

IRON SHIP.

No. *5340* Survey held at *Dumbarton* Date, First Survey *23 Feb 1880* Last Survey *1st April 1880*
On the *S.S. Egyptian Monarch* 4 masts. Master *J. O. Constable*

TONNAGE under Tonnage Deck } *2855.10*
Ditto of ~~Deck~~ *1022.20*
Ditto of ~~Deck~~ *2877.3*
Ditto of Houses on Deck } *38.40*
Ditto of Forecastle
Gross Tonnage *3915.70*
Less Crew Space *110.4*
3805.30
Less Engine Room *1253.02*
Register Tonnage as cut on Beam } *2552.28*

~~ONE OR TWO DECKED, THREE DECKED VESSEL.~~
~~SPAR DECKED VESSEL.~~
HALF BREADTH (moulded) *21.25*
DEPTH from upper part of Keel to top of Upper Deck Beams *28.25*
GIRTH of Half Midship Frame (as per Rule) *44.95*
1st NUMBER *94.45*
1st NUMBER, if a 3-DECKED VESSEL, deduct 7 feet *7*
87.45
LENGTH *358.5*
2nd NUMBER *31350*
PROPORTIONS—Breathths to Length *8.43*
Depths to Length—Upper Deck to Keel *12.69*
Main Deck ditto *17.7*

Built at *Dumbarton*
When built *1880-81* Launched *18 Dec 1880*
By whom built *A. McMillan & Son*
Owners *Royal Exchange Shipping Co*
Port belonging to *London*
Destined Voyage *New York*
If Surveyed while Building, Afloat, or in Dry Dock.
While building afloat & in Dry Dock

LENGTH on deck as per Rule ... *358* Feet. *6* Inches. BREADTH—Moulded... .. *42* Feet. *6* Inches. DEPTH top of Floors to Upper Deck Beams *28* Feet. *25* Inches. Do. do. Main Deck Beams... .. *16* Feet. *9* Inches. Power of Engines *500* Horse. No. of Decks with flat laid *3* No. of Tiers of Beams *4*

	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	<i>12 x 1 1/6</i>	<i>12 x 1 1/6</i>	<i>12 x 2 3/4</i>	<i>12 x 2 3/4</i>	<i>12 x 5 1/2</i>	<i>12 x 5 1/2</i>				
STEM, moulding and thickness	<i>12 x 2 3/4</i>	<i>12 x 2 3/4</i>	<i>12 x 5 1/2</i>	<i>12 x 5 1/2</i>						
STERN-POST for Rudder do. do.	<i>12 x 5 1/2</i>	<i>12 x 5 1/2</i>								
" " for Propeller	<i>12 x 5 1/2</i>	<i>12 x 5 1/2</i>								
Distance of Frames from moulding edge to moulding edge, all fore and aft	<i>24 ins</i>	<i>24 ins</i>								
FRAMES, Angle Iron, for 1/2 length amidships	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>				
Do. for 1/2 at each end	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>				
REVERSED FRAMES, Angle Iron	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>				
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	<i>as per approved</i>	<i>as per approved</i>								
" thickness at the ends of vessel	<i>as per approved</i>	<i>as per approved</i>								
" depth at 3/4 the half-bdth. as per Rule	<i>as per approved</i>	<i>as per approved</i>								
" height extended at the Bilges	<i>as per approved</i>	<i>as per approved</i>								
BEAMS, Upper, Double Deck Single or double Angle Iron, Plate or Tee Bulb Iron	<i>8</i>	<i>8</i>	<i>8</i>	<i>8</i>	<i>8</i>	<i>8</i>				
Single or double Angle Iron on Upper edge	<i>4 x 3</i>	<i>4 x 3</i>	<i>4 x 3</i>	<i>4 x 3</i>	<i>4 x 3</i>	<i>4 x 3</i>				
Average space	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>				
BEAMS, Main or Middle Deck Single or double Angle Iron, Plate or Tee Bulb Iron	<i>9</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>9</i>				
Single or double Angle Iron, on Upper Edge	<i>6 x 3</i>	<i>6 x 3</i>	<i>6 x 3</i>	<i>6 x 3</i>	<i>6 x 3</i>	<i>6 x 3</i>				
Average space	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>				
BEAMS, Lower Deck, Hold Single or double Angle Iron, Plate or Tee Bulb Iron	<i>10</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>10</i>				
Single or double Angle Iron on Upper Edge	<i>4 x 3 1/2</i>	<i>4 x 3 1/2</i>	<i>4 x 3 1/2</i>	<i>4 x 3 1/2</i>	<i>4 x 3 1/2</i>	<i>4 x 3 1/2</i>				
Average space	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>	<i>48 ins</i>				
KEELSONS Centre line, single or double plate, box or Intercoastal, Plates	<i>51</i>	<i>51</i>	<i>51</i>	<i>51</i>	<i>51</i>	<i>51</i>				
" Rider Plate	<i>36</i>	<i>36</i>	<i>36</i>	<i>36</i>	<i>36</i>	<i>36</i>				
" Bulb Plate to Intercoastal Keelson										
" Angle Irons	<i>4 x 4</i>	<i>4 x 4</i>	<i>4 x 4</i>	<i>4 x 4</i>	<i>4 x 4</i>	<i>4 x 4</i>				
" Double Angle Iron Side Keelson										
" 3 Side Intercoastal Plate <i>9 riders</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>				
" do. Angle Irons <i>vertical</i>	<i>3 x 3</i>	<i>3 x 3</i>	<i>3 x 3</i>	<i>3 x 3</i>	<i>3 x 3</i>	<i>3 x 3</i>				
" Attached to outside plating with angle iron	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>				
BILGE Angle Irons <i>attaching ring plate</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>				
" do. Bulb Iron										
" do. Wing Intercoastal plates riveted to plating for <i>down bottom</i> length										
BILGE STRINGER Angle Irons <i>for aft</i>	<i>6 x 4</i>	<i>6 x 4</i>	<i>6 x 4</i>	<i>6 x 4</i>	<i>6 x 4</i>	<i>6 x 4</i>				
Intercoastal plates riveted to plating for <i>down bottom</i> length										
SIDE STRINGER Angle Irons										
Transoms, material. Knight-heads. Hawse Timbers.	<i>Iron</i>									
Windlass <i>Patent</i> Pall Bitt <i>✓</i>										

