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No. 2978

Lloyd's Register of Shipping.

Port

WELLINGTON

19th October, 1940

This is to Certify that

I, GEORGE DAVID LIDGWT,

the undersigned Surveyor to this Society did at the request of the MASTER and AGENTS, MEMBERS, NEW ZEALAND SHIPPING CO. LTD., WELLINGTON, hold a DAMAGE SURVEY on the M. V. "ARMADALE" of LONDON, G.R. 5066 TONS (H. E. WEBB, Master) & No. 69996 IN REGISTER BOOK OF SOCIETY, on the 1st August 1940 and subsequent dates, in order to examine and report on damage stated to have been caused by collision with the Motor Tanker "Ole Jacob" off Cape Campbell, Cook Strait, during the evening of 31st July 1940. See copy of Ship's Log attached hereto.

CIRCUMSTANCES: The "Armadale" was on voyage from Dunedin to Sydney, N.S.W. and "Ole Jacob" had received orders to proceed to Lyttelton to commence discharge. Both vessels proceeding on their course, "Armadale" black out, "Ole Jacob" navigation lights dimmed, when the collision occurred off Cape Campbell. "Armadale" heavily holed Starboard side No.1 Hold. "Ole Jacob" forecastle wrecked and bows crumpled back to nearly collision bulkhead.

1ST EXAMINATION: Vessel afloat at Aotea Wharf. Examination started 1st August 1940. The impact has taken place at the fore end of No.1 Hold tearing the ship's side plating and folding the whole mass including the Main or Lower Tween Deck back on to the after end of the hatch coamings; damage extending from after bulkhead No.1 Hold to the Collision Bulkhead frame. Frames 125 to 153 decreasing in area in the lower strakes. Lower deck completely torn away in way of hatch coaming, frames 130 to 152. Hatch coaming and star. girder wrecked. Fore and aft of this plates and beams buckled. Hatch corner pillars of Lower Hold and Tween Deck starboard side torn away and buckled. Upper Deck. All deck beams torn away by forecastle deck of "Ole Jacob" and deck buckled frames 128 to 148, starboard girder and coaming torn away. Hatch beams buckled and two lost; all wooden hatch covers of No.1 Hold hatches lost.

It was then recommended and advised that cargo, as stored in No.2 Hold be discharged, also that about 60 tons of fuel oil left in No.2 D.B. Tank be discharged to enable this tank to be cleaned out for examination and tests. Arrangements were made to drydock the vessel to complete the examination of the damage; the vessel was docked on Saturday, 3rd August, 1940.

Certificate is issued upon the terms of the Rules and Regulations of the Society, which provide that:—

the Committees of the Society use their best endeavours to ensure that the functions of the Society are properly performed. It is to be understood that neither the Society nor any Member of any of its Committees is under any circumstances to be held responsible for any inaccuracy in any report or certificate issued by the Society or its Surveyors, or in any Register Book or other publication of the Society, or for any error of judgment, default or negligence of any of its Members or any Member thereof, or the Surveyors, or other Officers or Agents of the Society."

REPAIRS: Examination of the damage in drydock. The work extended down and under to A Stroke cutting well into the B. B. Tank frames 132 to 145, tearing away wing brackets and also tank margin in this area. Floors and half intercostals and, tank top plate torn away from two strokes.

2. Hold and Tween Deck fittings Starboard side with all bolts and straps destroyed. All wooden hatch covers lost over-

board. Repairs were shown over and made their examination with a view to submitting a price, only one firm being interested (Messrs. Cable & Co. Ltd., Wellington), and they submitted a price of £20,000 (Twenty Five Thousand Pounds) New Zealand Currency and time 12 weeks. In view of the emergency conditions prevailing, i.e., shortage of material and labour, no competitive tenders could be obtained. It was recommended that this price and time be accepted, to count when the vessel docked for repairs. Specification, conditions of contract or penalty clauses were not acceptable to the firm and the only guarantee that the work would be completed on time and for the amount stated, was the firm's good name and reputation. Overtime to be worked to the limit of the men's ability.

The Dock was secured and the vessel placed in on the 1st August 1940 when repairs were got under way. Conferences with the firm and their representatives and myself were held to discuss methods of repair and to conserve material, at the same time the vessel was kept in her original good condition.

