

COPY.

# Lloyd's Register of Shipping.

Port **FREMANTLE. W.A.**

14th June, 1943.

**This is to Certify** that

**Wm.G. DAVIES,**

undersigned Surveyor to this Society did at the request of Owners Representative, Survey the Steel Screw Motor Tanker "D I N A" of Willemstad 6341 Gross Registered Tons, for the purpose of (1) ascertaining the nature and extent of damage which stated to have been caused by shells and torpedoes during enemy action in November 1942, while the vessel was on a voyage from Fremantle to Overseas Port, and (2) recommending necessary repairs. It is stated that, after the action, the vessel returned to Fremantle under her own power. Further particulars see Log Books.

PRELIMINARY EXAMINATION with the vessel afloat in Fremantle four found damage, which could be grouped into three categories namely, (1) minor damages caused by shell splinters and shrapnel in numerous places generally throughout the Hull, Decks, Superstructures and Masts, (2) damage resulting from direct shell hits on Starboard Bow Plating, Starboard Hull Plating Amidships, Bridge, etc., (3) major damage caused by torpedoes on Starboard Hull and Bottom plating in way of No.2 Starboard Tank and Bulkheads of Nos. 3 Centre and Starboard Tanks which were seen to be flooded.

Categories Nos 1 & 2 will be merged in the following report, so that the location of each item will follow a sequence throughout the vessel, irrespective of the extent of damage. Category No.3, however, will be described separately under its heading entitled "Major Damage".

As preliminary examination revealed such damage as to warrant either permanent repairs being done inside a cofferdam or temporary underwater repairs of a certain nature to enable the vessel to continue her proposed voyage to Melbourne for Dry Docking. Actually, the vessel was required to proceed to an American Port for permanent repairs which necessitated greater strengthening of structures in way of No.2 Starboard Tank than would have been the case for the voyage to Melbourne, and conferences were held with Mr. McCowan (Principal Surveyor in Australasia to Lloyd's Register) Mr. Kirkbright (Owners Representative) when a method of strengthening as set out by Mr. Pratt (Surveyor to Lloyd's Register at Fremantle) was discussed.

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 carried out, it is to be understood that neither the Society nor any Member of any of its Committees is under any liability whatever to be held responsible for any inaccuracy in any report or certificate issued by the Society or in any entry in the Register Book or other publication of the Society, or for any error of judgment, or for any omission of any of its Committees or any Member thereof, or the Surveyors, or other Officers or Agents of the Society.



M.T. "ONDINA" AT FREMANTLE 14th JUNE 1943.

tested method of strengthening by means of horizontal channels the gap in the Hull in way of No.2 Starboard Tank and anchor- vertical stiffeners by means of struts at stated intervals bottom fastenings of the bulkhead between No. 2 Centre and Tanks or to transverse floors was then transferred by the to a drawing of the Hull section of "ONDINA" in way of and submitted to the Principal Surveyor and to the Owners representative, and it was agreed that the methods be put into effect.

as shown on Drawing Nos. 1 & 2 W.G.D. "ONDINA" would strength, but it was fully expected that No.2 Starboard remain fully open to the sea, and No.2 Centre and No.3 would also remain completely flooded and unable to be pumped No.3 Centre was to have been made relatively watertight by patch fitted by a Diver to the longitudinal bulkhead separ- from No.3 Starboard.

The original recommendations have been adhered to in their insofar as longitudinal vertical and transverse stiffenings is a considerable amount of extra work had to be done through ssity, which resulted in No.2 Centre and No.3 Centre and Star- being made tight, and opportunity was taken to give double strength to the renewed bulkhead between No.2 Centre and Star- as will be seen under the heading of "Major Damage". The for building a local cofferdam and a watertight wall will on by reference to "Major Damage".

DRAWINGS, LETTERS ETC. Drawing No.3 W.G.D. "ONDINA" contains ate rough sketches which were originally attached to letters Principal Surveyor, Owners Representative and Mr. Pratt.

1 & 2 W.G.D. "ONDINA" shows details of the proposed stren- drawing No. 1A W.G.D. "ONDINA" shows what was eventually e work.

4 W.G.D. "ONDINA" shows the alterations to pipe lines found s a result of the vessel having been chartered (on complet- lrs) as a Mobile Depot Supply Ship, and at the same time diagrammatic view of the condition of the Hull and the after No.3 Starboard Tank and the extent of the opening in the No.2 Starboard Tank.

a summary of findings of damage and recommendations for ment or temporary repairs.

FOUND

RECOMMENDED

BRIDGE - all on Star-  
Twelve concrete  
ion slabs shattered  
king of deck under  
ly started and leak-  
ainy weather.

