

Messrs. Bartram & Sons' Yard No. 279.

Messrs. J.L. Thompson's Yard No. 589.

Messrs. White's Marine Eng. Co's Engines Nos. 14C & 15C.

IT IS SUBMITTED that with double compound steam reciprocating engines for open sea service, having 2 H.P. cylinders 10.5/8" diameter or 10.3/4" diameter, 2 L.P. cylinders 21.1/2" diameter, by 13" stroke, working pressure 220 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 ~~steam~~ 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 & amended also merits approval.

It should, however, be pointed out that the size of the reciprocating engine quill shaft now proposed is the same as that used for previous engines of smaller size and power, and does not meet the requirements of the Rules.

If the material of this shaft has a tensile strength of 55/65 tons per sq. inch, as in previous similar cases, the diameter of the shaft should be not less than 5.7/16" instead of 5.3/8" as proposed.

Lr 26/8

W.D.H.



J.R.P.

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