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Lloyd's Register of Shipping.



Port

of SWANSEA.

27th April, 1944.

This is to Certify that

A. REID,

the undersigned Surveyor to this Society did at the request of the Owners' Representative survey the s.s. "MARKAY", 10342 tons gross of Wilmington, Del., in drydock at Swansea, on the 30th December, 1943, and subsequently, on account of DAMAGE stated due to:-

1. Running aground off the North Coast of Skye on the 15th November, 1943.
2. Drydocking in damaged condition at Swansea during the last week of December, 1943.
3. Grounding at the entrance to the Chesapeake and Delaware Canal on the 27th September, 1943.
4. Causes unknown.

For full particulars of 1, 2, and 3 see Ship's Log Book.

FOUND.

RECOMMENDED.

DAMAGE 1.

PLAT KEEL PLATES Nos. 1, 2, 3, 4, 5, 6, 7, 8 and 9 torn off.

To be renewed.

Plate No. 10 torn and buckled.

To be renewed.

Plate No. 11 slightly buckled.

To be faired in place.

SHELL PLATING, Starboard side.

"A" Strake.

Plate No. 1, part torn off and lower end of remainder torn and buckled.

To be cropped approx. 6 ft. above butt with PK1, and lower part renewed.

Plates No. 2, 3, 4, 5, 6, 7 and 8 torn off.

To be renewed.

Plate No. 9 torn and buckled.

To be renewed.

(See continuation)

This Certificate is issued upon the terms of the Rules and Regulations of the Society, which provide that:—
While 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 entry in the Register Book or other publication of the Society, or for any error of judgment, default or negligence of any of its Committees or any Member thereof, or the Surveyors, or other Officers or Agents of the Society."



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"HARKAY".

REPORT. (CONT'D).

RECOMMENDED.

DAMAGE 1. (Cont'd).

PLATING, Starboard side (cont'd).

Stroke.

No. 1 torn and buckled.

To be cropped approx. 3 ft. above lower butt and lower part renewed.

Noes. 2, 3 and 4 torn and buckled.

To be renewed.

Noes. 5, 6, 7 and 8 torn off.

To be renewed.

No. 9 torn and buckled.

To be renewed.

Stroke.

No. 2 torn and buckled.

To be renewed.

Noes. 3, 4, 5, 6, and 7 torn off.

To be renewed.

No. 8 torn and buckled.

To be renewed.

Stroke.

Noes. 4 and 5 torn and buckled.

To be renewed.

Noes. 6, 7 and 8 torn off.

To be renewed.

No. 9 torn and buckled.

To be renewed.

Stroke.

No. 1 torn and buckled.

To be renewed.

Noes. 2, 3 and 4 torn off.

To be renewed.

No. 5 torn and buckled.

To be renewed.

Stroke.

Noes. 6 and 7 slightly buckled.

To be faired in place.

PLATING, Port Side.

Stroke.

Noes. 2, 3, 4, 5, 6, 7, 8 and 9 torn off.

To be renewed.

No. 10 badly buckled.

To be renewed.

Stroke.

No. 1 torn and buckled.

To be renewed.

Noes. 2, 3, 4, 5, 6, 7, 8 and 9 torn

To be renewed.

No. 10 badly buckled.

To be renewed.

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S.S. "MARKAY".

DAMAGE REPORT. (CONTD).

FOUND.

RECOMMENDED.

DAMAGE 1 (contd).

HULL PLATING, Port Side. (contd).

"Q" Strake.

Plate No. 2 torn and buckled.
Plates No. 3, 4, 5, 6, 7 and 8 torn off.
Plate No. 9 torn and buckled.

To be renewed.
To be renewed.
To be renewed.

"P" Strake.

Plate No. 4 and 5 torn and buckled.
Plates No. 6, 7, 8, and 9 torn off.
Plate No. 10 torn and buckled.

To be renewed.
To be renewed.
To be renewed.

"R" Strake.

Plates No. 1 and 2 torn and buckled.
Plates No. 3, 4 and 5 torn off.
Plate No. 6 torn and buckled.
Plate No. 7 slightly buckled.

To be renewed.
To be renewed.
To be renewed.
To be faired in place.

"T" Strake.

Plates No. 7, 8 and 9 torn and buckled.