(1) that these slabs be renewed  
after caulking the decks.

et section of hand  
to Standard Compass

(2) this section be renewed,  
faired, repaired and refitted.

lator Cowl holed  
ng scored.

(3) to be repaired.

finder loop and  
ged beyond repair.

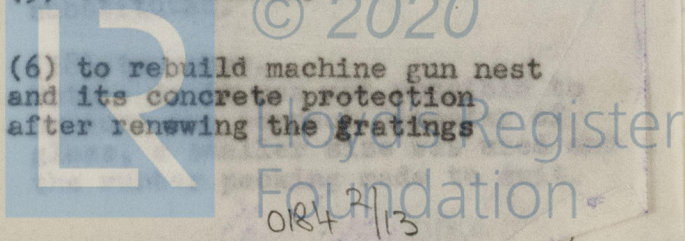
(4) a new loop and standard to  
be fitted.

ht glass cover

(5) to be renewed.

G BRIDGE - all on  
s. Machine gun  
board wing of

(6) to rebuild machine gun nest  
and its concrete protection  
after renewing the gratings





M.T. "ONDINA" AT FREMANTLE 14th JUNE, 1943.

RECOMMENDED

badly damaged and the  
g and gratings in way  
nt.

armour plate (3/4" thick)  
starboard entrance to  
torn and buckled and  
y from top fastenings  
ver.

1 steel armour plate  
and buckled.

Deck at top of Wheel  
sent to items 7 & 8  
torn.

Room concrete pro-  
ly damaged and the  
on bulkhead behind this  
buckled over an area  
t. and steel deck at top  
ea of 2 sq.ft. and its  
on fastenings torn.

et of fore and aft awn-  
carried away.

approximately 30 feet of fore  
bulwark teak rail (situ-  
e Bridge and outside the  
and immediately under-  
11) shattered.

e fore and aft bulwark  
is attached rail mentioned  
) holed in seven places  
ximately 36 sq. inches  
d in numerous places.

e Deck adjacent to item  
and torn in numerous

side of steps (leading  
dard Compass Platform)

HOUSE. Starboard door  
aged and all front wood-  
glasswork shattered and  
rred in places. Kent  
on screens intact bu the  
low (in which the Kent  
fitted) was broken.

and Starboard side  
roken.

detector glasses broken.

(6) and the wood decking and caulking  
and paying same, in way thereof.

(7) the top half to be cropped and  
renewed and welded to the lower  
half after the latter is removed  
and faired.

(8) to remove, fair and refit.

(9) to crop damaged plate and renew  
10 sq.ft. of plate.

(10) to crop and renew 16 sq.ft. of  
screen bulkhead and 2 sq.ft. of  
steel deckhead and renew damaged  
concrete protection.

(11) to renew 15 feet of awning spar.

(12) to renew 30 feet of bulwark  
rail in "Wandoo" wood.

(13) to square up ragged edges of  
holes and weld "insert" plates in  
position and fill in all possible  
scars by electric welding.

(14) remove approximately 120 linear  
feet of wood decking and renew in  
"Wandoo" wood and caulk and pay same.

(15) to remove steps and fit new  
side and replace in position.

(16) to renew all damaged woodwork  
and glasswork, overhaul Kent screen  
and motor and refit into new glass.  
Note:- correct sizes of armour plate  
glass could not be procured, so that  
it was necessary to make most wind-  
ows fixed and to case in the window  
frames to suit the size of the glass  
as a temporary measure.

(17) to be removed and wood panel  
substituted.

(18) to renew.  
Note:- As it was not possible to  
procure the correct diameter of  
glass, a smaller size was used and  
the rubber packing made to suit.

0184 3113



M.T. "ONDINA" AT FREMANTLE 14th JUNE, 1943.

RECOMMENDED

Telegraph glasses

(19) Renew glasses suitably marked and test Telegraph.

or safety latch deeply  
ent and one of the  
linders scored slightly.

(20) the latch to be renewed,  
but the cylinders to be perman-  
ently repaired at the Owners  
convenience.

DOM. Starboard window

(21) to fit wood panel as a war  
time measure and renew glass  
after cessation of hostilities.

DECK (COMPRISING  
RTERS). Front bulwark  
en places. Starboard  
d in four places.

(22) holes to be squared up and  
insert flush plates welded in.

use front scarred in  
ces.

(23) scars filled in by means of  
electric welding and dressed up  
and painted.

IDE. (Starboard) gener-  
and also in four places;  
rying from 6" x 6" to

(24) scars to be filled in and  
dressed and holes squared up  
and flush plates electrically  
welded.

se Box and its glass doors

(25) to be renewed.

tilator Cows holed.

