

R E P O R T.

LLOYD'S REGISTER OF SHIPPING.

*copy*  
*Lloyd's Register*

PORT NATAL,

10th March, 1926.

THIS IS TO CERTIFY that

I, JOHN STEWART,

undersigned Surveyor to this Society did at the request of Master of the vessel and H. Meyer Esq., Representing Owners Underwriters, Survey in the Graving Dock on the 2nd December 1925, and on subsequent dates, the Steel S/S "HAMPHOLM", of 1,000 tons, to ascertain the nature and extent of damage she is alleged to have sustained through being ashore on the East Coast of Africa, in October 1925.

From information obtained on board from the Master of the vessel, also from an abstract Log handed to me, it appears that the "Hampholm" is on a voyage from Oala to Madagascar via Suez Canal and East African ports with General Cargo, Coal, Timber, and on the 13th October at 3 a.m. on the passage from Darassalam to Delagoa Bay for Bunkers, the vessel ran aground and remained fast. The position of the vessel at the time of the accident was 25 miles North of Cape Delgado, or 10°-19' S. and Long. 40°-27' E. Every effort was made to refloat the vessel but she remained aground until 1.30 p.m. on the 15th October, when she floated, and proceeded to Mikindani to anchor and make inspection, so far as was possible.

Owing to the vessel having been on coral and rocks, it was known she had sustained serious damage, especially aft.



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W 197 0225(1/14)

S/S "Hampholm".      Damage (Contd.)

the rudder post of stern frame having broken off at the 18' mark and at sole piece about 15" from aft end of stern plating.

The rudder was bent over to Starboard about 35° and was hanging by top pintle and gadgeon only. After a survey had been held in Mikindani Bay the Captain decided to proceed to Zanzibar, and this was successfully carried out with the damaged rudder, the vessel arriving there on the 22nd October. During the time the vessel was ashore she had made no water in the holds, and had only leaked slightly into the after peak and the deep tank aft, all other tanks were practically tight.

The abstract of Log shows that about 250 tons of cargo consisting of 150 tons of Salt and 80 tons of coal (Briquettes) in No. 1 Hold, were jettisoned. For full particulars of the accident see ship's Log Book.

It was then decided to proceed to Durban for dry-docking and repairs and the services of the Union Government Tug "Henry Burton" was engaged to assist. The "Hampholm" in tow of the Tug left Zanzibar on the 12th November and arrived at Durban on the 21st November, the vessel steering remarkably well with her badly damaged rudder.

Before dry-docking the vessel, examination was made by a diver to assure that there were no projections on bottom that would foul the blocks.

The vessel was dry-docked on the 2nd December and on that and subsequent dates I made examination and found the damage to be as follows :- (All shell plates are numbered from aft.)

"A" strake -

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W197-0225(2114)

S/S "Hampholm".      Damage (Contd.)

"A" STRAKE.      Starboard Side.

Shell Plates Nos. 1,2,11,12,13,14 and 15 badly buckled,  
Nos 3 and 16 slightly bent.

"B" Strake      Plates Nos 2,3,11,12,13,14 and 15 badly buckled  
and bent.

"C" Strake      "      "      2,3,13 and 14 badly buckled, Nos 4 and  
15 slightly bent.

"D" Strake      "      "      1,2,8,9,10 and 11 badly buckled, Nos  
7 and 12 slightly bent.

"E" Strake      "      "      2,3,4,5,8,9,10,11 and 12 badly buckled  
Nos 7 and 13 slightly bent.

Port Side.

"A" Strake      Shell Plates Nos 13 and 16 badly buckled, Nos 9,10  
14,15, and 17 slightly bent.

"B" Strake      "      "      "      12,13 and 15 badly buckled.

"C" Strake      "      "      "      13 and 14      "      "

"D" Strake      "      "      "      3,4,10 and 11      2      "  
No. 9 slightly bent.

"E" Strake.      "      "      "      7 and 8 buckled      Nos 6 and 14  
slightly bent.

KEEL PLATES      Numbered from Bow.      Nos 1,2,4, and 5 badly damaged,  
Nos 5 and 17 slightly damaged.

BILGE KEELS.-      The Starboard Bilge Keel was badly damaged for its  
entire length.      The Port bilge keel was practically, intact.

STERN FRAME & RUDDER.-      The Rudder Post of stern frame was missing  
from the 18' mark to within 15" at sole piece from stern  
plating.      The Rudder was bent over to Starboard about 35°,  
and the top pintle and gudgeon was all that was left to guide  
the rudder when working.

