

REPORT ON STEAM TURBINE MACHINERY

No. 82336

Date of writing Report

19

When handed in at Local Office

30th Jan 1928 Port of

Received at London Office

NEWCASTLE ON TYNE

6 FEB 1928

No. in Survey held at

Newcastle

Date, First Survey

7th Oct. 1926

Last Survey

27th Jan 1928

1928

Reg. Book.

2998

on the

Steel Liner "BEVERDALE"

(Number of Visits 112)

Built at

Newcastle

By whom built

Armstrong Whitworth & Co.

Yard No. 1019

Tons

Gross 9990

Net 5813

Engines made at

Newcastle

By whom made

Parsons Marine Steam Turbine Engine Co.

Engine No. 238

When built 1928

Boilers made at

Newcastle and Glasgow

By whom made

Armstrong Whitworth & Co.

Boiler No. 1019

When made 1928

Shaft Horse Power at Full Power

8000

Owners

Canadian Pacific Ry. Co.

Port belonging to

London

Nom. Horse Power as per Rule

1578

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

TEAM TURBINE ENGINES, &c.

Description of Engines

Reaction Single Reduction

No. of Turbines

Ahead

6

Direct coupled, single or double reduction geared to

2

propelling shafts.

No. of primary pinions to each set of reduction gearing

direct coupled to

phase

periods per second, Alternating Current Generator rated

Kilowatts

Volts at

revolutions per minute; for supplying power for driving

Propelling Motors.

Propelling Motors, Type

ated

Kilowatts

Volts at

revolutions per minute.

Direct coupled, single or double reduction geared to

propelling shafts.

PARTICULARS OF TURBINE BLADING.

	H. P.			I. P.			L. 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.
1 st EXPANSION												
2 nd	11			13			2			15		
3 rd	16			18			5			18		
4 th	6			5			5			6		
5 th	13			23			7			29		
6 th	4			3			4			3		
7 th												
8 th												

Shaft Horse Power at each turbine

HP 1194

Revolutions per minute, at full power, of each Turbine

HP 1158

Pitch Circle Diameter, 1st pinion

LP 1645

HP 1194

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Is a Report on Main Boilers now forwarded? *yes*

Is a Donkey Boiler fitted? *No*

If so, is a report now forwarded?

Plans. Are approved plans forwarded herewith for Shafting
(If not state date of approval)

Main Boilers

Auxiliary Boilers

Donkey Boilers

Spare Gear. State the articles supplied:—

Please see attached list

*2 Studs + nuts each for rotor, pinion + main gear wheel bearings 1 Set (6) coupling bolts
Bolts, studs + nuts for gear case + turbine casing joints as per list, Sets (8 each) of
flexible coupling bolts. Complete set of bearings for 1 gear wheel shaft. Sets of bearings
for pinions + rotors. Sets of pads + pivots for all thrust blocks also liners for same
Valves etc for all pumps*

The foregoing is a correct description,

Manufacturer.

FOR THE PERSONS MARINE STEAM TURBINE CO. LIMITED
W. J. Wicks
DIRECTOR

Dates of Survey while building
During progress of work in shops -- 1926 OCT. 7. 18. 21. 28. NOV. 3. 5. 11. 12. 16. 18. 22. 30. DEC. 2. 3. 7. 10. 15. 22. 23. 25.
During erection on board vessel -- APRIL 7. 13. 21. 29. MAY 3. 5. 11. 13. 16. 18. 24. 27. 30. JUNE 1. 3. 29. JULY 4. 5. 21. 29. AUG 3. 5. 12. 25. 30. SEPT 2. 9. 14. 21. 23. OCT 18. 26. 27. 31.
Total No. of visits NOV. 1. 3. 8. 10. 14. 15. 18. 22. 23. 25. 28. 30. DEC. 2. 5. 7. 9. 12. 13. 14. 16. 21. 23. 28. 29. JAN. 4. 6. 10. 11. 12. 13. 14. 15. 16. 23. 25. 26. 27.

Dates of Examination of principal parts
Casings 16. 2. 27 Rotors 4. 7. 17 Blading 28. 2. 27 Gearing 4. 7. 17

Wheel shaft *Sheffield* Thrust shaft *Darlington* Tunnel shafts *Dusseldorf* Screw shaft *Darlington* Propeller *London*

Stern tube 30. 5. 27 Engine and boiler seatings 23. 9. 27 Engines holding down bolts 23. 11. 27

Completion of pumping arrangements 7. 12. 27 Boilers fired 14. 11. 27

Main boiler safety valves adjusted 23. 12. 27 Thickness of adjusting washers *Scotch Bbs F&A 5/2 A/F 5/2 Yarrow F.P. A 25 AP 3 FB 13 AS 3/2*

Material and tensile strength of Rotor shaft *Ingot Steel 34 - 38 tons* Identification Mark on Do. *Please see list of marks attached*

Material and tensile strength of Flexible Pinion Shaft Identification Mark on Do. *attached*

Material and tensile strength of Pinion shaft *Nickel Steel 40 - 44 tons* Identification Mark on Do.

Material and tensile strength of 1st Reduction Wheel Shaft Identification Mark on Do.

Material of Wheel shaft *Ingot Steel* Identification Mark on Do. *1322 JP 1322 TH* Material of Thrust shaft *Ingot Steel* Identification Mark on Do. *51680 51960*

Material of Tunnel shafts Identification Marks on Do. *See list* Material of Screw shafts Identification Marks on Do. *See list 51770*

Material of Steam Pipes *Steel* Test pressure *750 lbs* Date of test *16. 12. 27*

Is an installation fitted for burning oil fuel *No* Is the flash point of the oil to be used over 150°F.

Have the requirements of the Rules for carrying and burning oil fuel been complied with.

Is this machinery a duplicate of a previous case *No* If so, state name of vessel *Turbines + gearings as per "Beaver"*

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

The above turbines build under special survey in accordance with the Rule require

tested under steam at the Works + afterwards installed on board.

The materials + workmanship are good.

Mooring + sea trials witnessed with satisfactory results. Subsequently it was found

a contraction crack had developed in the top half casting of the starboard cylinder in way of the asterners t

bell. The repair as per print may be considered permanent but a new top half with blading is being

+ will be fitted at a convenient opportunity probably at London in a few days time

In my opinion the vessel is eligible for record of + L.M.C. 1.28

A packet containing plan of S.P. turbine repair, list of spare gear, forging reports + disposition of

is attached

The amount of Entry Fee ... £ 6 : - : -

3 For turbines + installation ... £ 83 : 14 : -

5 Special ... £ 83 : 14 : -

Donkey Boiler Fee ... £ : : -

Travelling Expenses (if any) £ : : -

When applied for, 14. FEB 1928

When received, 29. 3. 28

Committee's Minute TUES. 14 FEB 1928

Assigned + L.M.C. 1.28 F.D. C.L.

CERTIFICATE WRITTEN

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