(26) holes to be cleaned up and  
insert pieces welded in and  
dressed up.

deck under Captain's life-  
seven places each  
6" x 6".

(27) holes to be cut square and  
flush inserts welded in.

ately 200 linear feet  
ing (adjacent to steel  
27) burnt and scarred.

(28) damaged decking to be  
removed and new "Wandoo" wood  
decking laid, caulked and payed.

ight deck lights and  
ten.

(29) to be renewed.

's Lifeboat and its  
alls and equipment com-  
ished and the after  
two and its differential  
and steel seatings under.

(30) a new Lifeboat be placed  
aboard and fitted out and the  
after davit repaired by fitting  
an internal sleeve and electric  
welding same and a new differen-  
tial screw made and fitted.  
Note:- a steel boat of approxi-  
mately similar dimensions was  
procured and certain minor repairs  
done thereon in order to place it  
in efficient condition. The  
boat was then equipped as far as  
possible to meet the requirements  
of Netherlands Government Reg-  
ulations, and the davits were  
each moved three inches in order  
to give the necessary end clear-  
ances. Repairs to davits were  
carried out as recommended and  
new blocks made in steel and  
rove off with new manila. Boat  
and davits tested and found good.



- 5 -

M.T. "ONDINA" AT FREMANTLE 14th JUNE, 1943.

DUND

RECOMMENDED

LIFEBOAT (MOTOR BOAT).

smashed and holed (by  
in bullets while afloat  
action) and small items of  
damaged caused elsewhere  
at, such as punctured  
s and tanks.

(31) that damaged planks be renewed  
and other small items of damage  
made good.

BRIDGE DECK (COMPRISING  
QUARTERS.) Starboard  
deck house scarred in  
places.

(32) fill in scars and dress smooth  
(now done).

deck and bulwark stan-  
scarred in numerous places.

(33) fill in scars and dress smooth  
(now done).

deck pipe holed.

(34) to be welded (now done).

DECK. Steel Foredeck  
deeply in approximately  
abreast the Foremast.

(35) to be filled in by means of  
electric welding and all welds  
dressed.

DECK BUNKER LINE holed  
ace.

(36) to have a patch welded on.

TANK. Steam heater pipe  
leaking near lower

(37) to be brazed.

WARD PUMP ROOM. Both ven-  
holed each in several

(38) holes to be cleaned up and  
insert patches welded in.

Starboard side (between  
& Centre Castle and  
major damage) plating  
ored in approximately 20  
th four small holes.

(39) Holes and scores to be filled  
in with electric welding and welds  
dressed.

MAST. Two gas lines badly  
numerous places. Two top  
blown away. Four lower  
on the Starboard side  
the Port side either  
or blown away. One back  
away. Jumper stay  
Lightning conductor  
lips and insulators torn  
eel Mast generally holed.  
floodlights and fittings

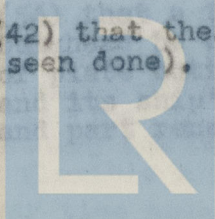
(40) to fit flush insert patches  
electrically welded. To renew all  
stays. Note:- Owing to shortage  
of materials it was not possible to  
procure correct size of stay wire  
or any stay wire at all, so that  
2<sup>3</sup>/<sub>4</sub>" flexible wire had to be used  
as a war time measure. To fit  
lightning conductor and new insula-  
tors. To fit flush insert patches in  
steel mast electrically welded. To  
fit new lights and fittings. All  
items under this section have now  
been seen done.

CASTLE HEAD (Starboard  
ck buckled (due to heat  
which had occurred in  
below during shelling) and  
ghtly generally between  
nd starboard gunwale.

(41) that this be faired at the  
Owners convenience.

CASTLE HEAD (Port side).  
l holes and a number of  
steel deck.

(42) that these be all welded. (Now  
seen done).



Lloyd's Register  
Foundation  
0184 1/3



- 6 -

M.T. "ONDINA" AT FREMANTLE 14th JUNE, 1943.

FOUND

RECOMMENDED

DECK SPACE (aft of  
tz). The four deck  
of the Verf Bergplatz  
lightly buckled (Star-

(43) that these be faired at the  
Owners convenience.

up slightly due to  
four frame spaces

(44) that these be faired at the  
Owners convenience.

BERGPLATZ. Paintwork  
backened by smoke.

(45) to be painted at Owners  
convenience.

PEAK STORE. Paintwork  
backened by smoke.

(46) to be painted at Owners  
convenience.

gratings and benches  
board portion of this  
store.

