

IRON SHIP.

18th JULY, 82.

510

No. 510 Survey held at Postock Date, First Survey Feb 7 82 Last Survey July 4 1882
On the Iron Steamer "Defiance" Master N. Houge

| | | | |
|---------------------------------------|--------|--|---------|
| TONNAGE under Tonnage Deck | 435.74 | ONE, OR TWO DECKED, THREE DECKED VESSEL. | |
| Ditto of Third, Spar, or Awning Deck. | | SPAR, OR AWNING-DECKED VESSEL. | |
| Ditto of Poop, or Raised Qr. Dk. | | HALF BREADTH (moulded) | 12.11 |
| Ditto of Houses on Deck | | DEPTH from upper part of Keel to top of Upper Deck Beams | 14.5 |
| Ditto of Forecasts | | GIRTH of Half Midship Frame (as per Rule) | 24.0 |
| Gross Tonnage | 698.05 | 1st NUMBER | 57.4 |
| Less Crew Space | 33.29 | 1st NUMBER, if a 3-DECKED VESSEL, deduct 7 feet | |
| Less Engine Room | 136.54 | LENGTH | 173 |
| Register Tonnage as out on Beam | 528.22 | 2nd NUMBER | 8880 |
| | | PROPORTIONS—Breadths to Length | over 6 |
| | | Depths to Length—Upper Deck to Keel | over 11 |
| | | Main Deck ditto | |

Built at Postock
When built 1882 Launched May 15 1882
By whom built Postocker Actien-Gesellschaft für Schiff und Maschinenbau
Owners Christopher Fahren, Halvorsen & Falk Compagnie af 1881
Port belonging to Bergen, Norway
Destined Voyage
If Surveyed while Building, Afloat, or in Dry Dock.

| | | | | | | | | | | | | | | |
|----------------------------|-----|-----------------|----|----|---|----|-------|------------------|----|--------|-----------------------------|---|-----------------------|---|
| LENGTH on deck as per Rule | 173 | BREADTH—Moulded | 25 | 10 | DEPTH top of Floors to Upper Deck Beams | 13 | 2 1/2 | Power of Engines | 75 | Horse. | Nº. of Decks with flat laid | 2 | Nº. of Tiers of Beams | 2 |
|----------------------------|-----|-----------------|----|----|---|----|-------|------------------|----|--------|-----------------------------|---|-----------------------|---|

