

Captain Atkinson says that he felt a shock at Sea as if the vessel had struck some floating substance, but he did not touch the ground at any time.

The vessel has a Bridge house in midships, the frame angles of the Hull do not come above the Deck, the Bridge house is a super structure supported with triangular bracket plates from the side extending out on the iron Deck about three or four feet, and many of the rivets connecting the bracket plates to the Deck were leaking. Some slight damages were done on deck, viz: two rigging screws carried away, and the cement under the Steam Winch and on top of deck house broken, and the pump gear and Steam Winch worn by excessive pumping.

Repairs.

The paint on the outer surface of the plating has been scraped off to the bare iron from the lower edge of the second strake above down to the light water mark from Stem to Stern on both sides, and when the vessel was put into dry Dock the paint on the bottom was scraped off from the light water mark to the Keel from Stem to Stern on both sides and coated, after the repairs were completed, with three coats of zinc paint and an overall coating of paint and tallow, mixed on the bottom up to the load line.

Inside, all the sparring battens between decks and in the lower hold were removed, the Hold washed down with fresh water and all the paint and rust scraped off the plates angles, stringers and tween deck beams to the bare iron, and the paint on the upper deck beam arms and in places on the beams and iron decks where required, and after the repairs were completed the iron was coated with three good coats of zinc paint. The whole of the paint work on the under part of iron upper deck, on the beams, Mast coamings and Sparring battens was damaged and destroyed by handling and by the smoke from the riveters fires and all was coated after the repairs were completed with two coats of good paint.

The Floor and Bilge ceiling being in Stitches, except a few planks of fixed ceiling in the forward and after ends, was all lifted, from the collision bulkhead right aft, and also the planks adjoining the Keelsons, and the Floor plates, Reverse angles & Keelsons being rusted with the briny water from the leakage and drainage of the salt cargo were scraped clean, and after the repairs were completed the Floors were coated with two coats of cement wash and the top part of the reverse bars and all the Keelsons painted. The cement in the bottom examined and found started off the iron in several places. In the centre under the main Keelson the spaces are filled up with cement nearly to the level of the limber holes and a thin layer of pure cement on top, that thin layer of cement, about $\frac{3}{8}$ " or $\frac{1}{2}$ " thick was bagged up in nearly all the spaces from the foremast to the Mizzen Mast and was all removed and recommended. The cement was cut out in many places to renew rivets found slack in the bottom and was entirely removed in the centre, under the main Keelson, and the butts of the Garboard strake where the Garboard Strake plates were fractured, and where cut out many of the Frame rivets through the floors were found very slack and were taken out and replaced with sound rivets. The Fractures in the Garboard Strake plates were repaired as follows:—

Holes drilled through the plates at the end of the fractures to prevent them from extending and filled with tapped bolts, and the fractures puttied and caulked, the one on the end of the

15th plate from the Sternpost being the largest was covered with a small patch of steel plate

fastened to the plate with tapped bolts to prevent it from leaking, the others were not patched. Captain Atkinson would not accept this as a permanent repair, but reserves the right to have the plates renewed when the vessel goes home if then considered necessary.

Some of the floor ceiling planks adjoining the Keelsons were washed up and broken and replaced with (161) one hundred and sixty one running feet of new ceiling. Thirty of the Cap pieces on the bilge ceiling were also renewed, and sixteen floor ceiling Stitches which were washed up and damaged were repaired.

The fixed ceiling in the after end had to be taken up to repair the fractured frame angles and sixty running feet of the old ceiling was relaid and one hundred and twenty feet replaced with new.

The cement in the Gutterways between decks was all removed to get at the defective rivets in the Stringers and was replaced with new cement after the rivets were changed. The cement between the frames, at the tween decks, was cut out in many spaces to get at the slack rivets in tween deck intercostal angles and was recemented after the slack rivets were changed, this cement was carried up over several of the Buttraps of the 3rd strake of plating from the Gunwale Stringer they could not be removed without disturbing the Stringer plate, and all the Butt plates of the strake of plating above the Bilge ceiling were covered over with solid cement. All the Butts in the bottom and bilges and the two plates above the bilges were examined, patched with Scotts cement and some of them caulked.

2518 Two thousand five hundred and eighteen rivets in Frames, Butts and Stringers, and thirty keel rivets have been changed in the several parts of the ship as follows:—

Between decks.

Starboard side (63) Sixty three Frame Rivets. (17) Seventeen Butt Strap Rivets.

Port side. (33) Thirty three ——— D. ——— (10) Ten ——— D. ——— D.
and one Beam arm rivet.

Horizontal Rivets

through tween deck Stringer Angle & reverse bars and
through the intercostal Angle & outside plating

Stringer angle.

Intercostal angle.

Starboard side (38) Thirty eight rivets.

(13) Thirteen rivets.

Port side (35) Thirty five ——— D. ———

none

Vertical Rivets.

in tween deck Stringers

Stringer angle.

Waterway angle.

Beam angle.

Intercostal angle.

Stringer Butts.

Starboard side

252.

122.

25

149

Port side

187

8

3

136

13

and Seven Beam arm rivets



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Lower Idold.

from tween deck Stringer to 1st Stringer Angle

Horizontal Rivets through Shell plating

	Frame Rivets.	Butt Rivets.	Intercostal angle Rivets.
<u>Starboard side.</u>	107	7	3
<u>Port side</u>	17		17

Between 1st & 2nd Stringers

Horizontal Rivets through Shell plating

	Frame Rivets	Butt Rivets.	Intercostal angle
<u>Starboard side.</u>	18	4	2
<u>Port side.</u>	6		

From 2nd Stringer to Cement.