(47) to be renewed at Owners  
convenience.

rd side of Chain Locker  
all splinters in six

(48) that the holes be cut clean  
and flush insert plates welded in.  
(Now seen done).

bulkhead (on Starboard  
end of Chain Locker  
Middle Peak from  
ly holed and buckled  
locker and ship's  
ee stiffeners buckled  
their brackets also  
valve rod (to Forward  
Valve) adjacent to  
bent.

(49) that the damaged portion of  
bulkhead be cropped and a piece  
of 3/8 plate 4 ft. x 4 ft. be  
inserted and welded and three new  
stiffeners and gussets welded in  
position and a new section of valve  
rod made and fitted with a new  
universal joint.

Starboard side plating  
Sheerstrake (in way of  
mentioned in item 49)  
places, one each side  
ad and approximately  
s. These holes were  
ately 6 sq.ft. area,  
mes including the bulk-  
dly buckled.

(50) as a permanent repair, that  
the damaged plate be cropped and  
a new plate 12 ft. x 7 ft. x 1/2"  
thick be rivetted and welded in  
position and one section of one  
frame renewed and three frames  
cropped, faired and refitted.  
(Now seen done).

gastight light fitting  
ed by heat.

(51) that these glasses be renewed.  
(Now seen done).

AK STORE. Paintwork  
erally by smoke.

(52) to be painted at Owners  
convenience.

IDE (STARBOARD) BE-  
ARBOARD TANK AND THE  
OM. Plate below sheer-  
in shell holes similar  
starboard Bow plating  
approximately 4 ft.  
n side of the bulkhead  
Room and No.3 Star-  
two horizontal members  
on ship's side torn in  
board.

(53) release plate at a rivetted  
joint and crop at a position for-  
ward of the damage and rivet and  
butt weld and strap a new piece of  
plate approximately 10 ft. long by  
5 ft. wide by 5/8" and fit new (two)  
horizontal members.

between Pump Room and  
Tank buckled (Star-  
over an area of approx-  
ft.

(54) that a 12 sq.ft. section of  
bulkhead be cropped and a new piece  
of plate butt welded in position  
and its ship's side angle cropped  
and part renewed.



- 7 -

M.T. "ONDINA" AT FREMANTLE 14th JUNE, 1943.

IND

RECOMMENDED

between Pump Room  
board Tank buckled  
(de) over an area of  
20 sq. ft.

(55) that a 20 sq.ft. section of  
bulkhead be cropped and a new piece  
of plate butt welded in position  
and its ship's side angle cropped  
and part renewed. Items Nos. 54  
& 55 have now been seen done as a  
permanent repair).

ge overboard valve  
cked on flange.

(56) to be welded as a temporary  
repair.

1. Steel top mast  
and hanging and its  
away. Lowermast was  
cept for several stays  
nters and a mast band

(57) that this mast be cut away and  
sent down and the top of the standing  
mast to be cut level and a steel  
truck or cap fitted, which in turn  
is to be fitted with pulleys for  
Radio Aerial, flag halliards etc.,  
This Main mast top to be renewed at  
Owners convenience. Note:- that  
pieces were cut out of this top mast  
to make flush welded patches for the  
Fore topmast.

ng conductor carried  
pmast stay, but later  
tact on deck except  
nsulators. All this extra

(58) repair conductor, make new clips  
and fair some original clips, fit  
new insulators into clips every 3 ft.  
along lowermast stay and weld necess-  
ary clips on mast between stay band  
and truck.

DAMAGE ON AFTER DECK.  
indle hand wheels for  
S. and Nos. 3 P.C & S.

(59) to amke and fit new hand wheels  
to replace damaged wheels,

up several inches  
th of 32 feet in line  
itudinal bulkhead  
2 C & S. Tanks.

(60) to be faired at the same time as  
permanent repairs are being carried  
out.

section of Deck copper  
split slightly near  
age.

(61) that, as steam ~~ea~~ was in use  
continuously during repairs a short  
section of steel pipe be made and  
fitted at first opportunity to enable  
the copper pipe to be repaired.

will along platform cut

(62) to be filled in with welding.

Two ventilators to  
holed.

(63) to be welded. (Now done).

as scores on hull plat-  
side aft.

(64) to be filled in by means of  
electric welding and dressed. Now  
done.

lifafts lost off after  
eel skids intact.

(65) that new Rafts be made and fitted  
and secured in position.  
Note:- To Owners requirements two  
more steel liferaft skids and rafts  
were made and these are located one  
each side aft of the Centre Castle.

mast holed in a number  
and stays shot away and  
ing conductor torn off.

(58a) that the holes in the steel mast  
be trimmed out and curved insert  
pieces flush welded in and that the  
lightning conductor be made good and  
new flexible wire stays be fitted as  
a war time measure.



