

Messrs. Bartram & Sons' Yard No. 279.

Messrs. White's Marine Eng. Co's Engine No. 14C.

Gears by The Power Plant Co.

IT IS SUBMITTED that with double compounded steam reciprocating engines for open sea service, having 2 H.P. cylinders 10.5/8" diameter, 2 L.P. cylinders 21½" diameter, by 13" stroke, working pressure 240 lb. per sq. inch, working in conjunction with an exhaust steam turbine on the White's system, developing a combined equivalent I.H.P. of 2000, consisting of 1000 I.H.P. at 310 revolutions per minute and 1000 equivalent I.H.P. at 3480 revolutions per minute developed by the reciprocating engine and steam turbine respectively, and revolutions per minute of the propeller 62, the following sizes of main gearing shafting merit approval, viz:-

Main wheel.....	13.75".
Turbine 1st reduction pinion...	4.75".
Turbine 1st reduction wheel....	9.5" with 5.5" hole.
Turbine 2nd reduction quill....	5.25".
Turbine 2nd reduction pinion...	9.5" with 5.5" hole.
Reciprocating engine pinion....	8.875" with 6" hole.

The plan showing arrangement of gearing, as shown and amended, also merits approval.

It is recommended that the diameter of the reciprocating engine quill shaft made from steel having a tensile strength of 55/65 tons per sq. inch, should be not less than 5.9/16", instead of 5.7/16" as proposed.

It is understood that this increased size of shaft will be fitted as stated in a conversation by telephone ^{to-day} between Mr. Hughes, a representative of the Company, and this Office.

Return plan.
Advise London Surveyors and furnish them with copy.

Advise Mex. Surveyors.

IT IS FURTHER SUBMITTED that with steam reciprocating engines having particulars as stated above, the following size of crankshaft merits approval, viz:- 7½".

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The plan showing details of crankshaft
also merits approval.

Return 2 plans.
Retain copy.

Ln 8/10

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6th October, 1937.

W143-0118 (2/27)



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