

REPORT OF SURVEY FOR REPAIRS, &c.

Date of writing Report 19-8-1940 When handed in at Local Office 29-8-1940 Port of Middlesbrough
No. in Survey held at MIDDLESBROUGH Date, First Survey 18th June 1940 Last Survey 15th Aug. 1940.
Reg. Book No. 6900 on the Wood, Iron or Steel S.S. "EMPIRE ENDURANCE" ex ALSTER

TONNAGE— Built at HAMBURG By whom DEUTSCHE SCHIFF MACHF. WERK LUWANEN 1928 2
GROSS 8570 Owners THE MINISTRY OF SHIPPING Owners' Address
UNDER D.K. 7768 Managers THE BOOTH STEAMSHIP CO. LTD. Port belonging to MIDDLESBROUGH.
NET 5353

Surveyed Afloat and Name of Dock South Dock Destined Voyage
Cell DB or DBa feet; u E&B feet; f feet
total capacity tons. F.P.T. tons; A.P.T. tons; M.T. feet tons.

Only alterations in the existing records of tanks should be inserted.

N.B.—All alterations in the existing records should be underlined.

Last Report, No. Port

(Periodical Surveys, when held, must be reported in detail and serially in the terms of the Rules and items remaining to complete the Surveys should be summarised. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be summarised in the form shown below. Whenever the replacement of Anchors or Chains is reported the particulars should be clearly stated in the space provided on the back of this form. State also the dates and initials of any letters respecting this case.)

In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose and to whom and why they were declined.

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements)	
CHARACTER. X for Special Survey. Date of last Survey and of Periodical Surveys.	Machinery and Boiler Surveys (Including date of N.B., if any).

Society's Freeboard (if assigned) as painted on Ship and now verified 5' 9½" ins.

Was a damage report made by anyone else? if so, by whom?

REPAIRS, OR EXAMINATION AS PER RULE, FOR Classification and Damage.

The vessel was placed in dry dock, bottom render and sternframe, cleaned examined and coated.

on account of damage stated to have been caused through collision and striking a quay the following repairs were effected.

No. 1 DAMAGE (STRIKING QUAY) PLATES NUMBERED FROM FWD. all on PORT SIDE

Shell plate 65 Port side, found indented, was removed, fairied and replaced

" " H4 " " slightly, was fixed in place.

" " H5 " fractured and indented, was removed.

" " J5 " badly indented, was removed.

5 Main frames, in way of the above found astern, were crooked, removed, fairied and replaced (P.T.O.)

SUMMARY OF DAMAGE REPAIRS :—	Shell Plates.	Frames.	R. Frames.	Floors and Bracket Floors	Beams.	Inner Bottom Plates.	Dk. Plates.	Other Items :—
Renewed	9	1						please see report
Removed and Fairied or Repaired	4	33			3		1	
Fairied or Repaired in place	5				5		2	

PRESENT CONDITION OF THE

Decks	good	Bulkheads	good	Engine Room Skylights	good	Copper, or I.M. (State if on Felt.)
Caulking of Decks	good	Ceiling and	good	Coal Bunkers, Openings, Covers, &c.	good	When fitted, Month Year
Coamings	good	Cement Asphalt	good	Oil Bunkers	-	
Beams & Fastenings	good	Rudder	good	Scuppers	good	
Outside Plating	good	Steering gear and its connections	good	Cargo Hatchways	good	
" " in way of sidelights	good	Windlass	good	Hatches	good	
Frames	good	Have pumps been examined and found efficient?	yes	Planking		
Reverse Frames	good	Have Sluice Valves been examined and found efficient?	now fitted	Caulking		
Longitudinals	-	Have Watertight Doors been examined and found efficient?	yes	Treenails		
Transverses	-	Have Ventilators and their Coamings been examined and found efficient?	yes	Breasthooks & Stemson		
Floors	good	Air and Sounding Pipes	good	Timbers of Frame at openings		
Keelsons	good	Doubling Plates under Sounding Pipes	good	" " at other places		
Stringers	good			Stringers, Clamps & Shelves		
Inner Bottom Plating	good			Salting		
Have the Tanks been examined internally?	yes			(State if examined.)		
Have the Tanks been tested?	yes					

General Observations, Opinion as to Class, Recommendation, &c.:

State clearly whether any and, if so, what alteration is suggested to be made in the existing classification and notification of the vessel in the Register Book consequent upon this survey, thus, for example—"to remain as classed in the Register Book without record of Survey," "to remain as classed and to have record of survey, 1-38," or "to remain as classed and to have record of survey, 1-38, and the notations of ss No. 1-38."