M.T. "ONDINA" AT FREMANTLE. 14th JUNE, 1943.

MAJOR DAMAGE.

Major damage due to torpedo occurred in No.2 Centre and Starboard  
3 Centre and Starboard Tanks and Hull plating and structural  
in way of Nos. 2 & 3 Starboard Tanks, while some minor damage  
in No.2 Port Tank.  
It can be said that Nos. 2 & 3 Centre and Starboard Tanks  
(4 tanks in all) were open to the sea principally owing to  
entire side and bottom of No.2 Starboard Tank being torn  
and/or pushed and furred inwards, (2) the bulkhead between No.2  
and No.2 Starboard having the forward section for one third  
length missing entirely from top to bottom and the remainder  
outboard with buckled stiffeners and badly holed in places  
for a strip of undamaged plating 3 feet wide by full height  
at its after end, (3) the bulkhead between Nos. 2 & 3 Centre  
being buckled and holed near Starboard bottom corner, (4) the  
between No.3 Centre and Starboard being buckled and badly  
towards its after end and (5) the bulkhead between Nos. 2 & 3  
ard tanks being badly holed in the small remaining flat portion  
buckled over the remainder and the ship's side in way of No.3  
ard Tank at its after end being curved inboard, and causing  
bulkhead and side plating to have so many furred buckles that it  
possible to distinguish the junction of the ship's side and  
ad.  
Bottom and side plating in way of No.2 Starboard Tank was so badly  
inboard with all frames, stringers, floors etc., that further  
ation by the Diver was not possible, until the undersigned  
ended that all this extraneous steel be cut away with under-  
oxy-hydrogen torches, leaving the bottom plating projecting  
imately 4 feet beyond the line of longitudinal bulkhead and  
el thereto except towards the after end where it was considered  
o leave the up-turned bottom and turned in side to act as a  
al stiffener and a protection against heavy wash causing velo-  
pressure on the forward bulkhead of No.1 Starboard Tank when the  
eventually left Port.

Majority of the large jagged holes in the longitudinal and trans-  
bulkheads (the largest being 8 ft by 9 ft. and the smallest  
by 5 ft.) were so close to the intersection of all the four  
d tanks that a hole in one longitudinal bulkhead merged into  
a transverse bulkhead, so that, in my opinion, any patches  
d underwater by a Diver would have been an improvisation, and  
quently recommended that a wooden cofferdam approximately 16 feet  
y 16 feet deep be fitted over an 8 ft. by 9 ft. hole in the  
bulkhead of No.3 Starboard Tank and standing 3 feet away from  
o allow steel plate patches to be welded on. This cofferdam  
ed through the large aperture caused by the missing longitud-  
bulkhead between No. 2 Centre and Starboard Tanks, and also  
d a 4 ft. by 4 ft. hole in the Starboard bottom corner of the  
bulkhead of No.3 Centre Tank. This cofferdam together with  
er of wooden wedges and sheepskins wedged into the furred side  
ter bulkhead of No.3 Starboard Tank allowed No.3 Centre and  
ard to be pumped dry and substantial repairs to be carried out  
se two tanks. This cofferdam took 12 days to make and fit; the  
roceeding concurrently with other repair work, and it was well  
the time and money spent, as these two tanks were eventually  
ight, and together with No.2 Centre which was also made tight  
d the vessel to be usefully employed for six months as a mobile  
depot ship, thus tiding her over winter months, so that her  
y overseas to Port of Repair should actually commence and be  
ted before the end of our Summer.

ts

1939

Register Book.)

Voyage.

Classification

in Register Bo

ER

Survey

ey and of

rveys.

Year

pet roleu

annel(s)

d under stea

d under stea

oilers?

oilers?

oilers?

fitted at th

ing efficie

the after

ently lubri

r bearing

ower fitte

er fa

and

oded

1-2-

four

1-bi

), s

cket

coo

conseq

9,11,

on,



- 9 -

M.T. "ONDINA" AT FREMANTLE 14th JUNE, 1943.

be noted, that, owing to the continued presence of oily No.2 Centre Tank, the Diver was not able clearly to define damage in same, and it was not until this condition was cleared itself after some months that any damage could be seen at all, and then from the surface it was apparent that serious damage existed to warrant having this Tank dried and repairs rather than trust to underwater work. Consequently, it was recommended that a watertight wooden wall be fitted between No.2 Starboard tank parallel to and approximately 12 feet away from the damaged longitudinal bulkhead between No.2 and Starboard Tanks.