RIVETS.-      A large number of the rivets in way of the damage  
were broken, and it is remarkable that the vessel kept so  
tight.



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ampholn". Damage (Contd.)

INSIDE DAMAGE.

As the vessel had lately been carrying oil in her double bottom, an internal examination of ballast tanks was difficult, but on opening up the bottom the floors, and frames in No. 1 Tank were found to be badly damaged, on Port side all of them were buckled and bent. The following floors and frames were damaged throughout :

DE.-

No. 1 Tank, 27 floors and frames buckled and bent.

No. 2 " 9 " " " "

No. 3 " Nil.

No. 4 " 2 Floors and frames buckled and bent.

No. 5 " 10 " " " "

No. 6 " Nil.

Deep Tank aft, Nil.

RD SIDE.-

No. 1 Tank, 36 Floors and frames buckled and bent.

No. 2 " 3 " " " "

No. 3 " 13 " " " "

No. 4 " Nil.

No. 5 " Nil.

No. 6 " 4 Floors and frames buckled and bent.

Deep Tank

Aft 16 " " " "

In fore peak 2 " " " "

In Nos 3 and 4 Hold, Starboard side, altogether 16 bilge brackets were damaged.

KEELSON.- In way of No 1 and 2 Tanks for about 30 feet, the centre Keelson Plate was found to be more or less buckled, and the Starboard bottom angle bar bent and broken.

"Hampholm".

REPAIRS.

I recommended the following Repairs :-

"A" STRAKE. Starboard Side.

No. 1	Shell Plate to be removed, faired, refitted and re-riveted.
No. 2	" " " renewed.
No. 3	" " " faired in place.
No. 11	" " " removed, faired, refitted and re-riveted.
No. 12	" " " Renewed.
No. 13	" " " removed, faired, refitted and re-riveted.
No. 14	" " " removed, faired, refitted and re-riveted.
No. 15	" " " renewed.
No. 16	" " " faired in place.

"B" STRAKE. Starboard Side.

No. 2	Shell Plate to be removed, faired, refitted and re-riveted.
No. 3	" " " renewed.
No. 11	" " " removed, faired, refitted and re-riveted.
No. 12	" " " " " " " " "
No. 13	" " " " " " " " "
No. 14	" " " " " " " " "
No. 15	" " " renewed.

"C" STRAKE. Starboard Side.

No. 2	Shell Plate to be removed, faired, refitted and re-riveted.
No. 3	" " " " " " " " "
No. 4	" " " faired in place.
No. 13	" " " removed, faired, refitted and re-riveted.
No. 14	" " " " " " " " "
No. 15	" " " faired in place.



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"Hampden". Repairs (Contd.)

STRAKE. Starboard Side.

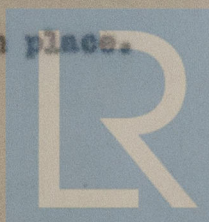
- 1 Shell Plate to be renewed.
- 2 " " " removed, faired, refitted and re-riveted.
- 7 " " " faired in place
- 8 " " " " "
- 9 " " " removed, faired, refitted and re-riveted.
- 10 " " " " " " " "
- 11 " " " renewed.
- 12 " " " faired in place.

STRAKE. Starboard Side.

- 2 Shell Plate to be removed, faired, refitted and re-riveted.
- 3 " " " " " " " "
- 4 " " " " " " " "
- 5 " " " renewed.
- 7 " " " faired in place.
- 8 " " " " " "
- 9 " " " " " "
- 10 " " " removed, faired, refitted and re-riveted.
- 11 " " " " " " " "
- 12 " " " " " " " "
- 13 " " " faired in place.

STRAKE. Port Side.

- 9 Shell Plate to be faired in place.
- 10 " " " " " "
- 13 " " " removed, faired, refitted and re-riveted.
- 14 " " " faired in place.
- 15 " " " " " "
- 16 " " " removed, faired, refitted and re-riveted.
- 17 " " " faired in place.



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S/S "Hamphelm".      Repairs      (Contd.)

"B" STRAKE.      Port Side.

No. 12 Shell Plate to be removed, faired, refitted and re-riveted.

No. 13      "      "      "      "      "      "      "

No. 15      "      "      "      "      "      "      "

"C" STRAKE.      Port Side.

No. 13 Shell Plate to be removed, faired, refitted and re-riveted.

No. 14      "      "      "      "      "      "      "

"D" STRAKE.      Port Side.

No. 3 Shell Plate to be removed, faired, refitted and re-riveted.

No. 4      "      "      "      renewed.

No. 9      "      "      "      faired in place.

No.10      "      "      "      removed, faired, refitted and re-riveted.

