

S
s. s. "KINGWOOD".

Combined Steam Reciprocating Engines and Exhaust Steam Turbines.
Messrs. Parsons Marine Steam Turbine Co., Ltd.

The Newcastle Surveyors state that Messrs. The Parsons Marine Steam Turbine Co., Ltd., propose fitting a low pressure exhaust steam turbine connected by double reduction gearing to the main propelling shafting of the existing machinery of this vessel. A combined elastic and friction clutch is to be fitted as part of the 1st reduction wheel, but in the proposed design the turbine cannot be declutched as in the case in the Bauer-Wach System.

It is stated the gearing has been designed to take a load equal to any torque that may be produced by the full torque of the reciprocating engine during sudden reversals under full steam, and that any shock stresses to which the teeth of the gearing may be subjected will be absorbed by the electric coupling.

IT IS SUBMITTED that with steam reciprocating engines for open sea service having cylinders $24\frac{1}{2}$ ", $40\frac{1}{2}$ " and 68" diameter by 45" stroke, working pressure 200 lb. per sq. inch, combined with an exhaust steam turbine by means of double reduction gearing, the reciprocating engine developing 1480 IHP and the exhaust steam turbine developing 575 SHP at the primary pinion when working in conjunction at 65.5 revolutions of the propeller per minute, screwshaft fitted with continuous liner and propeller 18 ft in diameter, the sizes of existing shafting, viz:- crank $13\frac{1}{2}$ ", intermediate $12\frac{3}{4}$ " and propeller shaft $14\frac{1}{4}$ " diameter and proposed size of new thrust shaft, viz:- $13\frac{1}{2}$ " diameter at collar, merit approval in accordance with the present practice.

The plans of machinery arrangement, gearing arrangement, elastic coupling and turbine casing also merit approval.

approval.

It is noted the gearing has been designed to take a load equal to any that may be produced by the full torque of the reciprocating engine during sudden reversals under full steam, and that any ~~sheck~~ stresses to which the gearing may be subjected due to varying torque of the engine will be absorbed by the elastic coupling incorporated in the first reduction gear wheel.

Return 4 plans.

Retain copies.

WDA *S.D.*
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