

For 2 Decks.

IRON OR STEEL STEAMER.

MON. 17 JUL 1893
Received at London Office, 529

State if Report is also sent on the Machinery of the Vessel

Date of completion of Report *14th July 1893* Port of *Barrow*
No. *529* Survey held at *Barrow* Date, First Survey *19th Aug 1892* Last Survey *12th July 1893*

On the *Steel Twin Screw Dredger "BRANCKER"* Rig *Sloop*

Net Tonnage under Tonnage Deck... *2413.63*

ONE OR TWO DECKED VESSEL.

CLASS *100.A "Dredger"*

Master *Rennings*

Year of appointment *1893*

Built at *Barrow*

When built *1893* Launched *4th Mar 1893*

By whom built *Naval Construction & Repair Co. Ltd.*

Owners *Mersey Dock & Harbour Board*

Managers

Residence *Liverpool*

Port belonging to *Liverpool*

If Surveyed while Building, Afloat, & in Dry Dock *Herculanum Dock*

Do. of Poop *76.50*
Do. of Raised (Gr.) *11.02*
Dk. or Breck... *9.93*
Do. of Bridge House *2511.98*
of Houses on Deck *67.40*
of excess of Hatchways *2443.68*
of Forecastle *803.55*
above Crown of *9.91*
Engine Room *813.46*
Gross Tonnage *1630.22*
Less Crew Space
Less above Crown of
Engine Room
Net Tonnage

Half Breadth (moulded) *23.41*
Depth from upper part of Keel to top of Main Deck Bms. *21.50*
Girth of Half Midship Frame (as per Rule) *42.83*
1st Number *87.74*
Length *318.25*
2nd Number *27923*
Proportions—Breadths to Length *6.8*
Depths to Length—Main Deck to top of Keel *14.8*
Destined Voyage *Liverpool*

Feet.	Inches.	BREADTH—	Feet.	Inches.	DEPTH—	Feet.	Inches.	Power of	Horse.	No. of Decks with Flat laid	No. of Tiers of Beams
318	3	Moulded	46	10	Top of Floors to Main Deck	19	5	Engines	225	Two	Two

Dimensions of Ship per Register, Length *320.0* breadth *47.05* depth *19.4* Moulded Depth, ft. *20* ins. *6* Round of Beam *12* inches.

ORGANIS AND CASTINGS.

Base or Side Plates depth and thickness *10 1/2 x 2 3/4*
moulding and thickness *10 1/2 x 2 3/4*
N-POST for Rudder do. do *10 1/2 x 2 3/4*
PIECE of Rudder, diameter at head *8 1/2*
do. at heel *4 1/4*
R, how constructed *Single forging Single plate*
Rudder be unshipped afloat?

FRAMING.

E, Angles, on *1/2* Bars, for *1/2* length amidships
for *1/2* at each end *5 1/2 x 3 1/2*
way of Double Bottoms *5 1/2 x 3 1/2*
ce of Frames from moulding edge to
ding edge, all fore and aft *25 x 24*
RSED FRAME, Angles *4 x 3 1/2*
RS, depth and thickness of Floor Plate
at mid-line for *1/2* length amidships *25 x 10*
in way of Engines and Boilers *11 x 12*
thickness at the ends of vessel *9 x 8*
depth at *1/2* the half breadth, as per Rule
height extended at the Bilges *See approved Sketch*
RS & BRACKETS, in Cell Dble Bottoms
Distance apart
RE GIRDER, in Double Bottom, depth
and thickness
Angles, Top Bottom
GIRDERS, number and thickness
Angles
IN PLATE, depth (exclusive of flange)
and thickness
Angles
BOTTOM PLATING, breadth and
thickness of Middle Line Strake
thickness in Engine and Boiler space
Remainder in Holds
Main and Raised Quarter Deck, Angle, Bulb Angle, Plate or Tee Bulb
Angles on Upper Edge
Average space *Alternate frames. All frames*
S, Lower Deck, Angle, Bulb Angle, Plate or Tee Bulb
Angles on Upper Edge
Average space *Alternate frames. All frames*
S, Hold, Plate or Tee Bulb
Angles on Upper Edge
Average space
S, Poop Deck, Angle, Bulb Angle, Plate or Tee Bulb
Angles on Upper Edge
Average space *Alternate frames*
MS, Bridge Deck, Angle, Bulb Angle, Plate or Tee Bulb
Angles on Upper Edge
Average space
MS, Forecastle Deck, Angle, Bulb Angle, Plate or Tee Bulb
Angles on Upper Edge
Average space
PILLARS, in 'tween Decks, Size and Spacing
Hold *4 x 3 1/2*
WEB FRAMES, in *Fore Body*, No. and Spacing
Brdth. & Thickness *21 x 8*
No. of Side Stringers *Two*
WEB FRAMES, in *After Body*, No. and Spacing
Brdth. & Thickness *21 x 8*
No. of Side Stringers *Two*
Size of Angles or Tee Bars to Web Frames *4 x 3 1/2*
BRACKET PLATES to Stringers between Web Frames, Depth and Thickness

