

Days at

ers.

Continu



B.9 -

torn

B.10

floor

C

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Continued Damage Report COPY02, on the M/V. "SEISTAN"

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FOUNDRECOMMENDED

004833-004841-0029²/₉

Main sheer. J.12 torn and buckled.	- To be renewed. (29'-2" x 75, $\frac{1}{4}$ " x 0.60")
J.13 - buckled.	- To be renewed. (29'-1 $\frac{1}{2}$ " x 74, $\frac{3}{4}$ " x 0.60")
K.4 - fore deck bulwark plate, indented.	- To be removed, faired & refitted. (27'-2 $\frac{1}{2}$ " x 47" x 0.38)
Three washport doors missing.	- Three doors to be supplied and fitted.
K.9 - torn and buckled.	- To be renewed. (29'-3" x 57" x 62")
K.10 - Buckled.	- To be renewed. (29'-2 $\frac{1}{2}$ " x 56, $\frac{3}{4}$ " x 0.62")
K.11 - Buckled.	- To be renewed. (29'-1 $\frac{1}{2}$ " x 58 $\frac{1}{2}$ " x 0.62")
Bridge sheer L.10 - torn and buckled.	- To be renewed. (29'-1 $\frac{1}{2}$ " x 57" x 0.70")
L.9 - part missing.	- To be renewed. (29'-2 $\frac{1}{2}$ " x 57 $\frac{1}{2}$ " x 0.70")
L.11 - Buckled.	- To be renewed. (29'-1 $\frac{1}{2}$ " x 57" x 0.70")
L.13 - Indented at upper after corner.	- To be faired in place.
L.14 - Slightly indented.	- To be faired in place.
Bridge bulwarks buckled full length, including, rail bar, stanchions and attachments.	- To be renewed.
<u>Starboard side -</u>	
A.7 - Torn.	- To be renewed. (29'-10" x 93, $\frac{3}{4}$ " x 0.62")
A.8 - Torn.	- To be renewed. (29'-10" x 93, $\frac{3}{4}$ " x 0.62")
A.9 - Torn and buckled.	- To be renewed. (29'-10" x 93, $\frac{3}{4}$ " x 0.62")
A.10 - Set up at after end.	- To be removed, faired & refitted. (29'-10" x 93, $\frac{3}{4}$ " x 0.66")
B.9 - Torn.	- To be renewed. (29'-10" x 94" x 0.62")
B.10 - Torn and buckled.	- To be renewed. (29'-10" x 94" x 0.62")
B.11 - Buckled.	- To be removed, faired & refitted (29'-10" x 94" x 0.62")
C.7 - Missing.	- To be renewed. (29'-10" x 96 $\frac{1}{2}$ " x 0.62").

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FOUND

RECOMMENDED

C.8 - Torn and buckled.

- To be renewed.
(29'-10" x 93, $\frac{3}{4}$ " x 0.62")

D.8 - Missing.

- To be renewed & extended one frame space at forward end.
(32'-6" x 68" x 0.62")

D.9 - Buckled one frame space at after end.

- To be cropped at after end and new butt formed.
(27'-4 $\frac{1}{2}$ " x 65, $\frac{3}{4}$ " x 0.62")

D.11 - Small fitting bolted through shell.

- To be removed and small hole plugged.

E.10 - Torn and buckled.

- To be renewed.
(29'-2 $\frac{1}{2}$ " x 81 $\frac{1}{2}$ " x 0.60")

E.11 - Buckled.

- To be renewed.
(29'-1" x 82 $\frac{1}{2}$ " x 0.60")

E.12 - Slightly set in at upper seam.

- To be faired in place.
(29'-1" x 82 $\frac{1}{2}$ " x 0.60")

E.14 - Slight^{ly} indented at forward upper seam.

- To be faired in place.

E.15 - Slightly set in.

- To be removed, faired and refitted.
(29'-5" x 93" x 0.64")

F.10 - Missing.

- To be renewed.
(29'-2" x 87, $\frac{3}{4}$ " x 0.60")

F.11 - Torn and buckled.

- To be renewed.
(29'-1" x 87, $\frac{3}{4}$ " x 0.60")

F.12 - Slightly set in.

- To be removed, faired & refitted.
(29'-2" x 88 $\frac{1}{2}$ x 0.62")

F.14 - Slightly set in.