When completed enabled, not only the repairs effectively to be made out in the No.2 Centre Tank, but also allowed the bulkhead between this tank and No.2 Starboard Tank to be renewed and fitted with stiffeners (vertical and longitudinal) twice as strong as the old, and the tank made perfectly watertight, and it also allowed the bulkhead to be fixed to the otherwise unsupported ceiling projecting into No.2 Starboard beyond the bulkhead, to prevent this plate from flexing during rolling at sea, as it would have a tendency to strain the bottom fastenings of the old bulkhead. Also, it was possible to arrange the new bulkhead and have holes drilled in the vertical stiffeners for the Diver to fit the five bottom transverse struts between the new bulkhead and the proposed channel framing over the side of the ship's side in way of No.2 Starboard Tank, after the removal of the wooden wall.

When completed, it was found that the repairs had eliminated a considerable amount of doubtful under-keel in connection with the repairs and enabled a perfectly sound No.2 Centre Tank to contribute towards the vessel becoming a fully useful mobile supply ship, and in company with the other tanks gives the vessel a larger margin of safety than would have been the case for her proposed voyage Overseas to repair.

Other items included in the area of major damage found with alterations made thereon are continued below.

FOUND

RECOMMENDED

2 CENTRE TANK. Forward bulkhead (attaching forward bulkhead) to longitudinal bulkhead between No.2 Port and Centre Tanks, was found to be cracked and rivets pulled away at rivetting of the vertical angle to bulkhead.

(66) that all rivets be cut out of the gusset angles and new rivets fitted and the heel and toe of both main gussets tack welded to the bulkheads.

Keelson buckled and twisted at several places between transverse deep floors and bulkhead.

(67) that weakness caused by Keelson buckles be minimised by fitting a large gusset at each end of Keelson and attaching by welding to the bulkheads to form companion gussets to those already originally fitted to Keelson and bulkheads in Nos. 1 & 3 Centre Tanks.

Starboard section of forward bulkhead buckled where attached to side and set up high at its top where originally attached to bulkhead between Centre and Starboard Tanks and at the bottom set aft about one foot from outer end and its gusset cracked and rivets attached to bottom plating slack.

(68) to crop this section of floor and its top angles to within two feet of Keelson, fair and refit. Remove gusset plate and angles and fit new ones. Remove slack rivets and fit grummetted bolts in lieu thereof. See item 71 relating to bulkhead.

Lloyd's Register  
Foundation



-10-

M.T. "ONDINA" AT FREMANTLE 14th JUNE 1943.

FOUND

RECOMMENDED

head was non exist-  
s position forward to  
and the bottom set  
here not supported by

board intermediate  
floors of channel  
gen forward deep  
head badly buckled  
r slightly and rivets  
ess to bottom slack.

re bulkhead between  
entre Tanks set in  
holed over a space  
ft. at starboard  
r and indented above  
space of 6 ft. x 7 ft.

dinal bulkhead between  
and Starboard Tanks  
sing for its full  
en the vertical twin  
hing to the forward  
ulkheads and a posi-  
t to the forward web  
No.2 Starboard. The  
er stringers were  
from this position.  
forward web stiffener  
was bulged to Star-  
lly over a large area  
within three feet of  
anverse bulkhead.  
he after web stiffen-  
ly buckled as well as  
taching the starboard  
after deep transverse  
heating coils in the  
e of No.2 Centre Tank  
.as well as the Fuel  
Pipes. Numerous loose  
ets in addition to  
sly mentioned.

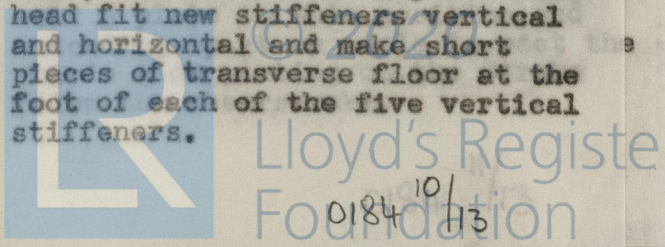
STARBOARD TANK (a) Forward  
stiffeners and their  
and buckled beyond  
om torn and set up-  
ards. Hull plating  
torn and folded  
st forward and after  
e plating was torn  
the bottom row of  
dtrake below sheer-  
is plate was split  
several places and  
ng its lower edge.  
is generally chipped and  
ue riddled.

(69) to remove all slack and  
leaky rivets and fit grummetted  
bolts in lieu thereof to make  
watertight and fill in the entire  
starboard half of this tank with  
cement up to the level of the  
channel tops with an extra depth  
of cement in the bay next to the  
bulkhead when it is completed.

