MODIFIED SPECIFICATIONS FOR TRIPLE-EXPANSION TWIN-SCREW PROPELLING MACHINERY FOR U.S.S. SAN FRANCISCO (CRUISER NO. 5) OF 4,083 TONS DISPLACEMENT AND 19 KNOTS SPEED

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649651122

Modified Specifications for Triple-Expansion Twin-Screw Propelling Machinery for U.S.S. San Francisco (Cruiser No. 5) of 4,083 Tons Displacement and 19 Knots Speed by Bureau of Steam Engineering United States

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

BUREAU OF STEAM ENGINEERING UNITED STATES

MODIFIED SPECIFICATIONS FOR TRIPLE-EXPANSION TWIN-SCREW PROPELLING MACHINERY FOR U.S.S. SAN FRANCISCO (CRUISER NO. 5) OF 4,083 TONS DISPLACEMENT AND 19 KNOTS SPEED

Trieste

MODIFIED SPECIFICATIONS

۶

>

5

FOR

TRIPLE-EXPANSION

Twin-Screw Propelling Machinery JOHN S. PRELL Civil & Mechanical Engineer. U. S. S. SAN FRANCISCO,

(CRUISER No. 5,)

OF

4,083 TONS DISPLACEMENT

AND

19 KNOTS SPEED.

WASHINGTON: GOVERNMENT PRINTING OFFICE. 1888. ан 1997 - С. 200 1997 - С. 2007 -

VM737 U6 S3

Page.

INDEX.

Page.

•

,

9

в

Bars, lazy	47
Bearers and grate-bars	46
Bearings, reversing-shaft	21
Bearings, rock-shaft valve-	277.55
motion	19
Bearings, stern-bracket	31
Bearings, stern-tube	30
Bearings, thrust	29
Bilge and double-bottom	12.00
valve-boxes	71
Bilge and fire-pumps	60
Bilge injection-valve	39
Bilge-pumps, main	37
Bilge suction-pipes	66
Bleeder-pipes	
Blowers	63 57

Blowing-engines	58
Blow-pipes	64
Blow-valves, bottom	52
Blow-valves, surface	52
Boilers Boilers and machinery, tests of	41
Boilers and machinery, tests of	88
Boiler, auxiliary	55
Boiler air-cocks	54
Boiler attachments, main	50
Boiler bracing	42
Boiler clothing	55
Boiler drain-cocks	54
Boiler-heads	41
Boiler man-hole and hand-hole	
plates	44
Boiler material	41
Boiler protectors, zinc	54
Boiler pumping-out pipe	67
Boiler stop-valves	51
Boiler saddles	50
Boiler shells	41
Boiler tubes	42
Boiler tube-sheets	41
Bolts and nuts	81
Bottom blow-valves	52
Boxes, journal	80
Bracing, boiler	42
Brasses, crank-pin	14
Bridge-walls	46
Bridge-walls Bulkheads and decks, pipes	1
through	67
Bulkheads, shafts through	74

σ

Changes in plans	90
Check-valves, feed	52
Chests, valve	8
Circulating-plates	47
Circulating-pump connections	38

I

Р	H	ø	0	ř.

O'montestance and and	37
Circulating-pumps	
Circulating-pump engines	38
Clothing, boiler	55
Clothing, cylinder	8
Clothing, pipe	67
Coal-bunkers, pipes through	67
Cocks and valves	71
Cocks, gauge	53
Combustion-chambers	42
Condensers	32
Connections, circulating-numn	38
Connections, hose	64
Connections, hose	
shafts	18
Connecting-rods	13 .
Couplings, shaft	27 !
Covers, cylinder	8
Covers amoka nine	50
Covers, emoke-pipe Covers, valve-chest	91
Covers, varve-coest	14
Crank-pin brasses Crank-shaft pillow - block	14
Crank-shan pillow - block	04
brasses. Crank-shaft pillow-blocks	24
Grank-shaft pillow-blocks	23
Crank-shafts	25
Cross-head and slippers	13
Cross-head guides	23
Cross-heads, valve-stem	21
Cylinder covers	6
Cylinder casing, high pres-	
sure	8
Cylinder clothing Cylinder drain-cocks	8
Cylinder drain-cocks	16 !
Cylinder linings	5;
Cylinder man-hole covers	6
Cylinders, pamp	81
Cylinder relief-valves	15
2307	

i

•

,

D

i)

Decks and bulkheads, pipes	
through	67
Description, general	1
Desks, log	77
Distilling apparatus	60
Doors, ash-pit	46
Doors, furnace	45
Doors, uptake	48

Page.

Drain-cocks, boiler	54
Drain-cocks, cylinder	16
Drain-pipes and traps	69
Drawings of completed ma-	
chinery	90
Drawings, working	90
Dry-pipes	51
Ducts, air	47
Dumpe, ash	59
Duplicate pieces	84

E

Eccentrice	17
Eccentric-rods	17
Eccentric-straps	17
Engine-frames	22
Engine-room instruments	76
Engine-room telegraphs	78
Engine-room water-service	65
	85
Engine throttle-valve	14
Engines, blowing	58
	38
Engines, reversing	21
Enginee, turning, and gear	69
Escape-pipes	64
Exhaust, main feed-pump	63
Exhaust-pipes	7
Exhaust-pipes, auxiliary	63

F

Feed check-valves	
Feed-pump, auxiliary boiler	57
Feed-tanks	40
Feed-tanks, auxiliary	57
Feed-tank suction-pipes	
Feed-suction from condensers.	
Fire and bilge-pumps	60
Fire-tool racks	58
Floor-plates	
Frames, engine	
Fronts, furnace	44
Furnaces	44
Furnace-doors	
Fornace-fronta	44

III

Page.	l
-------	---

G	
Gauge-cocks	Levers, working, and gear75 Lifting-gear
	Lubrication 79

1

H

61

,

1

23

Hand-rails	75	Machine
boiler	44	
Heads, boiler		Mandre
High-pressure cylinder casing.	3	bearing
Hose-connections	64	Man-hole
Hoists, ash	õ9	boiler
Hydrokineters		
		35.1

M

Machinery and boilers, tests of	88
Machinery, drawings of, com-	1992)
pleted	90
Mandrels for white-metal	SPiste
bearings	80
Man-hole and hand-hole plates,	
boiler	44
Man-hole covers, cylinder	6
Main steam-pipes	61
Material and fitting of pipes	68
Materials and workmanship	86

1

Indicator fittings and motions 77	
Indicators, revolution 78 Injection-valve, bilge 39	Nozzles, stop-valve 44
Injection-valve, main 39 Instruments	Nuts and bolts 81
Instruments, engine-room 76	0
Intermediate cylinder-casing 4	lease to the second

J.

Intermediate cylinder-casing 4	152235 R. H. 10 19255 R.
	Office, superintending naval
-	engineer's 89
J	Oil-drips 80
	Oil-tanks 82
Jackets, steam 6	Omissions 91
Journal-boxee 80	Outboard-delivery valves, main 39
Joints, riveted 43	
	P
Б.,	2.50 Aug
	Painting
Labelson gear and instruments 72	
Ladders 74	Pillow-block brasses, crank -
Lamps, supports for	
	shaft 24
Lazy-bars 47	Pillow-blocks, crank-shaft 23