- To be removed, faired & refitted.
(29'-4 $\frac{1}{2}$ " x 88, $\frac{3}{4}$ " x 0.64")

G.9 - Torn and buckled.

- To be renewed.
(29'-2" x 88" x 0.60")

G.10 - Buckled.

- To be renewed.
(29'-1 $\frac{1}{2}$ " x 88" x 0.60")

G.11 - Torn and buckled.

- To be renewed.
(29'-1" x 88" x 0.60")

G.12 - One small indent between frames 111 and 112.

- To be faired in place.

G.15 - Three small indents between frames 137 and 146.

- To be faired in place.

G.16 - One indent at frame space 156/158.

- To be faired in place.

H.10 - Part missing.

- To be renewed.
(29'-2" x 71" x 0.60")

H.11 - Torn and buckled.

- To be renewed.
(29'-1 $\frac{1}{2}$ x 70, $\frac{3}{4}$ " x 0.60")

H.12 - Buckled.

- To be renewed.
(29'-1 $\frac{1}{2}$ " x 72, $\frac{3}{4}$ " x 0.60")

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FOUNDRECOMMENDED

- H.13 - Buckled.
- Main sheer, J.12, missing.
- J.13 - Part missing.
- J.14 - Slightly wavy.
- K.2 - (foredeck bulwarks numbered from bridge front) - Undented.
- K.3 - Indented.
- K.4 - Indented.
- Four washport doors missing.
- K.9 - Bridge side (numbered from bridge aft) - Missing.
- K.10 - Buckled.
- K.11 - Buckled.
- K.12 - Slightly wavy.
- Bridge sheer L.9 missing.
- L.10 - Part missing.
- L.11 - Buckled.
- L.12 - Slightly buckled.
- L.14 - (Forecastle sheer) Indented and buckled at upper edge.
- L.15 - Indented and buckled at upper edge.
- L.19 - Indented.
- Bridge bulwarks buckled full length, including rail bar, stanchions and attachments.
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- Decks -
- To be renewed.
(29'-3" x 73, ¹/₄" x 0.64)
 - To be renewed.
(29'-2" x 75, ¹/₄" x 0.60")
 - To be renewed.
(29'-1¹/₂" x 73, ³/₄" x 0.60")
 - To be removed, faired and refitted.
(17'-1" x 75, ¹/₄" x 0.92")
 - Bulwark plate to be removed, faired and refitted. (15'-10" x 54" x 0.38")
 - Bulwark plate to be removed, faired & refitted (23'-10¹/₂" x 59¹/₂" x 0.38").
 - Bulwark plate to be removed, faired & refitted (27'-2¹/₂" x 47" x 0.38").
 - New doors to be supplied and fitted.
 - To be renewed. (29'-3" x 57" x 0.62")
 - To be renewed.
(29'-2¹/₂" x 56, ³/₄" x 0.62")
 - To be renewed.
(29'-1¹/₂" x 58¹/₂" x 0.62")
 - To be removed, faired & refitted.
(24'-5" x 59, ¹/₄" x 0.75")
 - To be renewed.
(29'-2¹/₂" x 57¹/₂" x 0.70")
 - To be renewed.
(29'-1¹/₂" x 57" x 0.70")
 - To be renewed.
(29'-1¹/₂" x 57" x 0.70")
 - To be removed, faired & refitted.
(24'-9" x 57¹/₂" x 0.87")
 - To be removed, faired & refitted.
(25'-4" x 65" x 0.42")
 - To be removed, faired & refitted.
(21'-2" x 66, ³/₄" x 0.42")
 - Forecastle bulwark plate, to be removed, faired and refitted.
(23'-9" x 48" x 0.42)
 - To be renewed.

NOTE:- Sizes of plates taken from expansion plan, larger widths only of tapered plates given.

FOUNDRECOMMENDEDDecks.

Bridge deck and all steelwork above, decks, casings, coamings, deckhouses, navigating bridge, radio room, accommodation, etc. completely gutted.

- To be completely renewed, together with all fittings, furnishings, navigational aids, etc., as originally fitted.

Foredeck.

Upper deck set down approx' 3" in way of N°2 hatchway, port & starbd, and to a lesser extent to the after part of N°3.

- Foredeck plating, port & starbd, to be removed, faired & refitted.