Horizontal Rivets through Shell plating

	Frame Rivets	Butt Rivets	Intercostal angle
<u>Starboard side.</u>	52	57	
<u>Port side.</u>	30	59	4

Below Cement.

through floor skin plating & bottom Butts.

	Frame Rivets.	Butt Rivets.	Intercostal Rivets
<u>Starboard side</u>	48	3	
<u>Port side</u>	20	1	8

Lower Idold Stringer Rivets.

1st Stringer below tween decks

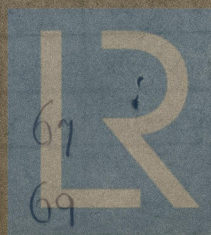
	Through Stringer angle and Reverse Bars - Horizontal Rivets.	Butt & Stringer Angle.	Intercostal angle Vertical Rivets
<u>Starboard side.</u>	26	199	24
<u>Port side.</u>	16	70	9

Second Stringers below tween decks

<u>Starboard side</u>	36	152	8
<u>Port side</u>	43	202	4

Third Stringer

<u>Starboard side</u>	8	67
<u>Port side</u>	10	69



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A new Butt strap on the Butt of the lower angle of a Stringer on the Starboard side abreast of the main mast.

The cement between the Floors was cut out in ^{eleven} ~~divers~~ spaces at the after end of the vessel to repair the fractured frame angles and were recemented after the repairs were completed.

The fractured Frame angles aft were repaired as follows: - viz:

The third and fourth Frame angles on each side forward of the after end of centre Keelson, being almost straight and fractured in line of top of floor plate, were repaired with Plates, three feet long by five inches by eleven sixteenths, $3 \times 5 \times \frac{11}{16}$, fitted over the fracture and riveted into the angle of the Frame and riveted to the Frame angle with six rivets in each. The other five fractured frames, two of which, the 8th and 9th, from the after end of centre Keelson are fractured in two places, and the reverse bars also fractured, have been strengthened with bracket plates riveted to the Floor plates and Frame angles and a reverse angle on top to take the floor ceiling.

To strengthen the after end of the vessel and prevent the excessive panting experienced on the passage out, Six Panting Beams have been fitted in the after end, about half way between the tweendeck and the Keelson and immediately below the after end of the Stringer above the hidge, the beams are of two angles $5\frac{1}{2} \times 3\frac{1}{2} \times \frac{9}{16}$ riveted back to back with bracket plates at each end fitted between the angles and riveted to the Frame angles, the Bracket plates are $\frac{1}{16}$ thick, and a stringer plate on top on each side 21 inches broad by $\frac{1}{16}$ thick extending from the Breast plate at the after end to the fourth frame forward of the forward Panting Beam and the projecting parts supported with two brackets on each side riveted to the Frame angles and to the Stringer plates, and another bracket between the two forward panting Beams. The Stringer plate is riveted to the beams and has Gusset plates on the two forward beams and connected to the Frames with an angle bar $5\frac{1}{2} \times 3\frac{1}{2} \times \frac{9}{16}$ fitted close against the reverse bars of the Frames and riveted thereto and to extra pieces of reverse angles on the forward side of the Frame and to the Stringer plates, and four forward beams supported in the middle with 3" iron stanchions riveted to the beams and to the centre Keelsons. The Stringers and angles are connected to a new Breast plate at the after end.

The Buckled Breast plate of the Stringer above the new panting Beams has been strengthened with an angle bar riveted on the forward part. The Breast plate of the Stringer above, the one next to the tweendecks, also strengthened on the forward part with an iron bar. The after end in line of tweendeck Stringer has been strengthened with an extra breast plate extending forward to the aftermost tweendeck beam. The tweendecks at the after end were lifted to admit of the new plate being put in.

The second side Keelson which did not extend as far aft as the Jigger Mast has been carried right aft on both sides and connected at the other end with a Breast plate $\frac{1}{16}$ thick extending ten feet forward.

The Breast plate of the lower Stringer has been extended four feet further forward with an extra plate $\frac{1}{16}$ thick butted to the original Breast plate and connected with a strap. This additional strengthening will, in my opinion, prevent the excessive panting in the after end of the vessel, but it should be examined when the vessel reaches a home port, to ascertain how it has stood the test of a voyage.

The upper (main) deck was caulked throughout, the inside of Bridge house gloomed, after being recemented in places, and all the leaks stopped.

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in the deck and the fastenings of the Bitts were tested with water and made perfectly tight. The top of Donkey Boiler house recemented. Cement under the Steam winch renewed and the rigging screws repaired, the pumps overhauled and put in good working order and the Steering Gear repaired and made secure, and she loaded a cargo of jute for Dundee and left Calcutta on the 8th instant.

When hauling out of the Port Commissioners new wet dock at Tidderpore, where she loaded her cargo, on the afternoon of the 7th instant, her Stern collided ^{against} the Stone Pier of the Dock and slightly started the lap of the 4th and 5th strakes of plating from the Gunwale at the butt of the first and second plate from the Sternpost, port side; the lap is opened about a sixteenth, so that the blade of a knife could be passed between the two plates, the damage extends about nine inches on each side of the butt and the plate above is very slightly dented at the butt. The ship was to leave next morning and there was no time to have the rivets taken out or to do any repair except caulking the lap with oakum and putty. I was not aware of the accident until I came on shore from the river work about twelve noon, when I heard that Captain Atkinson had come for me, but in my absence took Captain Thompson to survey the damage, as the vessel had to be taken in tow before eleven o'clock. Copy of Captain Thompson's report herewith sent.



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