space isolated from the propelling machinery space? Yes

Is the refrigerated cargo installation to be classed?

No. of main engines One Brief description of propulsion system Diesel Engine drives 290 K.W. Generator, 250 Kw Alternator, 60 Kw Generator & An exciter.

No. of propellers 2 Fee £80. 0. 0. Expenses

MAIN INTERNAL COMBUSTION RECIPROCATING ENGINE

To be reported on Rpt. 4b (Cons) Port Manchester Rpt. No. 1092

MAIN GAS TURBINES

To be reported on Rpt. 4f (Cons) Port Rpt. No.

ELECTRIC PROPULSION (Internal combustion reciprocating engines or gas turbines)

Electrical particulars to be reported on Rpt. 4d Port Rpt. No.

REDUCTION GEARING (Internal combustion reciprocating engines or gas turbines)

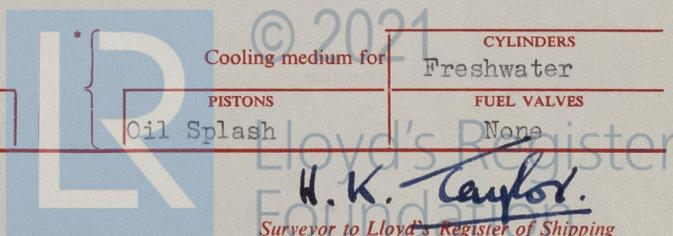
To be reported on Rpt. 4e Port Rpt. No.

*Are flame guards or traps fitted to crankcase relief devices?	Yes	No. of lub. oil coolers	MAIN 1	AUX. 1
*Is a torsional vibration damper or damper fitted to the shafting?		Is engine fitted directly on tank top or on a built-up seating?	Yes	
*Where positioned?		open floors		
		*Can engine/turbine be reversed?	No	
		*If not, how is reversing effected?		

*Type

Is the engine equipped to operate on heavy fuel?	No	Cooling medium for		CYLINDERS
		MAIN 1	AUX. 1	Freshwater
No. of fresh water coolers	1	Oil Splash		FUEL VALVES
				None

NOTE.—The particulars in this report are to be given as fully and as clearly as possible. Where the answer is "NO" or "NONE", say so. Ticks and other signs of doubtful meaning are not to be used. Wording not applicable to be cancelled.



CLUTCHES, FLEXIBLE COUPLINGS, &c. If a clutch or other flexible connection is fitted between engine/turbine and gearing, or between engine and the shafting, give Makers' name, brief description and, for clutches, state how operated.

One Holset flexible coupling between 290 K.W. generator and alternator and one Holset flexible coupling between alternator and 60 K.W. generator.

If main engine can be used for purposes other than propulsion when detached, state what purpose also at what maximum B.H.P. & R.P.M.

AIR COMPRESSORS AND RECEIVERS

State No. of independently driven air compressors, also capacity of each and whether a separator or filter is provided between each compressor and the air receivers, type of prime mover, position in ship, Port and No. of cert.

One - 34 C.F.M. driven by hand started diesel engine
Port Engine Room. Southampton Cert. No. D.26109. ✓

One - 33 C.F.M. driven by Electric Motor.
Port Engine Room. Southampton Cert. No. D.26156. ✓

A filter is fitted between each compressor and the Air Receivers.

State No. of starting air receivers, both main and auxiliary, capacity of each, position in ship, Port and No. of cert.

Two each of 23 cubic feet capacity. Aft engine Room.
Leeds Certs. Nos. 48820 & 48821 ✓

How are air receivers first charged?	By Compressor driven by hand started diesel engine.	Are the safety devices in accordance with the Rules?	Yes
		Are bursting discs or flame arresters fitted at the starting air valves on each cylinder line to cylinders?	Yes
Maximum working pressure of starting air system	350 P.S.I.	Has the starting of the main engines been tested and found satisfactory?	Yes