KEELSONS AND STRINGERS.

CENTRE LINE KEELSON, Vertical Plate above floors, *1/2* length Plate, or Intercoastal Plate *22 x 14*
Rider Plate *14 x 14*
Bulb Plate to Intercoastal Keelson
Horizontal Plates on Floors
Angles *6 1/2 x 4*
SIDE KEELSON, Angles *6 1/2 x 4*
Bulb Plate above floors for *1/2* lng *13 x 14*
Intercoastal Plate for *1/2* length *13 x 14*
Attached to outside plating with Angle *3 1/2 x 3 1/2*
BILGE KEELSON, Angles *6 1/2 x 4*
Bulb Plate above floors for *2/3* len. *10 1/2 x 12*
Intercoastal Plate for *3/5* length *10 1/2 x 12*
Attached to outside plating with Angle *3 1/2 x 3 1/2*
BILGE STRINGER Angles *6 1/2 x 4*
Bulb Plate for length
Intercoastal Plate for *3/5* length *3 1/2 x 3 1/2*
Attached to outside plating with Angle *3 1/2 x 3 1/2*
SIDE STRINGER Angles
Bulb Intercoastal Plate for length
Main and Raised Quarter Deck Stringer Plate, on ends of Beams, breadth & thknss *69 x 12*
Angle on ditto *4 1/2 x 4 1/2*
Tie Plates fore & aft, outside Hatchways *4 1/2 x 4 1/2*
Diagonal Tie Plates on Bms, No. of Pairs *Deck plating increased in way of opening*
Flat of Dk* Iron or Steel for *Whole* lng *12 x 7 1/2*
Wood P. Pine Material & thickness *3 1/2*
How fastened to Beams *Steel 8th rivets, Wood 8th rivets*
Lower Deck Stringer Plate, on ends of Beams, breadth and thickness *45 x 9*
Angles on ditto, No. *4 x 4*
Tie Plates, outside Hatchways *16 x 10 1/2*
Flat of Deck* Material and thickness *W.P. 3*
How fastened to Beams *Nut & screw bolts*
Hold Stringer Plate, on ends of Beams *45 x 9*
Angles on ditto, No. *3*
Poop Deck Stringer Plate, breadth & thickness *34 x 6*
Angle on ditto *3 1/2 x 3 1/2*
Tie Plates *12 x 6*
Flat of Deck, Material and thickness *Pine 3*
Bridge Deck Stringer Plate, brdth & thickness
Angle on ditto
Tie Plates
Flat of Deck, Material and thickness
Forecastle Deck Stringer Plate, brdth & thknss *34 x 6*
Angle on ditto *3 1/2 x 3 1/2*
Tie Plates *12 x 6*
Flat of Deck, Material and thickness *Pine 3*

PLATING.

FLAT PLATE KEEL, breadth and thickness *36 x 16*
Plating or increased thickness, & length appl.
PLATES in Garboard Strakes, brd'th & thickness *54 x 12*
From Garboard to lower part of Bilges *11 x 12*
Bilges, number of Strakes and thickness *3 Strakes 13 x 12*
Of doubling at Bilge, or increased thickness, and length applied *Whole*
from up. part of Bilge to lr. edge of Sh'rstrake *11 x 12*
Sheerstrake, breadth and thickness *39 x 13*
Of d'blng at Sh'stk. & lng. applied *3/4 L*
Poop Sides *11*
Raised Quarter Deck Sides *7*
Bridge Sides *7*
Forecastle Sides *7*
Lengths of Plating *9 spaces of frames*

BULKHEADS. No. in Vessel W.T. & Hoppers B.H. No. Head by Rule 7 & Hopper B.H.