Flat Keel Plates, breadth and thickness *36* Inches. *13* 16ths. *36* Inches. *11* 16ths.
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges *11.9*
" of doubling at Bilge, on increased thickness, and length applied *2 strakes* *14/10* *2 str* *14-10*
" fin up part of Bilge to lr. edge of Sh'rstrake. *12.9* *12.9*
" Main Sheerstrake, breadth and thickness of doubling at Sh'rstrake, & length applied from Mn. to *Shade* Dk. Sh'rstrake. *40* *16-10* *40* *15-10*
" *Shade* Dk Sh'rstrake, brdth & thickns *30* *6* *ou app'd* *sketch.*
Butt Straps to outside plating, breadth & thickness *19-9 1/2* *16-9* *19-9 1/2* *16-9*
Lengths of Plating *6 frames* *5 frames*
Shifts of Plating, and Stringers ... *2 frames* *2*
Gunwale Plate on ends of *main* Spar, on Upper Deck Beams, breadth and thickness... } *52* *6* *9* *5 1/2* *9*
Angle Iron on ditto } *42* *7* *42* *7*
Tie Plates fore and aft, outside Hatchways } *4 x 4 x 9* *4 x 4 x 9*
Diagonal Tie Plates on Beams No. of Pairs } *Iron deck* *Iron deck*
Planksheer material and scantling } *gutter waterway*
Waterways do. do. } *Iron deck* *Iron deck*
Flat of Upper Deck do. do. } *Iron deck* *Iron deck*
How fastened to *Iron deck* *Iron deck*
Stringer Plate on ends of Main or Middle Deck } *52* *6* *10* *5 1/2* *10*
Beams, breadth and thickness } *42* *8* *42* *8*
Is the Stringer Plate attached to the outside plating? *Yes*
Angle Irons on ditto, No. *2* } *4 x 4 x 9* *4 x 4 x 9*
Tie Plates, outside Hatchways } *Iron deck* *Iron deck*
Diagonal Tie Plates on Beams, No. of pairs } *P.P. line*
Waterways materials and scantlings } *2 1/2* *P.P.* *2 1/2*
Flat of Middle Deck do. do. } *Iron deck* *Iron deck*
How fastened to *Iron deck* *Iron deck*
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams } *45* *4* *9* *45* *9*
Orlop Beams } *33* *8* *33* *8*
Is the Stringer Plate attached to the outside plating? *Yes*
Angle Irons on ditto, No. *2* } *4 x 4 x 9* *4 x 4 x 9*
Stringer or Tie Plates, outside Hatchways } *18* *9* *18* *9*
Flat of Lower Deck } *2* *Spar* *2*
Ceiling betwixt Decks, thickness and material } *2 1/2* *P.P.* *2 1/2*
" in hold do. do. } *8 1/2* *4 1/2* *8 1/2* *4 1/2*
Main piece of Rudder, diameter at head } *8 1/2* *4 1/2* *8 1/2* *4 1/2*
do. at heel } *8 1/2* *4 1/2* *8 1/2* *4 1/2*
Can the Rudder be unshipped afloat? *Yes*
Bulkheads No. *6* Thickness of *5-6 up dk* and one aft to *W.T. flat*
Height up with *top* *except collision bulkhead*
How secured to sides of ship *Double frames*
" Size of Vertical Angle Irons *3 1/2 x 3 1/2 x 9/16* and distance apart *30* ins.
" Are the outside Plates doubled two spaces of Frames in length? *Yes*

