

**SPECIFICATIONS FOR TWO
HORIZONTAL DIRECT-ACTING
TRIPLE-EXPANSION
SCREW-ENGINES, SPECIAL PLAN
NO. 2, PP. 2-37**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649351183

Specifications for Two Horizontal Direct-acting Triple-expansion Screw-engines, Special Plan
No. 2, pp. 2-37 by Various

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

VARIOUS

**SPECIFICATIONS FOR TWO
HORIZONTAL DIRECT-ACTING
TRIPLE-EXPANSION
SCREW-ENGINES,
SPECIAL PLAN NO. 2, PP. 2-37**



SPECIFICATIONS

FOR

1885

TWO HORIZONTAL DIRECT-ACTING
TRIPLE-EXPANSION SCREW-ENGINES,

SPECIAL PLAN NO. 2,

FOR

U. S. S. PHILADELPHIA,

(CRUISER NO. 4.)

OF ABOUT 4,300 TONS DISPLACEMENT.

DESIGNED AND TO BE BUILT BY

THE WM. CRAMP & SONS
SHIP AND ENGINE BUILDING CO.,
PHILADELPHIA.

U.S. Re: ...

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1888.

INDEX.

	Page.		Page.
A.			
Air and bilge-pumps.....	13	Boxes, journal.....	19
Air-tight fire-rooms.....	31	Braces, boiler.....	22
Ash-boists.....	30	Bridge-walls.....	23
Ash-pit doors.....	24	Bulkheads, pipes through.....	29
Ash-sprinklers.....	35		
Auxiliary boiler.....	26	C.	
Auxiliary exhaust-main.....	12	Casings, cylinder.....	4
Auxiliary exhaust to escape-pipe.....	35	Centrifugal circulating-pump.....	13
Auxiliary feed-pumps.....	14	Certificate.....	39
Auxiliary steam-pipes and valves.....	27	Chambers, combustion.....	23
B.			
Bearings, outside and stern-pipe.....	18	Changes in plans.....	39
Bearings, spring.....	18	Check-valves.....	27
Bearings, thrust-block.....	18	Circulating-pump, centrifugal.....	13
Bearings, white-metal, mandrels for.....	35	Clothing, boiler.....	25
Bed-plates and pillow-blocks.....	11	Clothing, pipe.....	29
Bilge-injection.....	14	Combustion chambers.....	23
Bilge and air-pumps.....	13	Completed machinery, drawings of.....	39
Bilge and fire-pumps.....	15	Cocks, boiler drain.....	29
Bleeder-pipes.....	27	Condensers.....	11
Blow and feed-pipes.....	28	Connecting-rods.....	10
Blowers.....	30	Covers and heads, cylinder.....	5
Blow-valves.....	27	Covers, valve-chest.....	6
Boiler, auxiliary.....	26	Crank-shaft boxes and caps.....	11
Boiler clothing.....	25	Crank-shafts.....	11
Boiler drain-cocks.....	29	Cross-heads.....	10
Boiler-heads and braces.....	22	Cross-head slides and bed-frames.....	10
Boilers and attachments.....	21	Cups, oil.....	20
Boiler shells.....	22	Cylinder casings.....	4
Boiler stop-valves.....	28	Cylinder drain-valves.....	9
Bolts, holding-down.....	5	Cylinder-heads and covers.....	5
Boxes and caps, crank-shaft.....	11	Cylinder linings.....	5
		Cylinders, pump.....	16
		Cylinder tie-rods.....	10
		Cylinder relief-valves.....	9

•
•

•



II

Page.	Page.
D.	
Distiller and pumps	15
Doors, ash-pit	24
Doors, furnace	24
Drain-cocks, boiler	29
Drain-pipes and traps	21
Drawings of completed machinery	39
Drawings, working	38
Dry-pipes	25
Duplicate pieces	31
E.	
Engine bed-frames and cross-head slides	10
Escape-pipes	29
Exhaust, auxiliary, to escape-pipe	35
Exhaust-main, auxiliary	12
Eye-bolts	21
F.	
Feed and auxiliary pumps	14
Feed and bilge-pumps	15
Feed and blow-pipes	28
Feed-water tanks	17
Fire and bilge-pumps	15
Fire-mains, pump-connections to	20
Fire-rooms, air-tight	31
Frames and cross-head slides, engine-bed	10
Floor-plates	30
Furnace-doors	24
Furnace-fronts	24
Furnaces	23
G.	
Gauges, water	26
Gear, reversing	8
Gear, turning	18
Gear, valve	7
General description	2
Governor, steam	9
Grate-bars	22
Grate-surface	22
H.	
Heads and braces, boiler	22
Heads and covers, cylinder	5
Holding-down bolts	5
Holes through ship	20
Hydrokineter	31
I.	
Indicator fittings and motions	19
Indicators, revolution	19
Injection, bilge	14
Injection-valves	13
Inspector's office	39
Instruments, tools, etc	33
J.	
Journal-boxes	19
L.	
Liners, valve	6
Line-shafting	17
Linings, cylinder	5
M.	
Machinery, completed, drawings of	39
Machinery, tests of	38
Main steam-pipes	28
Main steam piston-valves	6
Main valve-stems	6
Mandrels for white-metal bearings	35

III

Page.		Page.
5	Man-holes and plates	17
36	Materials and workmanship ..	13
31	Materials, tests of	Pump connections to fire-
		main
		Pump-cylinders
		Pump, distiller
		Pumps, feed and auxiliary
		Pumps, fire and bilge
	O.	
39	Office, Inspector's	
20	Oil-cups	
32	Oil-tanks, cans, etc	
39	Omissions	
14	Outboard-delivery valves	
18	Outside and stern-pipe bear- ings	
	P.	
38	Painting	
11	Pillow-blocks and bed-plates ..	
29	Pipe-clothing	
27	Pipes and valves, auxiliary steam	
35	Pipes, auxiliary exhaust to escape	
34	Pipes, copper and brass, thickness of	
25	Pipes, dry	
21	Pipes, drain	
29	Pipes, escape	
28	Pipes, feed and blow	
28	Pipes, main steam	
24	Pipes, smoke	
29	Pipes through bulk-heads	
19	Pipes, water	
10	Piston-rods	
10	Piston-rod stuffing-boxes	
9	Pistons	
6	Piston-valves, main steam	
39	Plans, changes in	
30	Plates, floor	
5	Plates, man-hole	
16	Platform, working	
26	Pots, salinometer	
38	Preliminary tests and trials ..	
17	Propeller-shafting	
		R.
	Radiators	35
	Receivers	4
	Record of weights	39
	Relief-valves, cylinder	9
	Reversing-gear	8
	Revolution indicators	19
	Rods, connecting	10
	Rods, cylinder tie	10
	Rods, piston	10
		S.
	Salinometer-pots	26
	Saddles	24
	Safety-valves	25
	Screw-propellers	17
	Sea-valves	14
	Securing engines in ship	21
	Sentinel-valves	25
	Separators	29
	Shafting, line	17
	Shafting, propeller	17
	Shafts, crank	11
	Sheets, tube	22
	Shells, boiler	22
	Slides, cross-head	10
	Smoke-boxes and uptakes	23
	Smoke-pipes	24
	Spring-bearings	18
	Sprinklers, ash	35
	Steam governor	9
	Steam-pipe, main	28