	Thickness.	Angles.	Spacing.	Height up.	Sngl. or Dbl. Frames.
Ceiling betwixt Decks, thickness and material					
" in hold do. do. <u>2½</u>	W.T. Bulkheads	<u>8.7</u>	Vrtel <u>5x5x¾ 30.</u>	Main <u>8k</u>	double.
Number of Breasthooks <u>Six</u>	PARTITION....	<u>70.</u>	Hrztal <u>5x5x¾ 30.</u>	when over <u>40 ft + collar</u>	
Crutches <u>Six</u>	LONGITUDINAL		Vrtel.	<u>B.H. 9 x 3½ x ¾ B.A.</u>	
			Hrztal.	Sides of Hoppers <u>¾</u>	Stiffened internally every <u>25"</u> with B.A. <u>7x3½ x ¾</u> .
			Vrtel.		

Are the outside Plates doubled two spaces of Frames in length? See approved Sketch.

The FRAMES extend in one length from Center Line to Main 8k Riveted through Plates with 7/8 in. Rivets, about 6 apart

The REVERSED ANGLE on floors and frames extend from Center Line to Main and Lower 8k alike. Forward to Forecastle 8k + Lower 8k alike. Double in E & B Space to tops of bilge stringer.

RIVETING OF EDGES AND BUTTS OF SHELL PLATING AND BUTTS OF STRINGER PLATES, TIE PLATES, KEELSONS, &c.

Garboard, double riveted to Keel Flat Plate Keel, with rivets 1 in. diameter, averaging 4 x 4½ ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 in. diameter, averaging 3½ ins. from centre to centre.

Butts from Keel to turn of Bilge, worked clencher, double riveted, with rivets 7/8 in. dia., averaging 3½ ins. from er. to cr.

" " " overlapped for whole length, treble riveted for whole length; with rivets 7/8 in. dia., averaging 3½ ins. from er. to cr.

Butts of All Strakes at Bilge for whole length, treble riveted with Butt Straps thicker than the plates they connect. Overlapped.

Edges from Bilge to Sheerstrake, worked clencher, double single riveted; with rivets 7/8 in. diameter, averaging 3½ ins. from centre to centre.

Butts from Bilge to Sheerstrake, worked clencher, double riveted, with rivets 7/8 in. dia., averaging 3½ ins. from er. to cr.

" " " overlapped for whole length, treble riveted for whole length; with rivets 7/8 in. dia., averaging 3½ ins. from er. to cr.

Edges of Sheerstrake, double single riveted.

Butts of Main Stringer Plate, treble riveted for whole length amidships. Single or Double Butt Straps to Stringer Plate for half length.

Butts of Inner Bottom Plating riveted for length. Butts of Centre Gilder riveted.

Breadth of edge laps of Shell Plating in double riveting 5½ x 6. Breadth of edge laps of Shell Plating in single riveting 5½ x 6.

Butt Straps of Shell Plating breadth and thickness 1¼ x 1½ 16½ x 11½ 11½ x 9. Butts, if Lapped, breadth of laps 13½. 10½. 9 x 7½

Butt Straps of Keelsons, Stringer and Tie Plates, treble double riveted?

Manufacturer's name or trade mark of the Iron or Steel (state process of manufacture of Steel) used for Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.? Siemens Martin Steel. Angles Butts & Channels. Steel Co of Scotland. Colville & Co. Glasgow S & S. Co. N. Remondone & Co. - Plates. Cornhill Iron Co. Stockton-on-Tees. Messrs Steel Co.

Workmanship. Are the butts of plating planed or otherwise fitted? Planed.

Is the riveted work properly closed? Yes.

Are the liners between the frames and plates solid single pieces? Yes. Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes.

Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? Yes. Do any rivets break into or through the seams or butts of the plating? None.

Are the butts of Plating, Stringers, &c., properly shifted and strapped? Yes.

MASTS, SPARS, &c.

	Material.	Total Length	DIAMETER AND THICKNESS.				No. of Plates in round.	ANGLES. Number. Size.	RIVETING.	
			At Partners.	Heel.	Hounds.	Head.			Seams.	Butts.
LOWER MASTS.... Fore	<u>Wood</u>	<u>76.3</u>	<u>16</u>	<u>16</u>	<u>13</u>	<u>7½</u>				
Main	<u>Pole mast stepped on dkt.</u>									
Mizen										

Remainder of Spars Used.