To be renewed.

VERTICAL CENTER-GIRDER torn off from stem to approx. frame No. 63 (near aft end of No. 4 tank).

To be renewed from stem to aft end of No. 4 tank together with all attachments to shell; etc.

BONE PLATE.

Breasthooks 8, 9, 10 and 11 torn off or torn and buckled.

To be renewed.

Vertical bulb angle stiffeners on centre-line swash bulkhead buckled or torn off at lower ends and adjacent ends of remaining parts badly buckled.

To be cropped at level of No. 3 shell stringer and lower parts renewed.

Swash bulkhead and angle stiffener on lower edge buckled.

Bulkhead to be cropped and lower part renewed together with angle.

Lower ends of Transverse shell frames 90 to 106 p. and s. torn off and adjacent ends of remaining parts buckled.

To be cropped at approx. No. 3 shell stringer and lower parts renewed.

Flanged plate stiffener on bulkhead 89 at level of No. 3 stringer buckled port and starboard side.

To be cropped about 4 ft. from each end and outboard parts renewed.

No. 3 stringer plate p. and s. buckled at aft end.

To be cropped about 4 ft. from each end and after parts renewed.

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S.S. "HAWKAY".

DAMAGE REPORT (CONT'D).

FOUND.

RECOMMENDED.

DAMAGE 1. (cont'd).

BULKHEAD 89.

Lower part torn off and adjacent part of remainder torn and badly buckled.

To be renewed with all stiffeners, brackets, etc.

FORWARD TANK.

Lower part of Oiltight centre line bulkhead torn off adjacent part of remainder torn and buckled.

To be renewed to approx. 14 ft. hull above base together with all stiffeners, brackets, etc.

Shell longitudinals 18 and 19 port side and 19 starboard side torn off; 13 - 17 p.s. and 13 - 18 s.s. torn and buckled.

All to be renewed.

Lower part of shell web frame 85, port and starboard, torn off and adjacent part of remainder torn and buckled.

To be cropped between longitudinals 11 and 12, and lower part renewed.

Lower part of centre-line bulkhead vertical web stiffener at frame 85 torn off and adjacent part of remainder torn and buckled.

To be cropped at No. 7 longitudinal on bulkhead and lower part renewed.

Lower part of shell web frame 81 starboard torn off and adjacent part of remainder torn and buckled.

To be cropped between longitudinals 9 and 10 and lower part renewed.

Lower part of shell web frame 81 port torn off and adjacent part of remainder torn and buckled.

To be cropped between longitudinals 11 and 12 and lower part renewed.

Lower part of centre line bulkhead vertical web stiffener at frame 81 torn off and adjacent part of remainder torn and buckled.

To be cropped at No. 3 longitudinal on bulkhead and lower part renewed.

Lower part of shell web frame 77 port and starboard torn off and adjacent part of remainder torn and buckled.

To be cropped between longitudinals 12 and 13 and lower part renewed.

Non-watertight floors on frames 74 - 88 inclusive torn off.

To be renewed with all stiffeners, brackets, etc.

Longitudinal girders 5", 10" and 15" off centre line port and starboard torn off.

To be renewed.

Diaphragm plates 12" 6" off centre line p. and s. torn off.

To be renewed.

Lower part of forward pumproom bulkhead on frame 77 torn off and adjacent part of remainder torn and buckled.

To be cropped approx. 12' above base line and lower part renewed.

Lower part of longitudinal bulkhead port and starboard sides of forward pumproom torn off and adjacent part of remainder torn and buckled.

To be cropped approx. 12' above base line and lower part renewed.

Lower part of transverse bulkhead 73 torn off and adjacent part of remainder torn and buckled.

To be cropped approx. 12' above base line and centre part renewed.

(see Continuation).

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S.S. "HARLEY".

DAMAGE REPORT (CONTD.)

FOUND.

RECOMMENDED.

DAMAGE 1. (contd.)

FORE DECK TANK (Contd.)

Starboard side of pumproom flat 4' 6" above base torn off; port side badly buckled and now cut off.

All to be renewed together with all supports, brackets, etc.

Port and starboard brackets 17' 6" off centre line on forward side of bulkhead torn off.

To be renewed.

FORWARD COFFERDAK.