(70) to bridge across this hole  
with a half inch thickness plate  
fillet welded and stiffened.  
A filling piece to be welded to  
the bulkhead to accommodate this  
plate because the bulkhead has  
been bulged forward at this  
location.

(71) that prior to fitting the  
wooden watertight wall in No.2  
Starboard Tank, the upper half  
of the longitudinal bulkhead be  
renewed, and after fitting the wall  
and pumping No.2 Centre Tank dry,  
this bulkhead be entirely renewed  
together with all necessary vert-  
ical and horizontal stiffeners  
and prepare same for attachments  
for lower struts. See drawing  
No. 1A W.G.D. "ONDINA" which will  
save much description. All loose  
rivets to be removed and grummet-  
ed bolts fitted and to be covered  
with cement as stated in Item 69.

(72) to cut away all extraneous  
steelwork with the aid of the  
Oxy Hydrogen torch underwater,  
then all the following work to be  
done after fitting a wooden water-  
tight wall.  
Remove stiffeners and gussets and  
the remains of deep transverse  
floors from the longitudinal bulk-  
head, and after renewing the bulk-  
head fit new stiffeners vertical  
and horizontal and make short  
pieces of transverse floor at the  
foot of each of the five vertical  
stiffeners.





M.T. "ONDINA" AT FREMANTLE 14th JUNE 1943.

RECOMMENDED

Twin angles attaching longitudinal bulkhead to the strake were laid over and rivets slack and the space where the strake was non-existent. Bulkhead has large hole approximately 8 x 9 ft., while the remainder of bulkhead is twisted and furled. Strake and Cargo pipe line valves, struts, expansion valves, valve spindles etc. entirely. Heating coils demolished.

CENTRE TANK.

Strake and Cargo pipe line on the Starboard bulkhead tank. Transverse stiffener on after end of the tripping bracket same buckled. Transverse Bulkhead strake over an area of 16 ft. and holed near its starboard corner and bulkhead was lightly bulged full width up to half length indented over a space of 7 ft. Longitudinal bulkhead generally (from its extending forward) for a distance of approximately 12 feet from the bottom up to the strake or two thirds of its length. This damage consisted of starboard longitudinal bulkhead being torn away from the transverse bulkhead and approximately 6 ft. high by 16 ft. and bulged inwards. Longitudinal bulkhead locally twisted in position and rivetted with many loose

STARBOARD TANK.

Side plating pushed down from bilge Keel up to the strake sheerstrake and bulkhead to the middle strake.

(72) Then fit a longitudinal stiffener at the ends of these short sections of floors just inside the wooden wall to stiffen the projecting bottom plating against "flexing" and so disturbing the bottom fastenings of the bulkhead when at sea. Fill in the space between this bottom stiffener and the bottom of the bulkhead with cement. Heat bottom of strake below sheerstrake and straighten preparatory to fitting channel stiffeners. Deck beams to be left until dry docking as they do not impair the strength of the vessel. Fit cofferdam 16 x 16 ft. and standing 3 ft. away from bulkhead and weld new plate over the 8 x 9 ft. hole and fit stiffeners to same. See under No.3 Starboard Tank for repairs to remainder of bulkhead. See Drawings Nos. 1,2 & 3 W.G.D. "ONDINA" for details of the repairs which were recommended and seen satisfactorily completed. These Drawings should be read in conjunction with this Report.

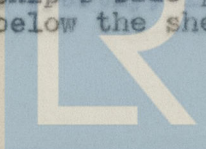
(73) See Drawing No.4 W.G.D. "ONDINA" for details of actual work done on these pipe lines. (This is not on account of damage but for American Navy requirements). Remove, fair and refit stiffener and brackets.

See item 70 which covers the repairs to this location. To remove damaged portion of bulkhead and renew.

Note:- that the cofferdam 16 ft. by 16 ft. fitted over the forward bulkhead of No.2 Starboard Tank not only allowed No.3 Starboard Tank to be pumped out but No.3 Centre Tank.

See Drawing No.4 W.G.D. "ONDINA" for details regarding repairs to item 74 (k). These heating coils to be removed and refitted.

(74) Fair along the top of that plating which was pushed inboard and then weld a plate to this position and extending up at an angle to meet the ship's side plating on the strake below the sheerstrake.



Lloyd's Register  
Foundation

0184 11/13



M.T. "ONDINA" AT FREMANTLE 14th JUNE 1943.