Rigging, Material and Size, Shrouds G.S.M. 2¾ Stays 3¼ G.S.M.

Sails. One fore Stay Sail Settee. And the following see code

EQUIPMENT No. 28771. LETTER U Supplied. ANCHORS.

Number of Certificate.	Weight, Ex. Stock Cwts. qrs. lbs.	Weight of Stock Cwts. qrs. lbs.	TEST, PER CERTIFICATE.			WEIGHT AS SUPPLIED.			Description of Anchor.	Makers.	Where and when tested and Superintendent.
			Tons.	cwts.	qrs. lbs.	Cwts.	qrs.	lbs.			
24539 1st Bower ..	<u>45 2 12</u>	<u>Smith's patent</u>	<u>39 12 3</u>	<u>7</u>	<u>45 2 0</u>	<u>Stockless</u>	<u>Jam. Spence & Son Ltd. 24 Jan/93 J. Hartman</u>				
24537 2nd "	<u>44 3 10</u>	<u>"</u>	<u>39 3 1</u>	<u>21</u>	<u>45 2 0</u>	<u>"</u>	<u>" " " " " " " " " " " "</u>				
24552 3rd "	<u>41 2 0</u>	<u>"</u>	<u>36 16 1</u>	<u>0 39</u>	<u>2 0</u>	<u>"</u>	<u>" " " " " " " " " " " "</u>				
Collective weight	<u>31 3 22</u>				<u>130 0 0</u>		<u>" " " " " " " " " " " "</u>				
15216 Stream	<u>11 1 3</u>	<u>2 3</u>	<u>7 13 5</u>	<u>0 0</u>	<u>11 1 0</u>	<u>Ordinary</u>	<u>Henry Wood & Co. 24 Dec/92 E.R. Baird</u>				
15240 Kedg.....	<u>5 2 0</u>	<u>1 14</u>	<u>7 16 1</u>	<u>0 5</u>	<u>2 0</u>	<u>"</u>	<u>" " " " " " " " " " " "</u>				
15239 2nd Kedg..	<u>2 3 0</u>	<u>0 3</u>	<u>0 5 5</u>	<u>0 0</u>	<u>2 3 0</u>	<u>"</u>	<u>" " " " " " " " " " " "</u>				

CHAIN CABLES.

Number of Certificate.	Fathoms.	Size.	Test per Certificate. Tons.	Weight of Chain Cable. Fms. lbs.	Description.	Makers of Cables.	Where and when tested, and Superintendent.	Material.	Fathoms.	Size.	Fathoms & Size.
											Per Rule.
5746 150½	<u>150½</u>	<u>1½</u>	<u>96.67</u>	<u>283.0</u>	<u>300.1</u>	<u>1½</u>	<u>Shackleton Henry Wood & Co. 24 Jan/93 J. Hartman</u>	<u>ROVLINE*</u>	<u>100</u>	<u>12"</u>	<u>100.12</u>
5746 150	<u>150</u>	<u>1½</u>	<u>"</u>	<u>285.0</u>	<u>285.0</u>	<u>1½</u>	<u>" " " " " " " " " " " "</u>	<u>"</u>	<u>90</u>	<u>10"</u>	<u>90.10</u>
5750 90	<u>90</u>	<u>1½</u>	<u>34.22</u>	<u>58.1</u>	<u>90.12</u>						

Order for Special Survey No. 12th July/92
 Date 12th July/92
 Order for Ordinary Survey No. —
 Date —
 No. 218. in builder's yard

DATES of Surveys
 held while building
 as per Section 18.