The FRAMES extend in one length from *Bilge to Bilge and to deck (from Bilge to Shelter)* Riveted through plates with *7/8* in. Rivets, about *7* apart.
The REVERSED ANGLE IRONS on floors and frames extend from middle line to *ring plate & alternately bottom* and to *up. dk* alternately
KEELSONS. Are the various lengths of Plates and Angle Irons properly connected? *Yes* And butts properly shifted? *Yes*
PLATING. Garboard, double riveted to Keel, with rivets *1/8* in. diameter, averaging *5 1/2* 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 *3 1/2* ins. from centre to centre.
" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 1/2* ins. from centre to centre.
" Butts of *3* Strakes at Bilge for *2/3* length, treble riveted with Butt Straps *1/6* thicker than the plates they connect.
" Edges from bilge to Main Sheerstrake, worked clencher, double ~~or single~~ riveted; with rivets *1/4 7/8* in. diameter, averaging *4-3 1/2* ins. from cr. to cr.
" Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *1/4 7/8* in. diameter, averaging *4-3 1/2* ins. from cr. to cr.
" Edges of Main Sheerstrake, double ~~or single~~ riveted. Upper Sheerstrake, double ~~or single~~ riveted.
" Butts of Main Sheerstrake, treble riveted for *1/2* length amidships. Butts of Upper ~~or Spar~~ Sheerstrake, *double* riveted *whole* length amidships.
" Butts of Main Stringer Plate, treble riveted for *1/2* length amidships. Butts of Upper ~~or Spar~~ Stringer Plate, treble riveted for *1/2* length.
" Breadth of laps of plating in double riveting *6 x 5 1/2* Breadth of laps of plating in single riveting *✓*
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Treble and double*
Waterway, how secured to Beams *Riveted* (Explain by Sketch, if necessary.)
Beams of the various Decks, how secured to the sides? *Forged knee ends* No. of Breasthooks, *4* Crutches, *3*
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *D. & W. Mossend, Stockton M. S. Co.*
Manufacturer's name or trade mark, *Messrs Dalziel & Co., Stockton Malleable Iron Co., Conssett Iron Works.*
The above is a correct description.
Builder's Signature, *A. McMillan & Son* Surveyor's Signature, *J. O. Constable*
Surveyor to Lloyd's Register of British and Foreign Shipping.

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed* 5340 g/s.
 Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? *Yes*
 Are the fillings between the ribs 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? *A few.*

Masts, Bowsprit, Yards, &c., are of *Iron & Steel* in *good* condition, and sufficient in size and length. If of Iron or Steel give Scantlings of Plating, Angle Irons, &c., and further explain by a Sketch showing how the lower Masts and Bowsprit are constructed, showing the number of Plates and Angle Irons, mode of riveting, quality of Materials, and if stamped with Maker's name.
 State also Length and Diameter of Lower Masts and Bowsprit *The four masts are built in accordance with the approved sketch, see Secretary's letter of the 8th April 1880. The iron for these masts is from the Cousett Iron Company and it was tested in accordance with the requirements of the Rules.*

No.	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.		No.	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Suprntd.
								N ^o .	Weight.					
	Fore Sails,	Chain	301 1/2 ft	2 7/8	107.1 tons	300 fms	Lipton	Bower Anchors	1	40.2-148	36.4-1-4	40 cwt	Lipton	
	Fore Top Sails,	Iron Str'm Chain	8" March 1880	1 3/16	76.5	90.4	signed by	1	40.0-73	35.16.3.14	114 cwt	signed by		
	Fore Topmast Stay Sails,	Ditto do.	10 July 1880	1 3/16	38	13 1/2	E.R.	1	34.1-142	31.15.0.14	6-2-73	E.R. Ditt		
	Main Sails,	Hmpn Strm Cbr	120	5" Steel	90-12	90-12	Switt	Stream	1	12.0-02	13.17.2.0	12 cwt	W. Maddison	
	Main Top Sails,	Hawser	2-100	3"-5"	90-12	90-12	Switt	Kedge	1	6.0-128	7.2.0	6-1-1		
	and spare	Towlines	120	12" manilla	90-8	90-8		Ditto	1	3.0-02	5.10.0.0	3-1-1		
		Warp	120	10" Tanned hemp										