No.11      "      "      "      renewed.

"E" STRAKE.      Port Side.

No. 6 Shell Plate to be faired in place.

No. 7      "      "      "      removed, faired, refitted and re-riveted.

No. 8      "      "      "      renewed.

No.14      "      "      "      faired in place.

KEEL PLATES.      Numbered from Bow.

No. 1 Keel Plate to be renewed.

No. 2      "      "      "      removed, faired, refitted and re-riveted.

No. 3      "      "      "      faired in place.

No. 4      "      "      "      removed, faired, refitted and re-riveted.

No. 5      "      "      "      "      "      "      "

No.17      "      "      "      faired in place.



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W197-0225(7/14)

"Hampholm". Repairs (Contd.)

BILGE KEEL REPAIRS.- The Starboard bilge keel was renewed for about three quarters of its length, including the angle bar on ship's skin.

STERN FRAME & RUDDER.- The repairs - which are presumably only temporary - to stern frame, consist of a forged steel sole piece about 9-1/2" x 9" which contains the lower gudgeon. This sole piece on Port side is fitted and butted to the part of old stern frame which projected about 15" aft of stern plating, and on Starboard side there is a strap fitted the full depth of the sole piece; it is about 5-1/2" thick at the break tapering off to 2-1/2" at after end. The connection of forged sole piece to old stern frame is <sup>fastened</sup> with eleven 1-3/4" machined fitted bolts, the bolts through forged sole piece and strap abaft the break are 1-1/2" dia. and 8 in number. The vertical part forming the rudder post of stern frame consists of two 10" x 3" forged steel bars shaped at top ends to get the full area of old stern frame between the break (which was about the 18" mark) and plating of counter, and at lower end these bars are (machine) fitted to the forged sole piece. The whole is secured with nineteen 1-1/2" fitted bolts - 11 at top end and 8 at bottom end. The 4 gudgeons are of forged steel fitted between the bars and secured with five 1-1/2" bolts. The space between the gudgeons is filled in with jarrah wood to prevent wear from wash of water.

The Rudder was removed to the repairing shop, all parts taken adrift, the whole including the arms, plate, and main part faired and all re-fitted and riveted; the five pintles were renewed.

WELDS.- All odd defective rivets (about 200) throughout the vessel were made good.



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W197-0225(8/14)

pholm". Repairs (Contd.)

DECKS & FRAMES. Port Side.

1 Tank, 27 Floors and frames removed, faired and refitted.  
 2 " 9 " " " " " " "  
 4 " 2 " " " faired in place.  
 5 " 10 " " " repaired at tank side end, eight welded and 2 faired in place.

DECKS & FRAMES. Starboard Side.

1 Tank 7 Floors and frames entirely renewed.  
 1 " 29 " " " removed, faired and refitted.  
 2 " 3 " " " " " " "  
 3 " 13 " " " faired in place.  
 6 " 4 " " " " " "

Top Tank Aft. 16 Frames renewed for about (averaging) 20 ft in length. These frames are jointed with bosom bars using 3 rivets on each side of joint.

In the fore peak two floors were faired in place.

BRACKETS. In Nos 3 and 4 Holds 16 bilge brackets were moved, faired and re-fitted.

KEELSON.- The centre keelson plate was faired in place and owing to a rather sharp set at one part near after end of No.1 hold, it was found necessary to drill several Holes to allow the freedom to unbuckle or free itself and to make up for the loss of strength at this part a 3/8" doubling on each side, fore and aft x 3' was fitted and riveted between the top and bottom Keelson bars in way of the part where holes had been drilled. The Starboard lower angle bar was renewed for two lengths.

Ceiling. About 600 ft. of wood ceiling 11" x 3" was renewed, altogether, throughout the Holds.

No. 1, 150 feet. No. 2, 100 ft., No. 3, 125 ft. and No. 4, 120 ft. In Deep Tank Forward, 105 feet.

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S/S "Hampden". Repairs (Contd.)

Two Hold sounding pipes renewed and one Tank Suction pipe partly renewed.

WEAR & TEAR.- Deck water service pipe, Mess Room port, and Lavatory repaired as found necessary.

DECK MACHINERY.- The Windlass, two capstans, 8 winches, steering engine, and gear, all examined owing to stress of work in assisting to float the vessel.

REPAIRS.- To make good the deck machinery it was necessary to carry out the following repairs :-

Windlass. Main Shaft removed to shop and stripped, overhauled, and made good; gear replaced and Drums re-fitted. The two piston and valve rods skimmed up and neck and gland bushes renewed; the pins in brake bands were renewed.