STEAM INSTALLATION

No. of aux./donkey boilers (see Key to R.B.) burning oil fuel	Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil-fired boilers?
Working pressure	
Type	Port and rpt. or cert. Nos. for aux./donkey boilers
Position	
Is a superheater fitted?	Is steam essential for the operation of the ship at sea?
Are these boilers also heated by exhaust gas?	If so, are any steam pipes over 3 ins. bore?
No. of aux./donkey boilers (see Key to R.B.) heated by exhaust gas only	What is their material?
Working pressure	For oil-fired boilers, is the arrangement of pipes, valves, controls, &c., in accordance with Rules?
Type	
Position	No. of oil-burning pressure units
	No. of steam condensers
	No. of evaporators

Date of approval of torsional vibration characteristics of the propelling machinery system with 16/7/64

Particulars of barred speed range(s) if imposed, with: —

(a) Working propeller

(a) Working propeller

(b) Spare propeller

(b) Spare propeller

STRAIGHT SHAFTING

Max. BHP/SHP approved for each line of shafting
THRUST SHAFT. Separate or integral with crank, wheel or electric motor shaft?

Corresponding RPM of propeller

MN

Thickness of liner between bearings
How is the after end of the liner made watertight in the propeller boss?

Diameter adjacent to collar

Material of screw/tube shaft

Material

Minimum approved tensile strength

Minimum approved tensile strength

Is an oil gland fitted?

INTERMEDIATE SHAFT

Diameter

What type?

Material

If an approved type, state name

Minimum approved tensile strength

Length of bearing next to and supporting propeller

SCREWSHAFT. Dia. of cone at large end

Material of bearing

Is screwshaft fitted with a continuous liner?

Material of stern tube

TUBE SHAFT (if separate) Diameter

Is tube shaft fitted with a continuous liner in way of stern tube?

Is stern tube fabricated? In multiple screw ships, is the liner between stern tube & "A" bracket continuous? If not, is the exposed length of shafting between liners readily visible in drydock?

PROPELLER

If of special design, state type

State method of control

Is it of reversible pitch type?

If so, is it of approved design?

PROPELLER	BLADE MATERIAL	TENSILE STRENGTH	BUILT OR SOLID	LEFT HAND (LH) OR RIGHT HAND (RH)	NO. OF BLADES	DIAMETER	PITCH	TOTAL DEVELOPED SURFACE
Working								
Spare								

FOR ICE STRENGTHENING ONLY

PROPELLER	DESIGN MOMENT OF INERTIA OF PROPELLER (DRY)	CLASS 1, 2 OR 3	THICKNESS OF BLADES			LENGTH OF BLADE SECTION AT 25% RADIUS	RAKE OF BLADES
			AT TOP OF ROOT FILLET	AT 25% RADIUS	AT TIP		
Working							
Spare							

OIL FUEL TANKS

No. and position of oil fuel settling or service tanks not forming part of ship structure } None

LUBRICATION

No. of lub. oil pumps and how driven
1 - M.E. Driven
1 - Standby
Driven by Electric Motor
Can normal supply be maintained with any one pump out of action? Yes

Is an alarm device fitted to indicate failure or reduction of supply from the pumps? Yes

No. of oil coolers 1 Main 1 Aux.

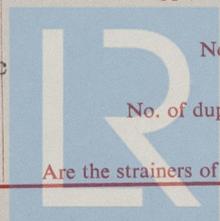
SUCTION	PRESSURE
None	1

No. of duplex oil strainers

Is an emergency supply automatically available as per Rule 7 (turbines only)

Are the strainers of magnetic type? No

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Lloyd's Register
H.K. Taylor
Surveyor to Lloyd's Register of Shipping

STEAM AND OIL ENGINE AUXILIARIES

REF	POSITION OF EACH	TYPE	MADE BY
a	{ Centre of Engine Room Non Propelling Engine	FSS A 5	Mirrlees National Limited
b			
c	Starboard Engine Room	ER4MA	Blackstone & Co. Ltd.
d			
e			
f			
g			
h			