This vessel is now in good and efficient condition, and eligible in our opinion to be classed 100% with record of survey 8-40 and notation of ss. no 3-8, 40, subject to the chain cables being renewed within 12 months from 8-40.

Survey Fee (per Section 20) £ 5.60/-	Fees applied for,
Special Damage or Repair Fee (if any) £	19
Travelling Expenses (if chargeable) £	Received by me,
Second Surveyor's Fee (if any) £	19

G. B. Sowerby
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 10 SEP 1940	Character Assigned 100%
Second Surveyor's Fee (if any) £	Received by me,

EMPIRE ENDURANCE EX. ALSTER

N°1 DAMAGE (Contd.)

3 Claw knees, found buckled, were removed, faired and replaced.
 2nd Oh stringer plate in way, found slightly set in, was faired in place.
 2 2nd Oh beams, found slightly buckled, were faired in place.
 3 Tween Oh frames, found set in, were cropped, removed faired and replaced.
 Minor repairs were also effected.

N°2 DAMAGE (striking a groy). PART SIDE Plates numbered from fore.
 Shellplate G8 found indented, was removed, faired and replaced.
 " H7 " badly, was renewed.
 " J8 " abut was cropped, and faired in place.
 " J7 " was renewed, and extended to crop of J8.
 " K7 " abut was cropped.
 " K8 " was renewed and extended to crop of K7.
 " L7 " slightly indented, was faired in place.
 Bla 124 wing plate, found slightly buckled, was faired in place.
 " Shell boundary bar, found set in, was cropped, removed, faired and replaced.
 5 Main frames in way, found set in, were completely removed, faired and replaced.
 5 2nd Oh beam "Kali". buckled, were removed, faired and replaced.
 " " badly, was renewed.
 2nd Oh stringer plate in way, found set in, was cropped, removed, faired and replaced.
 3C beams, found set in, were cropped, removed, faired and replaced.
 2C " slightly, were faired in place.
 5 Tween Oh frames, found set in, were cropped, removed faired and replaced.
 Minor repairs were also effected.

When Anchors or Cables are supplied, the particulars are to be reported in the following form:-

ANCHORS.

Number of Certificate.	Anchors.*	WEIGHT, EX. STOCK.			TEST PER CERTIFICATE.			Description of Anchor.	Makers.	Where and when tested and Superintendent.
		Cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.			
1st Bower ...										
2nd "										
3rd "										
Collective Weight.										
Steam.....										
Kedge.....										

U. Patent date name & Name.

NOT TO WRITE ACROSS THIS MARGIN.

* When a bower anchor is supplied it must be clearly stated whether it is a 1st, 2nd, or 3rd bower.

CHAIN CABLES.

Number of Certificate.	Length and size supplied.		Test per Certificate.		WEIGHT OF CHAIN CABLE.		Length and size per rule.		Description.	Makers of Cables.	When and where tested and Superintendent.
	Length.	Diam.	Statutory.	Breaking.	Supplied.	Per Rule.	Fathoms.	In.			
Iron Stream Chain or Steel Wire....											

II. Smooth side Mechanical Test.

N°3 DAMAGE (Collision) PORT SIDE Plates numbered from fore.
 shellplate F 16+17, found slightly indented, was faired in place.
 " G 16, found badly indented, was renewed.
 " H 15+16, found fractured, were renewed.
 " J 15 indented, was removed, faired and replaced.
 " J 16 badly fractured, was renewed.
 " K 16 indented, was removed, faired and replaced.
 7 Main frames in way, found set in, were removed, faired and replaced.
 1 Tweenish " badly set in, was cropped, removed, faired and replaced.
 6 Tweakish " found set in, were cropped, removed, faired and replaced.
 (See see Cat. Sheet)