Port and starboard shell longitudinals 13 to 26 torn off and 13 and 14 badly buckled.

To be renewed.

Lower parts of fore and aft swash bulkheads torn off and adjacent part of remainder badly buckled.

To be cropped approx. 14' above base line and lower parts renewed.

TRANSVERSE BULKHEAD 72.

Lower part torn off and adjacent part of remainder badly buckled.

To be cropped approx. 12' above base line and lower part renewed.

NO. 1 CARGO TANK.

Port and starboard shell longitudinals 15 - 26 torn off and 13 and 14 badly buckled.

To be renewed with all brackets, etc.

Lower part of swash bulkhead 17' 6" off centre line port and starboard torn off and adjacent part of remainder badly buckled.

To be cropped approx. 16' above base line and lower part renewed.

Lower part of centre line oil-tight bulkhead torn off and adjacent part of remainder badly buckled.

To be cropped approx. 12' above base line and lower part renewed.

TRANSVERSE BULKHEAD 71.

Lower part torn off and adjacent part of remainder badly buckled.

To be cropped approx. 12' above base line and lower part renewed.

Small hole in 4th plate from top approx. 12' starboard of centre line.

Lap patch to be welded over hole.

NO. 2 CARGO TANK.

Starboard.

Shell longitudinal No. 11 badly buckled at forward end.

To be cropped at approx. frame 70 and forward end renewed.

Shell longitudinal No. 12 buckled.

To be renewed in place.

(See continuation).

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DAMAGE REPORT. (CONTD).

FOUND.

RECOMMENDED.

DAMAGE 1. (contd).

NO. 2 CARGO TANK. (Contd).

Starboard. (Contd).

Shell longitudinals No. 13 to 19 torn off.

To be renewed together with all brackets, etc.

Lower part of transverse web frames 69 and 70 torn off and adjacent part of remainder badly buckled.

To be cropped at approx. shell longitudinal No. 9 and lower part renewed.

Bottom transverses on frames 69 and 70 torn off.

To be renewed together with all brackets, etc.

Lower part of vertical web stiffeners at frames 69 and 70 on longitudinal bulkhead torn off and adjacent part of remainder badly buckled.

To be cropped approx. 14 ft. above base line and lower part renewed.

Centre.

Lower part of port and starboard longitudinal bulkhead torn off and adjacent part of remainder badly buckled and torn.

Lower part to be renewed.

Bottom transverses on frames 69 and 70 torn off.

To be renewed together with all brackets, etc.

Port and starboard bottom shell longitudinals 21 - 26 torn off.

To be renewed together with all brackets, etc.

Lower part of web stiffeners 10 ft. port and starboard of centre line, on bulkhead 71 torn off and adjacent part of remainder torn and buckled.

To be cropped approx. 20' above base line and lower parts renewed.

Lower part of T bar and panel plate stiffener at centre line on bulkhead 71 and bracket to vertical centre girder torn off.

To be cropped approx. 15' above base line and lower part and bracket to be renewed.

Port.

Shell longitudinals 12 - 19 torn off.

To be renewed together with all brackets, etc.

Lower part of transverse web frames 69 and 70 torn off and adjacent part of remainder badly buckled.

To be cropped at longitudinal No. 11 and lower part renewed.

Bottom transverse on frames 69 and 70 torn off.

To be renewed.

Lower part of vertical web stiffeners at frames 69 and 70 on longitudinal bulkhead torn off and adjacent part of remainder badly buckled.

To be cropped at approx. 14' above base line and lower parts renewed.

(See Continuation).

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DAMAGE REPORT. (CONTD).

FOUND.

RECOMMENDED.

DAMAGE 1. (Contd).

TRANSVERSE BULKHEAD NO. 68.

Lower part of bulkhead torn off and adjacent part of remainder torn and buckled.

Three lower strakes to be renewed approx. 14' above base line.

NO. 3 CARGO TANK.

Starboard.

Shell longitudinals 12 - 19 torn off.

To be renewed together with all brackets, etc.

Lower parts of transverse web frames 66 and 67 torn off and adjacent part of remainder badly buckled.

To be cropped at shell longitudinal No. 11.

Bottom transverse on frames 66 and 67 torn off.

To be renewed.

Lower parts of vertical web stiffeners on longitudinal bulkhead at frames 66 and 67 torn off and adjacent part of remainder buckled.