Dimensions of Ship per Register, length, 173.57 breadth, 8.02 depth, 3.92

| | | | | | | | |
|--|-----------------------------|----------------|---------------|-----------------|---------------|--|---|
| KEEL, depth and thickness | 175.5 | Inches in Ship | 7 1/4 - 1 3/8 | Inches per Rule | 7 1/4 - 1 3/8 | Flat Keel Plates, breadth and thickness | |
| STEM, moulding and thickness | | | | | | PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges | 30 9x8 30 9x8 |
| STERN-POST for Rudder do. do. | | | | | | " of doubling at Bilge, or increased thickness, and length applied | 7x8 7x8 |
| " for Propeller | | | | | | " fm up. part of Bilge to Ir. edge of Sh'rstrake. | 7x8 7x8 |
| Distance of Frames from moulding edge to moulding edge, all fore and aft | 21 | | | | | " Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Upper or Spar Dk. Sh'rstrake. | 33 9x8 33 9x8 |
| FRAMES, Angle Iron, for 1/2 length amidships | 3 3 6 3 3 6 | Inches in Ship | 3 3 6 3 3 6 | Inches per Rule | 3 3 6 3 3 6 | " Up. or Spar Dk Sh'rstrake, brdth & thickness | 5 |
| Do. for 1/2 at each end | 3 3 5 3 3 5 | | | | | Butt Straps to outside plating, breadth & thickness | 7.8.10 |
| REVERSED FRAMES, Angle Iron | 2 1/2 2 1/2 5 2 1/2 2 1/2 5 | | | | | Lengths of Plating | 126 |
| FLOORS, depth and thickness of Floor Plate at mid line for half length amidships | 14 1/2 6 14 1/2 6 | | | | | Shifts of Plating, and Stringers | 4 2.8 6.3 |
| " thickness at the ends of vessel | 5 5 5 | | | | | Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness | 21 1/2 6x5 |
| " depth at 1/2 the half-bdth. as per Rule | 29 | | | | | Angle Iron on ditto | 2 1/4 x 2 1/2 5 |
| " height extended at the Bilges | 5 3 6 5 3 6 | | | | | Tie Plates fore and aft, outside Hatchways | 8 6x5 |
| BEAMS, Upper, Spar, or Awning Deck | | | | | | Diagonal Tie Plates on Beams No. of Pairs | |
| Single or d'ble Ang. Iron, Plate or Tee Bulb Iron | | | | | | Planksheer material and scantling | |
| Single or double Angle Iron on Upper edge | 4 2 | | | | | Waterways do. do. | |
| Average space | 5 3 6 5 3 6 | | | | | Flat of Upper Deck do. do. | 2 3/4 |
| BEAMS, Main, or Middle Deck | | | | | | How fastened to Beams | by bolts |
| Single or d'ble Ang. Iron, Plate or Tee Bulb Iron | | | | | | Stringer Plate on ends of Main or Middle Deck | 38 1/2 20 7x6 38 1/2 20 7x8 |
| Single or double Angle Iron on Upper edge | 21 | | | | | Beams, breadth and thickness | |
| Average space | 21 | | | | | Is the Stringer Plate attached to the outside plating? | yes |
| BEAMS, Lower Deck, Hold or Orlop | | | | | | Angle Irons on ditto, No. 2 3 1/2 - 3 1/2 6/16 | |
| Single or d'ble Ang. Iron, Plate or Tee Bulb Iron | | | | | | Tie Plates, outside Hatchways | |
| Single or double Angle Iron on Upper edge | | | | | | Diagonal Tie Plates on Beams, No. of pairs | |
| Average space | | | | | | Waterways materials and scantlings | |
| KEELSONS Centre line, single or double plate, box, or intercostal, Plates | 11 9.8x7 11 | | | | | Flat of Middle Deck do. iron do. deck | 5 |
| " Rider Plate | 7 1/2 9x8 7 1/2 9x8 | | | | | How fastened to Beams | |
| " Bulb Plate to Intercostal Keelson | 3 1/2 3 6/16 3 1/2 3 6 | | | | | Stringer Plates on ends of Lower Deck, Hold or Orlop Beams | 12 7x6 12 7x6 |
| " Angle Irons | | | | | | Is the Stringer Plate attached to the outside plating? | No |
| " Double Angle Iron Side Keelson | | | | | | Angle Irons on ditto, No. 4 3 1/2 - 3 1/2 | 6 |
| " Side Intercostal Plate | | | | | | Stringer or Tie Plates, outside Hatchways | |
| " do. Angle Irons | | | | | | Flat of Lower Deck | |
| " Attached to outside plating with angle iron | | | | | | Ceiling betwixt Decks, thickness and material | 2 1/2 pine 2 1/2 |
| BILGE Angle Irons | 3 1/2 3 6 3 1/2 3 6 | | | | | " in hold do. do. | 2 1/2 do. 2 1/2 |
| " do. Bulb Iron | 6 6 | | | | | Main piece of Rudder, diameter at head | 4 1/2 4 1/2 |
| " do. Intercostal plates riveted to plating for length | | | | | | do. at heel | 2 1/2 2 1/2 |
| BILGE STRINGER Angle Irons | 3 1/2 3 6 3 1/2 3 6 | | | | | Can the Rudder be unshipped afloat? | yes |
| Intercostal plates riveted to plating for length | | | | | | Bulkheads No. 5 Thickness of 1/4 inch | |
| SIDE STRINGER Angle Irons | | | | | | " Height up Main deck | |
| Transoms, material. Knight-heads. Hawse Timbers. | | | | | | " How secured to sides of ship | double frame |
| Windlass <u>Walker's</u> Pall Bitt | | | | | | " Size of Vertical Angle Irons | 2 1/2 - 2 1/2 1/8 and distance apart ins. |
| | | | | | | " Are the outside Plates doubled two spaces of Frames in length? | |

The FRAMES extend in one length from centre line of Keel to Awning deck Riveted through plates with 5/8 in. Rivets, about 5 apart.
The REVERSED ANGLE IRONS on floors and frames extend from middle line to upper deck and to lower deck 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 3/4 in. diameter, averaging 3 1/4 ins. from centre to centre.
" Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from centre to centre.
" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/4 ins. from centre to centre.
" Butts of one Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.
" Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 5/8 in. diameter, averaging 2 3/4 ins. from cr. to cr.
" Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 5/8 in. diameter, averaging 2 3/4 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, treble 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 whole length.
" Breadth of laps of plating in double riveting 4 1/2 Breadth of laps of plating in single riveting 2 7/8
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted?
Waterway, how secured to Beams of iron (Explain by Sketch, if necessary.)
Beams of the various Decks, how secured to the sides? By knee plates No. of Breasthooks, Crutches,
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? All very good German iron
Manufacturer's name or trade mark,
The above is a correct description.
Builder's Signature, ... Surveyor's Signature, ...
Surveyor to Lloyd's Register of British and Foreign Shipping.