RECOMMENDED

ing was split in  
es.  
end of the hull  
is tank was closely  
any laps and these  
imilar furls in  
khead. There were  
t each furl.  
and lower strin-  
sted beyond repair  
r length of the  
web frame and its  
were buckled  
and the corres-  
floor was twisted  
s also was the  
ing it to the  
bulkhead.  
strut attached to  
frame was twisted  
that its inboard  
and split the plat-  
ngitudinal bulk-  
e applies to the  
this.  
bulkhead was  
outboard half into  
furls merging into  
Hull plating and  
and horizontal stiff-  
isted into shape-  
er bulkhead was  
ft x 9ft approxi-  
e remaining flat  
is is mentioned under  
The top of this  
fairly intact for  
3 ft. for full  
inal floors of chann-  
isted for 8 feet  
r after ends.  
tion frames more or  
buckled in after  
he No.3 Starboard  
rivets slack in  
orst damage.  
and Cargo pipe line  
carried away and  
ms, expansion  
alve spindles broken.  
ating coils damaged  
er ends.  
ts attached to the  
rame were slightly

(74) This in effect would be a false side to the ship at this location. Then the leaks in way of the furls be temporarily stopped by means of sheep-skins and cement. As nothing could be done to remove these furls, it would be necessary to fit a curved plate on the inside of the tank to extend from the first reasonably good frame on the ship's side to the first similar stiff-ener on the remaining flat portion of the after bulkhead. This curved plate to fit as closely as possible to the furls so as to keep the amount of concrete required for this space as small as possible. The plate to be fitted with closely pitched vertical stiffeners and two wide horizontal stiffeners which are really intended to be continuations of the upper and lower stringers and to connect on to the horizontal stiffeners of after and longitudinal bulkheads. The bottom of this structure to be well secured to the bottom and to those longitudinal and transverse floors which were still intact and then several floor bays to be filled in with cement. After this was all done the annular space between the curved plate and the furls was filled in with concrete for strength rather than watertightness, because the curved plate (1/2" thick) had already been made watertight, then the top was plated over and welded. This repair automatically took care of all items 74 a,b,c,d,f,g,h, i & j. In regard to the other items recommend- ed that item 74 (e) be removed and a new temporary horizontal and in addi- tion companion diagonal strut fitted. Also the buckled floor of 74 (d) where buckled outside the newly fitted curved plate be strengthened by means of bridging pieces to preserve end strength. Reference to be made to Drawing No.4 W.G.D. "ONDINA" for details regarding temporary layout of item 74 (k). Item 74 (l). These heating coils to be left as they are. Item 74 (m). To be faired and refitted if time permits.

PAIRS. The following items are to be considered as temporary  
Item 16 (glass windows). Items 17, 18, 20, 21, 43, 44, 45,  
56, 57, 58a, 60, 67, 68, 69, 70, 71, (partly) 72 a,b,c,d,e,f,  
& c, 74 a,b,c,d,e,f,g,h,i,j,k (partly) l & m.

Lloyd's Register  
Foundation

0184 113



- 13 -

M.T. "ONDINA" AT FREMANTLE 14th JUNE 1943.

REPAIRS. The following items are to be considered as repairs. Items 1 to 15 both inclusive, items 19, 22 both inclusive, items 48, 49, 50, 51, 53, 54, 55, 58, 59, 61, 64, 65, 66, 71 (partly).

NO.1 STARBOARD TANK.

BULKHEAD. In order to provide additional strength against pressures on this bulkhead, recommended that extensions be made to the gusset bracket attachments at the foot of each vertical member. This has now been seen satisfactorily completed.

IN WAY OF NO.1 STARBOARD TANK

SHIP'S SIDE PLATING. These bolts approximately 380 in all are used for attaching the 15 x 4 channel stiffeners to the side and they were fitted with the heads outboard, so that the side of the tank could be tightened at will during the voyage as originally contemplated. The vessel was intended for use as a Mobile Depot ship it was found that the grumets would not stand up to the effects of petrol therefore the undersigned recommended and it was agreed with the Owner's Representative that pipe sockets be welded over each bolt head fitted with a screwed plug. This would isolate the bolts from the effects of the Petrol, and when the vessel even-ly departed for dry dock in ballast, the bolts could be inspected at will by the simple expedient way of removing screwed plug and inserting a pipe spanner. It is understood that the fitting of these sockets and plugs was to be borne by the Navy, as it was done to enable them to load Petrol in the fore section of the vessel.

TRIAL RUNS. The vessel's behaviour was noticed on two occasions during trial runs in Gage Roads after repairs were completed and when the sea was comparatively rough on the second occasion the vessel appeared to be quite stiff and satisfactory.

The work of the recommended work has been seen satisfactorily completed and an Interim Certificate issued and attached to this report.

Wm. G. Davies,  
SHIP & ENGINEER SURVEYOR  
TO LLOYD'S REGISTER OF SHIPPING.



© 2020

Lloyd's Register  
Foundation

0184 13/13