REPAIRS AND REPAIRS: The following are recommendations and the work carried out:-

STARBOARD SIDE HOLD.

(In) next to Flat Plate Keel.

Shell plating failed in place between frames 133 and 139 near some stroke shell plating.

(Out).

Shell plating removed between frames 130 and 143, laps arranged as follows.

(In).

Shell plating renewed between frames 133 and 143 and a new shift of shell plating arranged. Shell plating between frames 132 and 133 - 4 failed and removed.

(Out).

Shell plating renewed between frames 134 and 151, original laps.

(In).

Shell plating renewed between frames 129 and 147. Shell plate between frames 150 and 155 removed failed and replaced.

(Out).

Shell plating renewed between frames 132 and 150. Shell plating between frames 150 and 152 - 3 and between frames 149 - 50 and 151 failed in place.

(In).

Shell plating renewed between frames 130 and 152 and a new shift of shell plating arranged.

(Out).

Shell plating renewed between frames 128 and 153 and a new shift of shell plating arranged.

(In).

Shell plating renewed between frames 127 and 154 and a new shift of shell plating arranged.

Plating between frames 125 and 130 removed faired and replaced. Shell plating renewed between frames 129 - 30 and 153, and a new shift of butts arranged.

L Stroke (In).

Shell plating renewed between frames 134 and 152.

H Stroke (Out).

Shell plating faired between frames 130 and 137 near seam of L stroke. Damaged shell plating cut away in vicinity of frame 143 and a new piece of plate 18" x 1/2" x 2'3" butt welded therein.

Generally.

Adjacent plating faired in place as found necessary. Loose rivets in way of damage renewed generally.

Thicknesses of new Plating:- Strokes B, C, D, & E 5/8"; Stroke F 9/16"; and strokes G, H, J, K, L, M 1/2".

HULL INTERIOR.

No. 1 Double Bottom Tank, Starboard Side.

Floors on Frames 133 and 134. Faired in place near margin line on shell.

Margin connection angle on frame 134 removed, faired and replaced.

Floor on Frame 135. Plate cropped and renewed, and shell and Tank top angles cropped and renewed from margin line on shell to approximately 6'0" inboard. Margin plate connection angle renewed.

Floor on Frame 136. Floor plate and frame angle renewed from centre girder to margin line. Tank top angle renewed for a distance of 6'0" on outboard end. Margin plate connection angle renewed.

Floor on Frame 137. Floor plate cropped and renewed and shell and tank top angles cropped and renewed approximately 4'0" from margin line on shell. Margin plate connection angle renewed.

Floor on Frame 138. Floor on Frame 138 and shell angle cropped and renewed from margin line on shell to approximately 2'6" inboard. Margin connection angle renewed.

Floors on Frames 139, 140, 141, 142, and 143. Faired in place near margin line on shell. Tank top margin connection angles and shell angles in vicinity of damage cropped, and renewed, faired and replaced.

INTERCOSTALS.

Half height intercostal girder complete with connection angles renewed between frames 137 and 139.

Half height intercostal girder removed, faired, and replaced between frames 132 and 137 and between frames 139 and 142.

TANK TOP. STARBOARD SIDE.

Stroke of Plating next to centre stroke cropped and renewed between frames 136 - 7 and 140 - 1.

Steeper Plate near margin located between frames 133-4 and 140 - 1 renewed.

Margin plate cropped and renewed between frames 134 - 5 and 141 - 2 and new butts arranged.

Margin angle renewed between frames 134 and 5 and frames 141 - 2.

STARBOARD SIDE.

Wing Plate along top of wing brackets renewed between frames 132 and 143 and removed faired and replaced between frames 143 and frames 147 - 8.

Generally. Loose rivets in way of damage renewed.

FRAMING.

Frame 126. Frame cropped between Main Deck and 2'0" above Upper Deck and removed faired and replaced.

Frame 127. Frame faired in place between Main and Upper Decks.

Frame 128. Frame faired in place between Main and Upper Decks.

Frame 129. Frame removed faired and replaced between position 2'0" below Main Deck and 6" above Upper Deck.

Frame 130. Frame removed faired and replaced between positions 6'0" above margin line at shell and 6" above Upper Deck.