To be renewed.

Lower part of vertical web stiffeners on bulkhead 68, 7' 6" from longitudinal bulkhead torn off and adjacent part of remainder torn off.

To be cropped at approx. 24' above base line and lower part renewed.

Centre.

Port and starboard bottom shell longitudinals No. 21 - 26 torn off.

To be renewed together with all brackets, etc.

Bottom transverse on frames 66 and 67 torn off.

To be renewed together with all brackets, etc.

Lower parts of vertical web stiffeners on bulkhead 68 at centre line and 10' to port and starboard of centre line torn off and adjacent part of remainder badly buckled.

To be cropped approx. 24' above base line and lower part renewed.

Lower part of port and starboard longitudinal bulkheads torn off and adjacent part of remainder badly buckled.

To be cropped approx. 14' above base line.

Port.

Shell longitudinal 9 - 19 torn off.

To be renewed.

Lower part of web frames 67 and 66 torn off and adjacent part of remainder badly buckled.

To be cropped at No. 5 shell longitudinal and approx. 15' above base, respectively, and lower parts renewed.

Bottom transverse on frames 66 and 67 torn off.

To be renewed.

(See Continuation).

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S.S. "HARLEY".

DAMAGE REPORT. (Contd.).

FOURTH.

RECOMMENDED.

DAMAGE 1. (Contd.).

NO. 3 CARGO TANK. (Contd.).

Port. (Contd.).

Lower parts of vertical web stiffeners on longitudinal bulkhead at frames 66 and 67 torn off and adjacent part of remainder badly buckled and torn. To be cropped approx. 20' above base line and lower parts renewed.

Lower part of vertical web stiffener on bulkhead 68, 7' 6" from longitudinal bulkhead torn off and adjacent part of remainder badly buckled. To be cropped approx. 24' above base and lower part renewed.

Lower channel bar ties on web transverse frames 66 and 67 torn off at adjacent ends and remaining part buckled. To be renewed.

TRANSVERSE BULKHEAD 65.

Lower part of bulkhead in way of port and centre tanks torn off and adjacent part of remainder badly buckled. To be cropped approx. 13' above base and 2 lower strakes renewed.

Lower part of bulkhead in way of starboard tank badly buckled and torn. To be cropped approx. 7' 6" above base line and bottom strake renewed.

NO. 4 CARGO TANK.

Starboard.

Forward end of shell longitudinal 15 - 19 badly buckled and torn. To be cropped at frame 64 and forward parts renewed.

Lower part of vertical web stiffener on forward bulkhead 7' 6" from longitudinal bulkhead badly buckled and torn. To be cropped approx. 8' above base and lower part renewed. Part above to be faired in place as required.

Centre.

Forward parts of port and starboard shell longitudinals torn off and remaining parts badly buckled and torn. All to be renewed.

Lower part of vertical web stiffener at centre line on bulkhead 65 torn off and adjacent part of remainder badly buckled. To be cropped approx. 16' above base and lower part renewed.

Lower part of vertical stiffener 10' to starboard of centre line on bulkhead 65 torn off and adjacent part of remainder badly buckled. To be cropped approx. 8' above base line and lower part renewed.

Lower part of vertical stiffener 10' to port of centre line on bulkhead 65 torn off and adjacent part of remainder badly buckled. To be cropped approx. 20' above base line and lower part renewed.

(See Continuation).

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S.S. "MARLAX".DAMAGE REPORT. (Contd).FOUND.RECOMMENDED.DAMAGE 1. (Contd).NO. 3 CARGO TANK. (Contd).Centre. (Contd).

Bottom transverses 63 and 64 torn off on port side and remainder badly buckled. To be renewed.

Lower part of longitudinal bulkhead on port side torn off and adjacent part of remainder badly buckled. Three lower strakes to be renewed approx. 13' 4" above base line.

Bottom strake of longitudinal bulkhead on starboard side torn and buckled. To be renewed to original butt approx. 3' 4" above base line.

Port.

Shell longitudinals 11 to 19 torn off. To be renewed.

Lower parts of transverse web frames 63 and 64 torn off and adjacent part of remainder badly buckled. To be cropped at longitudinal 10 and lower part renewed.