1st. On the several parts of the frame, when in place, and before the plating was wrought) 1892. Aug 19. 23. 25. Sep 5. 9. 14. 16. 21. 28. Oct 1. 4. 5.
 2nd. On the plating during the process of riveting 7. 8. 11. 13. 15. 19. Nov 7. 8. 10. 14. 15. 17. 23. 25. 29. Dec 1. 2. 7. 13. 14. 16.
 3rd. When the beams were in and fastened, and before the decks were laid 1893. Jan 11. 13. 18. 25. 27. Feb 2. 8. 9. 15. 23. 24. Mar 1. 3. 4. 10. 11. 18. 23.
 4th. When the ship was complete, and before the plating was finally coated or cemented ... 129. Apr 11. 12. 14. 18. 19. 22. 25. 29. May 1. 4. 5. 6. 9. 11. 12. 16. 17. 24. 25. 29.
 5th. After the ship was launched and equipped June 2. 5. 6. 7. 9. 13. July 12

Total No. of Visits 79

State dates and initials of letters respecting this case M. 21st May/92 M. 24th May/92 M. 9th June/92. M. 26th July/92. E. 9th Sep/92.

General Remarks (State quality of workmanship, &c.) This Vessel has been built in accordance with the approved plans, the Secretaries' Letters of above dates and in other respects in accordance with the Rules, and the Workmanship throughout is good. The Steel used in her construction has been manufactured at the Works set forth on the report and duly tested by the Society's Surveyors. The Iron forgings have been manufactured by the N.C. & A. Co. L^{td} and examined during construction. When some dredging experiments were being carried out in Morecambe Bay before going to the Mersey, the Sand pump tube got fast in the Sand, and the Vessel was aground for some time. The bottom has now been examined in the Aquarium Day Dock at Liverpool and found to have sustained no damage: the wood fenders on the Sand tube were found to be damaged and these have been put right. Circular N^o. 887. No Gutterways, wood covering board. Circular N^o. 880. Hand pump Satisfactory.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 18.0 ft., R.Q.D. or Break _____ ft., Bridge Dk. _____ ft., F' castle 30.0 ft.
(in feet and tenths) where the Poop is on top of the R.Q.D., or when the Poop or R.Q.D. is joined to the B.D., this should be distinctly stated _____

No. and Material of Decks (if Iron or Steel) and whether wholly or partially covered with wood, and No. of tiers of Beams (this information is to be given as it should appear in the Register Book) 2 Decks (1 Steel 1 W.S.)
Official No. 102-100 ; Signal Letters -

PARTICULARS OF WATER BALLAST.—

Double bottom, aft, length and water capacity in tons . Double bottom, forward, length and water capacity in tons .

Double bottom, under engines and boilers, length and water capacity in tons . If under Engines only, or Boilers only, state which .

Double bottom, constructed on the cellular system, length and water capacity in tons .

Fore peak tank, water capacity in tons . After peak tank, water capacity in tons .

Midship deep tank, length 25 ft. and water capacity in tons 140. Other tanks, if fitted, length and water capacity in tons .

The above have now been tested as required by the Rules. Used as a feed tank for Boilers.

(If necessary, furnish further information by sketch.)

How are the surfaces preserved from oxidation? Inside Patent Cement in holds for 2, Portland Cement in E & B Space and after Hold. Outside Paint.
Patent Cement Admiralty Practice

FREEBOARD assigned by the Committee, as per Secretary's Letter, dated _____ <i>State if marked on Vessel's sides in accordance with Notice No. 572</i>	In Summer	ft.	ins.	To top of Wood, Iron or Steel Upper Deck.
	In Winter	ft.	ins.	
	For Winter in North Atlantic	ft.	ins.	
	Fresh Water above the centre of disc		ins.	

The amount of Entry Fee..... £ 5 : 0 : 0 is received by me, *M. J. L.*
 Special ... £ 86 : 2 : 0 *15/4 1893*
 Certificate* £ : : :
 Travelling Expenses, if any £ 3 : 11 : 0
 I am of opinion this Vessel should be Classed *100 A. 1. (Steel) "Dredger"*
28th (1 Stpt. W. S.)
17/4 93.
 *Certificate to be sent to
Wm Johnston.
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute
Character assigned
Lamp
+ Lmc 7.93
TUES. 18 JUL 1893
100A1 Steel
Dredger
2 Hrs (U. S. H. - W. S.)
FK/W
Hull Certificate
Written.
This Vessel appears to have been built
in accordance with the Rules and the
approved plans, and it is submitted
she appears eligible to be licensed
100A1 ("Steel") Dredger, as recommended.
100A1 ("Steel") Dredger
2 Hrs (U. S. H. - W. S.)
N.B. = MT 25/1405
Per Ass. per Comm.
F.K.
The Surveyor should be required to sign the certificate
of the Steam Class.