Frames 131, 132, 134, 133, 137, 138, 140, 141, 143, 144, 146, 147 and 149. Removed, faired and replaced between margin line at shell and Main Deck. Upper section of these frames between 18" below Main Deck and 6" above Upper Deck cropped and renewed. Original 6" x 3.1/2" x .32" B.A. Tween Deck frames cropped in Lower Tween Decks were renewed by 6" x 4" x 1/2" ordinary angle.

Frame 150. Removed, faired and replaced between 11'0" above margin line at shell and Main Deck; and Lower Tween Deck frame cropped and renewed with 6" x 4" x 1/2" angle as at 131.

Frames 133, 136, 139, 142, 145, 148. Removed, faired and replaced between margin line at shell and Upper Deck. Lower ends of Upper Tween Deck frames in way of the above main frames cut off and removed, faired and replaced butt welded and welded plate straps fitted at butts at positions approximately 6" above Upper Deck. Frame 142 was cut 20" above the Upper Deck.

GENERALLY: Frames removed and faired were generally reconditioned by means of electric welding before replacement.

WING BRACKETS: Wing brackets on frames 130 to 146 inclusive were removed.

MAIN DECK BEAM KNEES: Main Deck beam knees in way of damage, i.e. at Frames 128 to 153 inclusive were removed, faired and replaced or renewed as found necessary.

UPPER DECK BEAM KNEES: Upper Deck beam knees were removed, faired and replaced at frames 126 to 152 inclusive with the exception of the knees at frames 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 145, 146, 147 renewed.

PILLARS STARBOARD SIDE: The hold pillar seat on the tank top at the Starboard side, Frames 141, 2 & 3, was completely removed. The cap of this pillar was also completely renewed. The cap under the Upper Deck of the Tween Deck pillar on frame 142 was completely removed. The Lower Tween Deck pillars and hold pillars at frames 130 and 142 were removed, faired and replaced with the exception of the material already stated to have been renewed. These pillars, where of built up plate, were rivetted as found necessary. The Upper Tween Deck pillars at frames 130 and 142 were removed, faired and replaced.

HATCH & DECK GIRDERS.

Lower Deck.

Starboard side.

The No.1 Hatch side girder, frames 130 - 142, was renewed completely and 11.1/2" x 3.1/2" x 1/2" channel or "Port Bow" was used as bottom flange of this girder.

The Deck Girder was cropped and renewed between frames 142 and 149 - 150 and between frames 127 and 130.

The Port side No.1 Hatch Girder was faired in place.

UPPER DECK.

No.1 Hatch Girder was removed, faired and replaced.

Forward Deck Girder cropped and renewed between frames 142 and 150 - 1 and between frames 127 - 8 and 130.

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Deck and Hatch Girders Generally.

Deck cleats vertical angles and brackets were renewed or removed, faired and replaced as found necessary.

DECK.

Lower.

Lower Deck Starboard Side.

Beam 130. Faired in place.

Beams 131 to 141 inclusive renewed from shell to hatch girder using 8" x 3.1/2" x 1/2" channel material ex s.s. "Port Bowen".

Beam 142. Cropped at Port side deck girder and removed, faired and replaced.

Beam 143. Cropped at Port side deck girder and renewed using 8" x 3.1/2" x 1/2" channel material ex s.s. "Port Bowen".

Beams 144 and 145. Renewed right across ship using 8" x 3.1/2" x 1/2" channel ex s.s. "Port Bowen".

The following beams were cropped and removed, faired and replaced.

Beam 146 from position 3'5" inboard of Star. deck girder out to frame.

Beam 147 " " 2'8" " " " " " " " "

Beam 148 " " 5" " " " " " " " "

Beam 149 " " 5" outboard " " " " " " " "

Beam 150 " " 1'5" " " " " " " " "

Beam 151 2'0" of outboard end was removed, faired and replaced.

Upper Deck Beams Starboard Side.

Beam 126 faired in place.

Beam 127 3'0" of beam end cropped, faired and replaced.

Beam 128 1'6" of beam end cropped, faired and replaced.

Beam 129 cropped at position 2'6" inboard of starboard deck girder and faired and replaced.

Beam 130 cropped at position 4'8" inboard of starboard hatch girder and removed, faired and replaced.

