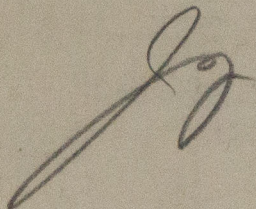


COPY

LYOYD'S REGISTER OF SHIPPING

PORT Vancouver, B. C.

July 29th, 1927.



THIS IS TO CERTIFY THAT

A. Scott

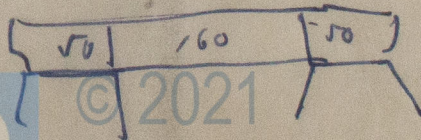
the undersigned Surveyor to this Society did at the request of the Owner's Representative survey the Wood Motor Vessel "CHALLANBA" 2401 tons gross register of Tacoma for the purpose of ascertaining the nature and extent of damage stated to have been sustained when the vessel struck on rocks on White Cliff Island on June 18th, 1927.

It is reported that the "CHALLANBA" was on a voyage from Seattle to Ketchikan and return and while proceeding south struck on rocks at White Cliff in a dense fog.

The vessel was refloated after discharging cargo by the Pacific Salvage Company on June 26th, and towed to Esquimalt, Vancouver Island and placed on dry dock on June 30th.

During the period the vessel was on rocks it is reported that she was supported for the forward and after 50 feet and was subject to severe straining and distortion particularly at low tides.

On July 1st, 1927 while the vessel was lying on dry dock at the Songhees Dock, Esquimalt the undersigned with the Owner's Representative and Underwriter's Surveyor upon examination found. The after end of the vessel showed a decided twist to port.



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Measurements were taken with a view of ascertaining the amount of twist, and the findings are shown on the attached blue print.

The line of keel was also checked up and showed a maximum deviation of three inches.

The outer edge of the Garboard planks showed a hog of 2-5/8 inches at middle of length.

A vertical line dropped from the top of the stem showed a variation to port of five inches in the full depth.

STEM:

The stem fastenings for the lower 10 feet started and shaken. The stem iron worn away from fastenings and the seams of the stem knee opened and stop waters broken.

STEM POST:

The lower portion of the stern post broken and crushed.

RUDDER:

The lower portion of the rudder badly splintered.

KEEL:

The fastenings in the keel seriously disturbed throughout, and the keel fractured. The forward end after lengths of some crushed and destroyed.

GARBOARD STRAKE:

The after planks of the garboard strake (Port and starboard) are crushed and splintered.

OUTSIDE PLANKING - Port Side

H #1	Broken and splintered.
H #2	Broken and splintered.
I #2	Broken and splintered.
J #1	Broken and splintered.
J #2	Broken and splintered.
J #4	Broken and splintered.

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K #2 Broken and splintered.
 K #3 Broken and splintered.
 L #2 Broken and splintered.
 M #2 Broken and splintered.
 M #3 Broken and splintered.
 X #3 Broken and splintered.

TOP SIDE PLANKING - Port side

One plank amidships broken and splintered.
 In addition to the above the following planks on the port side are more or less damaged or chafed; G #2, G #5, H #3, H #4, I #5, M #6, N #3.
 One plank amidships in top strakes 2, 3, 4 & 5.

OUTSIDE PLANKING - Starboard side

B #4 Badly chafed.

PLANK FASTENINGS:

The outside planking throughout the vessel is seriously disturbed. The butts and seams are open and a large number of the treenails broken. The bolts and spikes in very many cases show considerable movement, and their value as fastenings annulled.

KEELSONS:

The fastenings in the keelsons are started and the scarphs open and showing considerable movement.

CEILING:

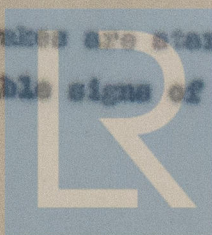
The wedging practically throughout the ship is loose and the fastenings started.

POINTERS:

The fastenings of the pointers are started and the pointers show a movement at the upper end of more than 5 inches.

WATERWAYS:

The lower waterways and lock strakes are more or less split and the fastenings of lower and upper waterways and lock strakes are started. The scarphs show considerable signs of movement.



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BEAMS:

The beams in upper tier throughout the holds are more or less split. This applies particularly to numbers 8, 9, 11, 12, 16, 17, 18, 19, 20, 21, 27, 28, 30, 31 & 32, and the half beams on port side at 15, 22 & 25, and on the starboard side at 14 & 25. In the second tier of beams numbers 8 & 10 are badly split.

The forward beams show considerable sign of straining and in some cases are completely apart from the locks.

KNEES:

The knees throughout are more or less split and the fastenings disturbed.

STANCHIONS:

The stanchions throughout the holds are in many cases split and the oak caps above same crushed.