3009 (17 8/78). Lloyd's Register of British and Foreign Shipping.

Workmanship. Are the butts of plating planed or otherwise fitted? *Carefully fitted planed*
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? *No.*

Masts, Bowsprit, Yards, &c., are *Pine* 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

| NUMBER for EQUIPMENT 11216 | | Fathoms. | Inches. | Test per Certificate. | Inches per Rule. | Machine where Tested & Suprtd. | ANCHORS. | N ^o . | Weight. Ex. Stock. | Test per Certificate. | W'ght req'd per Rule. | Machine where Tested & Suprtd. |
|----------------------------|------------------|-------------|---------|-----------------------|------------------|--------------------------------|--|------------------|--------------------|-----------------------|-----------------------|--------------------------------|
| SAILS. | | CABLES, &c. | | 42.2.2.0 | | | Bower Anchors | | | | | |
| N ^o . | Chain | 105.3 1/4 | 1 1/4 | 28.2.2.0 | 210 x 1 1/4 | | (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.) | 1 | 13.3.24 | 15.12.2.0 | 13 1/2 | |
| Fore Sails, | Iron Str'm Chain | 107.2 1/2 | 1 1/4 | 42.2.2.0 | 60 x 1 1/4 | | | 1 | 13.3.16 | 15.12.2.0 | do. | |
| Fore Top Sails, | Ditto do. | 60 | 13/16 | 17.16.0.0 | | | | 1 | 11.3.0 | 13.12.2.0 | 11 1/2 | 38 1/2 |
| Fore Topmast Stay Sails, | Hmpn Strm Cbl | | | 17.14.2.0 | | | Stream | ... | 1 | 4.3.8 | 7 1/4 | 4 3/4 |
| | Hawser ... | 75 | 8 1/2 | | 75 x 8 1/2 | | Kedge | ... | 1 | 2.0.21 | 4 3/4 | 2 1/2 |
| Main Sails, | Towlines ... | 90 | 6 1/2 | | 90 x 6 1/2 | | Ditto | ... | 1 | 1.1.0 | 1 1/4 | |
| Main Top Sails, | Warp ... | 100 | 5 | | 100 x 5 | | | | | | | |
| and | quality | 90 | 4 | | 90 x 4 | | | | | | | |

Standing and Running Rigging *are* sufficient in size and *good* in quality. She has *3* Long Boat and *1 1/8* / *20*
The Windlass is *Walker's* Capstan and Rudder *and* Pumps *are good*
Engine Room Skylights.—How constructed? *of Iron, spruce above deck* How secured in ordinary weather? *well*
What arrangements for deadlights in bad weather? *Good*
Coal Bunker Openings.—How constructed? *2 on each side 40 x 24* How are lids secured? *Hatches of iron* Height above deck? *14 inches*
Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea?

Cargo Hatchways.—How formed? *of iron 3/8" x 24"*
State size Main Hatch *17 1/2 x 9* Forehatch *10 1/2 x 7* Quarterhatch *10 1/2 x 8*
If of extraordinary size, state how framed and secured?
What arrangement for shifting beams?
Hatches, If strong and efficient? *of iron.*

| | | | |
|-------------------------------|---|---|-----------------------------------|
| Order for Special Survey No. | 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 | <i>Built under special survey</i> |
| Date | | 2nd. On the plating during the process of riveting | |
| Order for Ordinary Survey No. | | 3rd. When the beams were in and fastened, and before the decks were laid.... | |
| Date | | 4th. When the ship was complete, and before the plating was finally coated or cemented.. | |
| No. in builder's yard. | | 5th. After the ship was launched and equipped | |

General Remarks (State quality of workmanship, &c.)
Awning deck, lead line marked giving a draught of 13' 4", and leaving a freeboard of 1' 5" to the main deck and 7' 10" to the awning deck.
Water Ballast, double bottom 83 tons 63' long
Aft 19 tons 27' 6"
Peak 11 tons
The iron is of the best German material and the workmanship has been executed very carefully. The decks are of Swedish pine, the companion deck houses, rails & skylight are of teak

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom.
How are the surfaces preserved from oxidation? *Inside She received 3 coats of paint Outside 3 coats of paint, bottom patent paint*
I am of opinion this Vessel should be Classed *100 A1* *Awning Deck Lead Line marked 13' 4"*
The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, }
Special ... £ 34 : 18 : 0 187 }
Certificate ... — : 5 : 0
(Travelling Expenses, if any, £ 6.0.0.)

Committee's Minute *Friday 21st July, 1882.*
Character assigned *100 A1*
Freeboard 18 5/8' to main deck 19' 5/8' to awning deck
Lead line 13' 4"
100 A1
Lloyd's Register