Beams 131 to 141 inclusive renewed from shell to starboard hatch girder using 8" x 3.1/2" x 1/2" channel, material ex s.s. "Port Bowen".

Beams 142, 143, 144, 145, 146 & 147 were cropped and renewed from port deck girder to starboard shell and renewed using 8" x 3.1/2" x 1/2" channel material ex s. s. "Port Bowen".

Beam 148 5'0" of beam end cropped and removed, faired and replaced.

PLATING.

Lower Deck. Starboard stringer plate was renewed between frames 127 and 132. Plating abreast No.1 hatch on starboard side renewed.

Plating at fore and aft ends of No.1 hatch removed and faired or renewed as found necessary. Stringer angles and frame toe angles renewed in way of renewed stringer plate.

The No.1 Hatch Starboard Coaming half angle renewed and port end and coamings removed, faired and replaced.

Two new hatch beams made and fitted.

Two hatch beams faired.

No.1 Hatch rest bars renewed.

UPPER DECK. The starboard stringer plate was renewed between frames 127 and 145.

Plating alongside starboard side and just forward of No.1 hatch was renewed.

A short piece of plate 6'9" x 14" was renewed at port side of No.1 hatch. Intermediate strakes between stringer and starboard hatch side strake was removed, faired and replaced.

The hatch coamings were removed, faired and replaced.

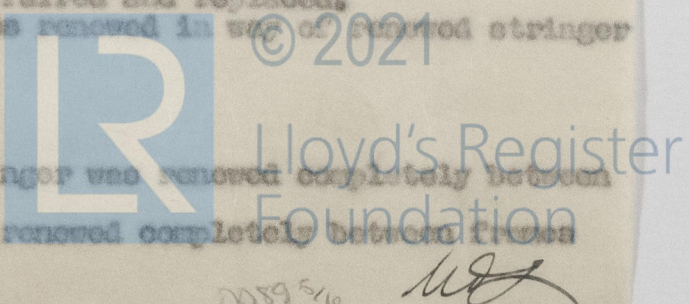
Deck stringer and frame toe angles renewed in way of renewed stringer plates.

Two hatch beams faired.

No.1 hatch rest bars renewed.

OLD STRINGERS. The lowest stringer was renewed completely between frames 140 and 148.

The upper and top stringers were renewed completely between frames 135 and 151.



Sparring and Coiling over Bilges in No. 1 Hold. On Port removed as found necessary. Starboard side removed completely. Ring in No. 1 Lower Tween Decks renewed. Ring in No. 1 Upper Tween Decks reconditioned. Ring supports flats reconditioned and cleats renewed where necessary.

CASCADE HEAD AND DEWATER. The angle attachment bar to hatch ring failed, rivetted and welded.

All the above work was carried out to my satisfaction, trial and workmanship and tests satisfactory, the vessel being brought back to her original good condition. This work which should have been completed in eight weeks has taken nearly nine weeks. The reason is due to the fact that the Repairers have had urgent naval work to complete and other work of national importance; incidentally they have also kept the work back.

The following is a list of Deck and Engine Room Stores as a result of the collision and which will require to be replaced:

DEPARTMENT.

60 feet 6 x 1 Dunnage
8" Hoisting Line (New)
Coil 2 1/2" Wire
1 White Lead
Carpenter's Tool Bag containing:-
with Hand Saw
Carpenter's Ratchet Brace
3" Auger 21" long
1/2" Centre Twist Bit
10 Hand Hammer
10 Pin Maul
elsew

Ex No. 1 Hold & Tween Decks.

Ex No. 1 Shelter Deck.

Ex No. 1 Shelter Deck where
Carpenter was repairing
Hatches.

Spaulins 31 x 22
" 36 x 22
Hatches 5'6" x 2' x 3"

Ex No. 1.

Ex No. 2.

Ex Nos 1 & 2.

ENGINE ROOM DEPARTMENT.

One Fuel Oil

Ex No. 1 D.B. Tank.

Spotlight torches lost during investigations.

Electric globes 110 volts 60 watt

" " " " 40 "

" " " " 100 "

} Broken in impact of collision.

Charged. \$151. 4. 0.

L. J. L. L.
SURVEYOR TO LLOYD'S REGISTER
WELLINGTON, N.Z.



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