Standing and Running Rigging *wire thump* sufficient in size and *good* in quality. She has *2* Long Boat and *4* others.
 The Windlass is *Paul's Patent*, *good* Capstan *good* and Rudder *good* Pumps *good & sufficient*.
 Engine Room Skylights.—How constructed? *Iron on Iron Combings* How secured in ordinary weather? *By Bolts*
 What arrangements for deadlights in bad weather? *Deadlights hinged to skylight*
 Coal Bunker Openings.—How constructed? *Cast Iron* How are lids secured? *Byonet fixing* Height above deck? *flush*
 Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *On main deck there are 6 scuppers and 7 ports, as approved, each side; and on shelter deck the bulwarks are open.*
 Cargo Hatchways.—How formed? *as usual, plate and angle iron*
 State size *Main Hatches 19'6" x 10'3"* Forehatch *11'9" x 8' x 6' x 8'* Quarterhatch *8 feet x 8 feet*
 If of extraordinary size, state how framed and secured? *not of extraordinary size*
 What arrangement for shifting beams? *One plate frame in main hatchways*
 Hatches, If strong and efficient? *Yes.*

Order for Special Survey No. *433*
 Date *31st Oct 1879*
 Order for Ordinary Survey No. *228*
 Date *20 Dec 1880*
 No. *228* in builder's yard.

DATES of Surveys held while building as per Section 16.	1st.	2nd.	3rd.	4th.	5th.
	On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the process of riveting	When the beams were in and fastened, and before the decks were laid...	When the ship was complete, and before the plating was finally coated or cemented...	After the ship was launched and equipped
	<i>Specially Surveied:—1880:— Feb 23; Mar 2, 8, 11, 15, 18, 22</i>	<i>20, 30; Apr. 5, 12, 19, 22, 28; May 4, 14, 21, 24, 27, 31; June 3, 8, 7, 14, 17</i>	<i>21, 24, 28; July 1, 5, 8, 12, 15, 29; Aug 2, 6, 9, 12, 16, 19, 20, 23; Sep 7, 8, 13, 16, 20, 23</i>	<i>27, 30; Oct 4, 8, 11, 14, 19, 22, 25; Nov. 1, 4, 11, 16, 18, 22, 29; Dec 2, 6, 9, 13, 16, 17</i>	<i>20, 27, 30; 1881:— Jan 10, 13, 17, 20, 24, 27; Feb 2, 8, 16, 22, 25; March 8, 11, 16, 21, 25, 29 & 1st April.</i>

General Remarks (State quality of workmanship, &c.) *The workmanship is good. She is a sister vessel to the S.S. "Prussian Monarch", and is built in accordance with approved tracings and instructions contained in Secretary's letters of the 9th Oct, 24th Nov, 6th 10th, & 23rd Dec 1879, 19th Jan, 5th 14th Feb, 8th April, 27th May, 17th June, 1880, and 8th 14th March 1881.*

The double bottom extends for the length of 292 feet divided into three separate compartments with a space of frame for well to each compartment, the capacity of this double bottom (cellular) is 600 tons. Each compartment was tested with a head of water as required by the Rules.

She has a shade deck constructed as approved, the fore openings being: forward 84 ft x 20 ft and aft 94 ft x 20 ft as per approved sketch of shade deck, four strops, being left loose in these openings on each side for air &c. Instead of pillars in hold there is a fore and aft bulkhead 5/16 thick stiffened with double T bars 5 x 3 x 8/16, 4 ft apart with shelter deck all fore & aft. Home on shelter deck, & casing 5 1/2 x 18 1/2 x 14 x 11 1/2 x 292 ft.

State if one, two, or three decked vessel, or if open, or covering decked, and the length of poop, fore-castle, or raised quarter-deck, and the length of double, or full double bottom.

How are the surfaces preserved from oxidation? Inside *Cement & Paint* Outside *Paint*

I am of opinion this Vessel should be Classed **100A.1. "2 Iron decks" "Three decked rule" & "Shelter deck"*

The amount of the Entry Fee ... £ 5 : : : is received by me,
 Special ... £ 120 : 2 : 6 *31st March 1881*
 Certificate ... : : :
 (Travelling Expenses, if any, £ 9 : 9 : 0) *14th April 1881*

Committee's Minute *Tuesday April, 12th 1881.*

Character assigned *100A.1. 3 decks & Shelter Deck. 4 Tiers of Beams. 2 Iron decks*

The Surveyors are requested not to write on or below the space for Committee's Minute.

J. D. Dobb
 Surveyor to Lloyd's Register of British and Foreign Shipping.
 This vessel has been built in accordance with the Rules and approved sketches and is eligible to be classed 100 A. 1 as recommended by Lloyd's Register of Shipping.