BRIDGE SPACE:

The beams, knees and stanchions in the bridge space are badly shaken and in many cases split.

The fuel oil tanks in this space have moved considerably and the fastenings and connections for same are loose or broken.

DECK:

The forecastle deck, poop deck and main deck throughout are started and more or less opened at butts and seams.

BULKHEAD:

The fastenings of the bulkheads are loose and started. The after bulkhead of bridge space has been broken for salvage purposes.

BULWARK:

The fastenings in the bulwarks are started and the scarphs in the clamp strakes show a movement of more than 1/4"



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MAST:

The main mast is split below decks two places and the mast wedging started.

DECK MACHINERY:

The foundations of the windlass and other deck machinery shows signs of movement.

ENGINE ROOM:

The engine room has been flooded up to the cylinder tops and the whole of the machinery affected by sea water. The exhaust pipes from both the main engines to the silencer and from the silencer to the funnel are broken. The tanks in the engine room on the port and starboard sides have all moved from the original position and fastenings for same and pipe connections are broken.

SHAFTING:

The shafting shows signs of being seriously disturbed and there is a difference of 5 inches between the height of the port and starboard tail shafts as measured from the bottom of the deck.

CONDENSER:

The cast iron water box at the forward end of the condenser is broken.

PUMPS:

All the pumps in the lower engine room have been under water and the piping to same in some cases is broken and lagging damaged.

DYNAMO & SWITCHBOARD:

The dynamo and switchboard and all the wiring in the lower engine room have been damaged by contact with salt water, and the auxiliary air compressor and its motor have also been damaged from the same cause.



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BOILERS:

The two donkey boilers are reported to be heavily scaled through the use of salt water while discharging cargo when the vessel was ashore and the pipe connections are in some cases broken or disturbed.

The lower part of the boiler lagging has been damaged by water.

VENTILATORS:

The engine room ventilators have moved from their original position.

In view of the conditions as found above the following RECOMMENDATIONS were made:

STEM:

The stem iron to be faired and refitted, the stem fastenings to be made good and additional stem fastenings to be fitted in the lower portion. The stop waters in the stem knee to be removed and additional fastenings fitted; seams to be recaulked.

STERN POST:

The broken stern post to be removed and a new stern post throughout to be fitted using old iron work where possible.

RUDDER:

The rudder to be removed and rebuilt with part new. The pintles and gudgeons to be overhauled and made good.

KEEL :

A new keel to be fitted throughout, and secured with full length bolts. A new full length shoe to be fitted.

GARBOARDS:

The after garboards on port and starboard sides to be rehewed.



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OUTSIDE PLANKING - Port Side

H #1	To be renewed.
H #2	To be renewed.
I #2	To be renewed.
J #1	To be renewed.
J #2	To be renewed.
J #4	To be renewed.
K #2	To be renewed.
K #3	To be renewed.
L #2	To be renewed.
M #2	To be renewed.
M #3	To be renewed.
X #3	To be renewed.
G #2	To be dressed up as required or graving piece fitted.
G #5	To be dressed up as required or graving piece fitted.
H #3	To be dressed up as required or graving piece fitted.
H #4	To be dressed up as required or graving piece fitted.
I #3	To be dressed up as required or graving piece fitted.
M #5	To be dressed up as required or graving piece fitted.
N #3	To be dressed up as required or graving piece fitted.

TOP PLANKING - Port Side

Lower Strake	One plank amidships to be renewed.
Strake #2	One plank amidships to be dressed up or graving piece fitted.
" #3	One plank amidships to be dressed up or graving piece fitted.
" #4	One plank amidships to be dressed up or graving piece fitted.
"	



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TOP PLANKING - Port Side (CONTD)

Strake #8 One plank midships to be dressed up or
graving piece fitted.

OUTSIDE PLANKING - Starboard Side

B #4 To have a graving piece fitted.

Several other planks to be dressed up as required.

PLANK FASTENINGS:

All broken and disturbed treenails to be rewedged and
in each case a new treenail fitted as compensation.
All bolts and spikes to be set up, and additional bolts
and spikes fitted as required for compensation.
All scarphs, seams and butts which are started to be
reefed out and caulked.

KEELSONS:

The keelson scarphs to be wedged and secured by
hardwood keys. All the fastenings to be set up
and additional fastenings fitted as compensation.
It is recommended that an additional keelson be
fitted on each side for the full length and securely
fastened at every frame vertically and horizontally.

CEILING:

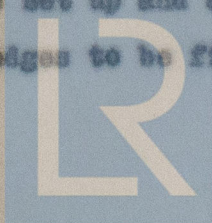
The ceiling throughout the vessel to be rewedged;
the present fastenings hardened up and additional
fastenings fitted as required.