Beams in way of the foregoing set down corresponding to deck.

- All beams to be reset and faired as found necessary.

Upper deck between Nos. 2 & 3 hatchways buckled and set down.

- Centre strake to be renewed. Port & starbd 'A' strakes to be removed, faired and refitted.

Upper deck between forecastle bulkhead and N°1 hatch coaming set down.

- To be removed, faired & refitted. Deck beams in way to be removed, faired and refitted.

NOTE:- All six winches in way of foredeck repairs require to be removed for access and later replaced. Mooring bollards eye plates, coamings etc., also to be removed for access and later replaced.

N°2 hatch coaming set down, together with port & starbd longitudinal underdeck girders and side stiffeners.

- To be removed, faired & refitted together with all portable beams & steel plate hatchcovers, or renewed as may be found expedient.

N°2 hatch, tween deck fore and aft bulkhead at forward end of hatch, set down, and buckled.

To be renewed.

Beam knee brackets buckled at frame stations Nos. 149, 151, 152, 158, 159, 164, 165, 166, 167, 168, 169, 170, port and starboard.

- To be renewed.

N°2 hold, port & starbd tween deck / upper deck pillars buckled.

- To be renewed.

Tween deck in way of foregoing set down.

- To be cropped and part renewed in way of pillars.

N°2 tween deck, after storehouse, port and starbd, steel doors buckled.

- To be renewed.

N°2 tween deck, after storehouse ^{found} after athwartship bulkhead buckled.

- To be removed, faired & refitted, together with stiffeners.

N°2 tween deck, after bulkhead buckled, port and starboard.

- To be removed, faired & refitted.

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RECOMMENDED

Nos. 2 & 3 holds, tank top ceiling disturbed by immersion.

- To be removed, also for access to double bottom tank top for examination and testing, and later replaced with new material as necessary.

Upper deck (freeboard deck) from bridge front to frame 74 not completely examined owing to collected rubbish at forepart.

- To be cleaned, examined, and dealt with as may be found expedient.

Shell frames & floors.-

It was not practicable to make a close examination of the floors and frames in way of the damaged shell plates, but it is concluded that repairs will be necessary.

- To be further examined and dealt with as may be found expedient.

Miscellaneous.

Equipment - Two lower anchors on foredeck, and one in starbd hawse. Cable presumed to be in locker.

- To be ranged for examination, connected and restowed. Spare anchor to be clipped as original.

Foretop mast bent.

- To be removed, faired and rewedged in position.

Foremast stays slack.

- To be examined and readjusted.

Forecastle rails - starbd side 4 sections of 3 tier rails buckled.

- To be faired in place and part renewed.

Port side, portable section of three tier rails missing.

- To be supplied and fitted.

Derricks - N°1 port 4 ton derrick boom bent at outer part. - Outer section to renew.

N°2 hatch, starbd 15 ton derrick boom bent.

- To be removed, faired or repaired, and refitted;

N°2 hatch, starbd after 10 ton derrick bent at outer section.

- Outer section to be renewed.

N°3 hatch, port derrick boom buckled.

- To be renewed.

N°3 hatch, starbd derrick boom buckled.

- To be renewed.

N°3 hatch, MacGregor steel cover badly buckled.

- To be renewed. Existing trunnions and fittings to be used, so far as practicable.

Deck steam and exhaust lines, valves and fittings missing or damaged.

- Remaining parts to be removed and tested; missing parts supplied, and all refitted.

Windlass, forecastle & foredeck winches appear undamaged.

- To be greased, lubricating oil sumps checked, turned by hand, and finally tried working under steam.

FOUND

Derrick gear wire ropes, pulleys and chains.

RECOMMENDED

- To be subjected to the requirements of the Docks Regulations, 1934.-

MACHINERY

A superficial examination was made in dry dock. The engine room was found to have been submerged from February 1958, until this part of the vessel was refloated, when it was immersed to the water-level to present date, the after bulkhead having carried away. A thorough examination was not possible owing to the presence of wreckage and debris, the whole being saturated with sea water and fuel oil.

From the superficial examination made, the following is a rough description of the machinery:-

Main engine - Foremost length of intermediate shafting bent at almost 90° tearing the forward coupling bolts and apparently damaging the flywheel. The thrust block casting badly broken. The combined thrust shaft and after section of the crankshaft set up approx' one inch at the after main bearing the bolts of the latter being broken or bent.

