

19782 Iron.

Port

Hull December 11th

Details of Main Boilers of the Steam Ship

Baron Hambro 367¹⁸⁷⁷ tons

Diameter (Mean) 11' 6" Length 9' 0"

Thickness of shell plates 15/16"

Description of riveting of longitudinal joints Double buttstraps of circumferential joints Lap joint

Pitch of rivets ditto 4" ditto 3 3/8"

Diameter of rivets ditto 1 1/8" ditto 1 1/8"

Lap of plating ditto 11/4" buttstraps ditto 5 1/2"

No. Size of manholes in circular shell 15" x 11"

How compensated for by doubling plate: 2' 2" x 1' 10" x 15/16"

Number of furnaces in boiler 2

Diameter of furnaces 3' 3" Length of furnaces 6' 5"

Thickness of furnace plates 1 1/2"

Description of joint of furnaces Welded

Whether strengthened with rings Yes Greatest length between rings 6' 3"

Thickness of combustion chamber plating 1 1/2"

Diameter of screw stays to ditto 1 1/6" pitch of stays { 8 1/2" x 6 3/4" { 8 1/4" x 7"

End plates, thickness 1/16" and 3/8" lining plate.

Diameter of longitudinal stays to end plates 2 1/8" pitch of ditto 14" x 10 1/2"

How stays are secured By double nuts and washers.

Diameter of tubes 3 1/4" pitch of tubes 4 1/2" x 4 1/2"

Thickness of tube plates front 1/16" back 5/8"

Stayed by Screwed stays 1 3/16" thick pitch of stays 9" x 9"

Description of steam receiver Vertical cylindrical.

Diameter of ditto 3' 6" length of ditto 4' 0"

Thickness of plating of ditto 1/2" ends 5/8"

Ends, how stayed by four solid stays 1 3/4" dia.

Working pressure = 75 lb p. sq. inch.

Screw stays = 75 " " " "

Mainstays = 78 " " " "

Flat plates: Screw stays = 106 " " " "

Mainstays = 86 " " " "

Circular flues = 91 " " " "

A. Keyesell

Engineer Surveyor to Lloyd's Register of Shipping.

The Spring Safety valves - Seaton & Cameron's patent, are set at 75 lb p. sq. inch pressure, and have been tested under steam on board, in my presence on the 8th of December 1877 in the usual way.

The result was - as follows -

1. 35	above :	75 lb of steam							
1. 40	" :	80 "	"	"	"	"	"	Valves blowing off	
1. 45	" :	81 "	"	"	"	"	"	"	
1. 50	" :	81 1/2 "	"	"	"	"	"	"	
1. 55	" :	81 "	"	"	"	"	"	"	
2. 0.	" :	81 "	"	"	"	"	"	"	

Steam valves and feed valves closed during the trial, and firing continued as though Engines working at full speed.

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