POINTERS:

The pointers are to be securely wedged and the present
fastenings set up. Additional fastenings are to be
added for compensation, and additional pointers
fitted as required. The fastenings in the deadwood
are to be overhauled and set up and additionally
fastened.

WATERWAYS:

The upper and lower waterways and lock strakes are to
be repaired or renewed as may be required. The present
fastenings are to be set up and additional fastenings
fitted. Hardwood wedges to be fitted in each scarph.



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BEAMS:

The damaged beams and half beams throughout in upper and lower tiers are to be repaired or renewed as may be found necessary, fastened as before or additional fastenings fitted as required.

KNEES:

The split knees to be repaired or renewed. The knee fastenings throughout to be set up and additional fastenings fitted as required.

STANCHIONS:

The split stanchions to be repaired or renewed and the caps above same, where crushed, to be renewed.

DECKS:

The decks throughout to be refastened where started and additional spikes fitted. The caulking throughout to be overhauled and recaulked.

BULKHEADS:

The fastenings in the bulkheads to be set up and new fastenings added as compensation. The bulkhead at the after end of the bridge space which has been disturbed for salvage purposes is to be made good.

BULWARKS:

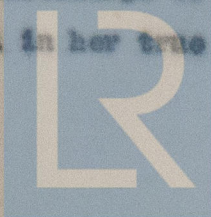
The fastenings in the bulwarks to be set up and additionally fastened as required. The scarps in the clamp strakes to be wedged and the damaged portions of the bulwark repaired with part new.

MAST:

The mast wedging and mast coating to be renewed, and the rigging to be overhauled and set up. The main mast to have two heavy iron clamps fitted below deck.

TRIST:

The vessel to be put back in line as formerly, and additional pointers in the after end to be fitted. Extra stiffening and fastenings to be added so as to maintain the vessel in her true shape.



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DECK MACHINERY:

The foundations for all deck machinery are to be overhauled and sole pieces securely fastened.

TANKS:

The fuel oil and other tanks in the bridge space, hold, and engine room are to be refitted in their original position. The clamps and other supports are to be repaired or renewed and all fastenings and pipe connections to be made good. The tanks and connections to be tested and proven satisfactory.

MACHINERY:

The main propelling machinery to be opened up throughout including all cylinders, pistons, valves, compressors, etc. The crank shafts to be lifted and all bearings cleaned and adjusted and the machinery left in good working order after a satisfactory trial. The holding down bolts to be examined, tightened up and any found damaged to be replaced by new.

TAIL SHAFTS:

The propeller shafts to be drawn. The stern bearing castings are to be refitted and refastened, lignum vitae renewed as required and the shafting placed in good alignment when the vessel is afloat.

SHIPS SIDE CONNECTIONS:

Ships side connections including discharges to be overhauled and placed in good order.

PIPES:

The broken exhaust pipes from main engine are to be renewed and any other started or broken connections to be made good as required.

CONDENSER:

The condenser to be cleaned and the broken water box to be renewed, the air and circulating pump to be overhauled, cleaned and left in good order.



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PUMPS:

All the auxiliary pumps to be opened up and cleaned, adjusted and repacked and tested out in good order.

DYNAMO:

The dynamo to be opened up and overhauled and the armature and field coils to be rewound with new wire. The commutator to be re-insulated, the switchboard and terminals made good.

WIRING:

All the wiring in the lower engine room is to be renewed and terminals and sockets renewed or repaired as may be found necessary. The wiring throughout the vessel is to be overhauled and tested and left in good order.

AUXILIARY COMPRESSOR:

Motor driven air compressor to be overhauled and repacked, and the motor to be rewound with new wire. The rheostat for this motor to be renewed.

BOILERS:

The two boilers are to be opened up and cleaned throughout. The mountings examined and placed in good order. The foundations and uptakes repaired and refastened, and the broken safety valve to be fitted with a new casting.

The boiler lagging to be part renewed and all lagging on pipes, fittings, steam cylinders, etc., to be renewed where damaged.

VENTILATORS:

The engine room ventilators and the engine room skylight to be overhauled, repaired and made good and to be securely fastened as before. The engine room ladders and gratings are to be overhauled and the broken step replaced by new.



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STEERING ENGINE:

The steering engine to be opened up, overhauled and adjusted. The holding down bolts are to be tightened up and all connections from wheel house to engine overhauled and made good. Steering engine to be tested under working conditions on completion of repairs.

WINDLASS

The anchors and cables are to be ranged for inspection, the windlass to be opened up and overhauled and replaced in good working order.

In conjunction with the Owner's Representative and the Surveyor for the Salvage Association a specification (copy attached) was drawn up and tenders for the repairs invited.

The vessel was refloated on June 26th, 1927 and particulars of the distortion taken after refloating are shown on the attached blue print.

A. Scott

SURVEYOR TO LLOYD'S REGISTER.



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