Bottom transverses on frames 63 and 64 torn off. To be renewed.

Lower part of vertical web stiffener on bulkhead 65, 7' 6" from longitudinal bulkhead torn off and adjacent part of remainder badly buckled. To be cropped approx. 24' above base and lower part renewed.

Lower parts of vertical web stiffeners on longitudinal bulkhead at frames 63 and 64 torn off and adjacent part of remainder badly buckled. To be cropped approx. 13' above base line and lower parts renewed.

TRANSVERSE BULKHEAD 62.

Two lowermost strakes on port side badly buckled and torn. To be renewed.

NO. 5 CARGO TANK.Port.

Lower parts of transverse web frames 60 and 61 badly buckled and torn. To be cropped at No. 11 longitudinal and lower part renewed.

Bottom transverse on frames 60 and 61 badly buckled and torn. To be renewed.

Lower part of vertical web stiffener 7' 6" from longitudinal bulkhead on transverse bulkhead, 62 badly buckled and torn. To be cropped approx. 8' above base line and lower part renewed.

Shell longitudinals No. 13 - 19 badly buckled and torn. To be renewed.



(See Continuation).

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-COPY-Q.2. "HARLEY".DAMAGE REPORT. (CONTD).FOUND.RECOMMENDATIONS.DAMAGE 1. (Contd).BILGE KEEL.

Forward end of port bilge keel badly buckled and torn.

To be cropped at original butt approx. 5' aft of bulkhead 59 and forward part renewed.

Forward end of starboard bilge keel buckled.

4 feet at forward end to be faired in place.

FURTHER RECOMMENDATIONS.

Vessel to be sighted in drydock and placed in proper alignment and maintained so during repairs.

All renewals, weights of materials, size of welds, rivets, etc., to be in accordance with original scantlings.

All workmanship to be of the first class and all welding to be carried out with approved electrodes and procedures.

All cargo tanks, fore deep tanks, fore peak, forward cofferdam and forward pumproom to be cleaned out after repairs, debris removed, and tested to Rule requirements.

All new and disturbed work to be coated as originally.

Cargo pipe lines, pumps, valves, bellmouths, reach rods, ladders, Batterworth sounding equipment, etc. in damaged cargo tanks to be repaired or renewed as found necessary and subsequently tested.

Fuel oil lines, valves, bellmouths, bilge lines, steam lines, fire lines, strainers, fittings, sounding pipes, etc., ladders, gratings, fuel oil transfer pump, fire and bilge pump, in the forward pumproom, fore deep tanks, fore peak and forward cofferdam to be examined, repaired or renewed as found necessary and subsequently tested.

Fuel oil heating coils in fore deep tanks to be renewed and tested to Rule requirements.

Standard compass to be adjusted.

Gyro compass to be examined and placed in good order.

Sea strainer plates to be removed and built-in sea chests examined. Chests to be recoated and strainer plates replaced.

FOUND.RECOMMENDED.DAMAGE 2.

Flat keel plates in way of No. 5, 6, 7, 8 and 9 tanks buckled and waved in way of keel blocks.

To be faired in place as necessary and centre tanks No. 5, 6, 7, 8 and 9 to be examined for damage to internal structure.

(See Continuation)



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S.S. "MARKAY".

DAMAGE REPORT. (CONTD).

FOUND.

RECOMMENDATIONS.

DAMAGE 3.

No. 4 shell plate from aft in "A" strake, starboard, heavily set in.

To be faired in place.

Adjacent shell plate No. 4 from aft in "B" strake, starboard, slightly set in.

To be faired in place.

DAMAGE 4.

Shell plate, starboard, abreast No. 6 cargo tank slightly set in.

To be faired in place.

No. 3 shell plate from aft in 2nd below main sheer, starboard, set in sharply.

To be cut as required, faired in place and welded.

The above recommendations have been made with a view to placing the vessel in as good a condition as she was in prior to the stated casualties.

Due to the present emergency these recommendations could not be effected at this time, and efficient temporary repairs, for DAMAGE 1, have been carried out to enable the vessel to proceed in ballast from the U.K. to a U.S.A. port where permanent repairs are to be effected. Temporary Docking stools to facilitate re-drydocking have been fitted at this time.

A. Reid

..Surveyor to Lloyd's Register..



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