REF	PORT & No. OF REPORT OR CERTIFICATE	DRIVEN MACHINERY (for electric generators state kw, volts & amps)
a	Manchester Rpt. No. 1092	290 K.W. Generator 400V. 725 A. 250 K.W. Alternator 380V. 474 A.
b		60 K.W. Generator 220 V. 273 A. Exciter 27 V. 190 A.
c	London Rpt. No. 153532	125 KVA Alternator 380V. 190 A.
d		
e		
f		
g		
h		

If electric current is used for essential services at sea, state the minimum No. and capacity of generators required

- (1) So that the ship may operate at sea
- (2) For refrigerated cargo purposes

Has the spare gear required by the Rules been supplied? Yes
Has all the machinery been tried under full working conditions & found satisfactory? Yes

Date & duration of full-power sea trials of main engines: 4/11/65 & 1/12/65 6 hours
Has the manoeuvring of the main engines been tried and found satisfactory?

DECLARATION TO BE SIGNED BY INSTALLING ENGINEERS

To the best of our knowledge this machinery has been installed in conformity with the Rules, Regulations and requirements of Lloyd's Register of Shipping, and the foregoing particulars of main and auxiliary machinery and pressure vessels (as shown on sheets 1, 2 & 3) are correct.

FERGUSON BROTHERS (PORT-GLASGOW) LTD.

J.A. Conn MANAGING DIRECTOR
(signature)

6th January, 1966 (date)

A previous similar case was for (name)

Port and Rpt. No.

IDENTIFICATION MARKS (copies of certificates to be forwarded)

Thrust shaft

Intermediate shafts

Screw and tube shafts

Propellers

Other important items

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DATES OF APPROVAL OF PLANS		Oil burning arrangements	
Straight shafting		Compressed air system	Original 1/3/65 Final 28/12/65
Air receivers		Main steam pipes	
Clutch		Boiler feed system	
Reversing gear & control		Main boilers	Original 1/3/65 Final 28/12/65
Flexible coupling		L.O. System	Original 1/3/65 Final 28/12/65
Separate fuel tanks		F.W. & S.W.	Original 1/3/65 Final 28/12/65
General pumping arrangements	6/11/64	Superheaters	
Bilge, ballast & oil fuel pumping arrangements in the machinery space	Original 1/3/65 Final 28/12/65	Aux. boilers	
Oil fuel piping & fittings at settling & service tanks	Original 1/3/65 Final 28/12/65	Donkey boilers	
Cargo oil pumping arrangements		Feed water economisers	
		Steam heated steam generators	
		Propeller (including spares if supplied)	
		Stern gear	
		Oil retaining gland (if not shown on shafting plan)	

DATES OF EXAMINATION OF:—			
Fitting of stern tube		Alignment* of straight shafting	
Fitting of propeller		Testing of pumping arrangements	23/9/65
Completion of sea connections	26/8/65	Oil fuel lines	30/8/65
Alignment* of crankshaft on board	24/9/65 (Light)	Boiler supports	
Alignment* of turbines/engines & gearing		Steering machinery	
Holding down bolts & chocks	24/9/65	Windlass	

*State if aligned when ship in light, ballast or loaded condition

† The machinery reported above has been constructed and installed under Special Survey in accordance with the Rules, approved plans and Secretary's letters. The materials and workmanship are good, the spare gear required by the Rules has been supplied and the machinery is eligible, in my opinion, to be classed ‡ the machinery arrangements are in accordance with the Rules for Class 100A1 Dredger restricted service non propelled ship.

H.K. Taylor.

Surveyor to Lloyd's Register of Shipping

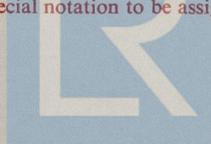
Date of Committee GLASGOW 21 MAR 1966

Minute See minute on Rpt. 1

† (a) If the installation contains any features of a novel or experimental nature, give particulars.

(b) If centralised and/or bridge control is fitted for main propelling and/or essential auxiliary machinery, state on a Rpt.-(cont.) where the control room is situated, the machinery controlled from it and give a brief description of the control system, including any automatic system for controlling essential auxiliary machinery.

‡ Include any special notation to be assigned.



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NOTE—Where existing machinery is submitted for classification, the circumstances are to be explained as fully as possible, and the recommendation should be suitably amended.