

HULL.

Length over all	81' 9"
Length between perpendiculars	71' 0"
Moulded beam	16' 10"
Draught with full coal bunkers, about	11' 0"

ENGINE. (Fore and Aft Compound.)

Diameter of high pressure cylinder	16"
Diameter of low pressure cylinder	32"
Stroke of pistons	24"

The high pressure cylinder is fitted with piston valve, while the low pressure has a double ported balance slide valve.

When running at 125 revolutions per minute the engine indicates about 440 horsepower.

The engine is equipped with a steam reversing gear actuated by a steam cylinder fastened to the bed plate. It is quick in its action and is so constructed that the links can be held in any position which feature is of value when a variation of cut off is desired.

BOILER.

(Water leg firebox, return tubular. Two D flues leading to a single combustion chamber.)

Length over all	12' 0"
Diameter of shell	8' 9"
Area of fire grate	43 sq. ft.
Total heating surface	1402 sq. ft.
Ratio of H. S. to area of fire grate	32.6
Ratio of fire grate area to area through tubes	6

It may be stated that this boiler is an excellent steamer, and, considering the exceptionally heavy towing the boat does, the coal consumption is not high. A table showing the coal consumed by the various vessels of the fleet is given below, though it must be borne in mind that the fuel burned by a tug depends greatly upon the conditions under which the boat is working, and that as these conditions vary from day to day, it is difficult to more than average the quantity of coal used per stated interval. The quality of the coal is also a varying factor.

Steering is done by means of a steam steering gear operated by a direct steam cylinder fitted with a single piston secured to the centre of a rod which passes through both cylinder heads, the rods being attached to the tiller rope. A controlling lever in the pilot house moves a specially constructed valve gear admitting steam to