Forward Capstan. New ends welded on piston rods, rods skimmed in lath and neck and gland bushes renewed; bottom and brasses renewed.

After Capstan. New ends welded on piston rods, rods skimmed up, valve rods also skimmed up and neck and gland bushes, and bottom end brasses renewed.

Steering Engine. Journals of worm shaft skimmed up, two pairs main bearing brasses renewed, steering engine steam pipe repaired and engine and gear, thoroughly overhauled throughout.

Telemotor. The Telemotor gear was overhauled and four new leathers fitted; 2 on bridge and 2 aft.

The Repairs were carried out in a satisfactory manner and all Tanks including the fore and after peaks, and the Deep Tank aft, were tested to the height of upper deck. There was slight leakage from several bottom rivets, but these were set up and made tight. The bottom was coated

V/S "Hampholm". Repairs (Contd.)

with anti-corrosive and anti-fouling compositions.

On the 3rd March the vessel floated out of dock and the only leak was from one frame rivet in bilge in 6th Bay from No. 2 after bulkhead on Starboard side. Although this rivet is "weeping" it is not slack, and was made tight by dusting with dry Portland cement, and to assure that there would be no further leakage from this rivet, the frame bar was boxed in with cement.

A Report will be forwarded to Lloyd's Register, London, stating the damage to repairs and recommending that the "Hampholm" be continued in her present class and be assigned fresh date of Survey 3 - 26 Port Natal, subject to stern frame being further examined first time vessel is dry-docked at Home port, the leaky rivet in No. 2 Hold to be also made good there. The Machinery to be assigned fresh record of "Boilers Surveyed" and New Tail Shaft fitted 3 - 26.

An anchor shackle made and supplied here may have to be tested at Home port, and I recommend that the Master gives this matter his attention.



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191-0225(1/1/14)

DAMAGED STORES & GEAR.

The following Stores and Gear are alleged to have been used up for various purposes during the time the vessel was ashore, and in discharging cargo, heated coal, also in towing the vessel from Zanzibar to Durban :

90 Fathoms of 3" steel wire rope.

1 Coil 2-1/2" Manilla rope - 120 fathoms.

1 " 3" " " - 120 "

1 " 7" " "

6 Tarpaulins

1 Anchor shackle broken while towing  
to Durban.

Paint for painting Holds damaged by heated coal.

Paint for bottom damaged by stranding.

I recommend that these stores and gear be replaced by new stores. The anchor shackle to be tested on arrival at Home port.



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U197-0225(12/14)

Ampholm".

### M A C H I N E R Y.

ERY. In dry dock I found all the bronze propeller blades broken at tips, and badly distorted, and the Chief Engineer stated that the machinery had a very rough and trying time while the vessel was ashore.

I therefore recommended that the whole of the Main and Auxiliary Machinery be opened up for examination and the tunnel shaft parted at couplings and to be re-lined after the vessel floated out of dry dock.

The parts of Main Engines examined include, the cylinders, pistons, slide valves, shafting throughout including the tail end Shaft, all bearings including thrust, the condenser and pumps. The sea cocks and valves on ship's skin all opened up, examined, and overhauled.

AS TO MAIN ENGINES.- The only real damage found to main engines was the propeller as above mentioned, and the Tail shaft was down  $3/16$ ". I could see no actual damage to the old tail Shaft, but owing to the rough usage it had, as evidenced by the condition of the propeller, I did not consider it advisable to use it further for driving the vessel, and recommended that the new spare tail shaft be fitted, the stern bush re-lined with new lignum vitae in bottom half, and a new propeller ordered and fitted.

No other repairs were necessary to the Main Engines, and the Condenser was tested and found tight; all main engines were re-adjusted.

ARY MACHINERY. The circulating, ballast, feed and bilge pumps were all opened up and examined, no repairs - only adjustment - being necessary.



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W197-0225(13/14)

BAR & TRAR. → Other repairs carried out which come under Machinery repairs include Stokehold ash cock pipes, Sanitary pump steam pipes and valves.

The new propeller and new spare Tail Shaft were fitted and all coupled up in a satisfactory manner.

On the 5th March the engines were tried alongside the Wharf for about 5 hours, and on the 6th March the vessel steamed from Graving Dock Quay Wall to the Bluff Wharf, and all was found satisfactory.

On the 10th March I attended on board and floated the Safety Valves of the three Main Boilers to 200 lbs. and all was found satisfactory.

1st Survey 2nd December ( 1925.  
Last Survey 10th March ( 1926.

John Stewart  
Surveyor to Lloyd's Register.