All aluminium parts of the engine completely corroded away. All instruments destroyed. All lubricators, fuel pumps, roller bearings, and valves encrusted with rust. All machined surfaces encrusted with rust and marine growth. No recommendations are made for the main engine which would require to be minutely stripped and thoroughly cleaned for examination.

Auxiliaries - Three 80 KW steam driven dynamo sets appear intact. Steam engines would required to be stripped for examination. Electric generators beyond repair.

Two steam driven starting air compressors appear intact. Would require to be stripped for examination.

Donkey boiler oil fuel firing unit comprising two shell and tube heaters and two reciprocating steam pressure pumps, and fittings completely destroyed. Diesel and lubricating oil centrifugal purifying plant completely destroyed by action of salt water.

Condenser circulating pump - steam driven (horizontal) centrifugal pump appears intact, would require to be stripped for further examination.

Two piston cooling vertical lubricating oil pumps - electric motor destroyed; oil pumps to be opened out for examination.

The following reciprocating steam pumps appear to be intact, but require to be opened out for examination :-

Two single donkey feed pumps.

Ballast pump.

General service pump.

Stand by forced lubricating oil.

Distilled water circulating pump.

The bilge pump.

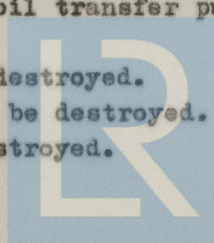
The condenser air pump.

The diesel oil transfer and the heavy oil transfer pumps appear to be destroyed by explosion.

The three hydrofor pumps appear to be destroyed.

The fuel valve cooling pumps appear to be destroyed.

The hot fuel oil pump appears to be destroyed.



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The evaporator appears to be intact, but will require to be stripped, examined and tested.

The fuel oil priming pump appears to be intact, but its electric motor is destroyed.

Engineers workshop not examined.

The refrigerating machinery totally destroyed.

All ventilator fans destroyed.

Boilers.

Both scotch boilers appear to be intact. They will required to be stripped of lagging, cleaned, examined and hydraulically tested.

The boiler fronts and uptakes appear to be intact, but require further examination.

The boiler flues fuhhels and casings completely destroyed.

All steam pipes, valves, straps, and fittings required to be removed, stripped of lagging, examined and hydraulically tested.

The whole of the electrical installation, fittings, cables, motors, generators switchgear completely destroyed throughout the vessel.

Starting air tanks, fuel oil settling tanks appear intact, but will required to be opened out, cleaned, examined, and tested.

The main engine turning motor and gear appears to be damaged beyond repair.

All spare gear contaminated with salt water, would require to be cleaned, examined and tested where necessary, before being considered fit for use.

The above recommendations made with a view to placing the salvaged part of the above vessel in as good conditions as before the casualty took place.

For parts and fittings missing, or not covered by this report, reference to be made to plans or instructions supplied by the Owner.

Any further damage which may come to light subsequently, to be dealt with as may be found expedient.



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Re - classification.

HULL - The requirements of a Special Survey 'A' of the existing section of the hulk, to be carried out.

Damage to the hull, structure, and equipment, as described in Palermo Damage Report N° D-102, to be permanently repaired to the satisfaction of the survey^{or} dealing with the case.

Plans, as required by D.108 of the Rules, of the contemplated new after and amidship sections, to be submitted for approval.

MACHINERY - The requirements for a Special Survey to be carried out.

Damage to the main and auxiliary machinery, boilers, and electrical installation, as described in Palermo Damage Report N° D-102, to be permanently repaired to the satisfaction of the Surveyor dealing with the case.

Plans, as required by the Rules, for the contemplated new intermediate and screwshafts, propeller, pumping arrangements and electrical installation to be submitted for approval.

Should the new shafting or propeller differ, in proportions or material, from that originally fitted, calculations of torsional vibration characteristics for the dynamic system formed by the engine, shafting, and propeller, also to be submitted.

E. Grieves

(E. Grieves)

Surveyor to Lloyd's Register of Shipping
PALERMO

MA

Jan. Fee	---	Lit.	146.000 =
off. Exp.	---	"	32.980 =
S.A.F.	---	"	25.000 =
R.T.	---	"	6.120 =
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