Rpt. 8
Port of

EMPIRE ENDURANCE EX. ALSTER

MIDDLESBROUGH

Continuation of Report No. 16891 dated 29-8-40 on the

N°3 DAMAGE (Contd.) 1 Tween Oh frame, found set in, was cropped and part renewed.
 2nd Oh stringer plate in way, found slightly buckled, was faired in place.
 The east steel stem post, found fractured in a number of places, was
 need set in way of fractures, electrically welded, and plate Anthony
 filled in way with electro welding. The post set in way was fitted solid
 with cement to the height of the main deck floor.
 minor repairs were also effected.
 The steel plating in way of all damage was tested in completion
 of repairs and found satisfactory.

3. S. N°3 FOR CLASSIFICATION (as per Letter S. 11614).

The vessel was examined aft and in any dock the bottom, rudder and
 stern frame were cleaned examined found in good condition and coated.
 Hold peaks, deck erection spaces, tanks and engine room air filter
 room cleared, as necessary. The ceiling on tank top, port light or required,
 timber covers lifted, cement clock at vessels sides cut out as required
 in various places, and pipe casings removed. The steelwork was
 examined throughout including oak shoot and shell plating in
 way of opening, and plating in way of scylights, scuttles and coals
 as necessary, and found or placed in good condition.
 all double bottom tanks including expendams and coals, were
 examined internally sealed and coated as necessary, and found
 or placed in good condition.
 all double bottom tanks, peak tanks and deep tanks, were tested
 and found tight.

Screws, casings and deckhouses, anchors and chain cables including stream
 anchors and chain cable, chain locker, morts, (or wedges) and rigging,
 (not attached), general equipment, hatchways and supports, hatch
 covers, ventilators and coamings, main and auxiliary steering
 gear and connections, windlass, load pumps, watertight doors,
 air, founders and fitting pipes, examined and found or placed in
 good condition. Smelting plates found or placed under all
 sounding ports. The freeboard assigned verified.

all the steering chains including strops, swivels and tools
 and found satisfactory. The necessary spare gear was supplied.
 The echo sounding device was overhauled, the stowage in
 way and coals examined and all found in good condition.

Repairs effected in account of wear and tear.

No 107 hatchway coamings at corners, found worn, were doubled.
 A number of air pipes found fractured or worn were renewed.
 minor repairs were also effected.

NOTE: It was not considered necessary to drill the shellplating as
 the scantlings and condition of the plating etc in the damage was found to
 be satisfactory.

There is a deficiency in the equipment of 1 bower anchor and

P.T.O.

1265-D2123

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Rpt. Sa

Middlesbrough Continuation of Report No. 16891 dated 29-8-40 on the

30 fathoms of chain cable. The chain cable on board was recommended to be renewed within 12 months on account of the results of the tests carried out at the Proving House and forwarded with our letter of the 29th July 1940.

class 2
The closing appliances on the bulkheads at the after end of the bridge will be altered to class 1 or the freeboard deck hatchway coamings increased to 9" at the end of the present emergency.

There were some minor insects on the shell plates on the following plates, which were noted for reference but need not be dealt with, as the plates are efficient and in good condition, and the insects so slight that they do not affect the vessel's smoothness.

Port side - 18⁰ 406 plate from food in the 2nd stroke below sheath
1⁴ 4 plate from aft at the upper edge in the 1st
stroke in 18⁰ 5 " food in the 1st stroke below sheath

To be noted in the S.R.L. An anchor and 30 fathoms of chain cable to be supplied, the class 2 closing appliances in the bulkhead at the after end of the Bridge to be replaced by class 1 closing appliances or the hatchway coamings on the Starboard deck (upper deck) to be increased to 9°, at the end of the present emergency period.

High among the
mildly undulating hills and low mountains and spurs that
divide the plateau from the coastal plain the water was rather
clear and the sand bottom composed of fine silty material (silt).
The water had a yellowish tint and the sand bottom was covered
with yellow, greyish, reddish, and brownish sand. The water
was very clear and the sand bottom was composed of fine silty material (silt).

about one thousand, each operation costs \$1000 but the
addition cost will make present the \$15000 a year net
income which is about the average over the system. Then the
third way is to let us run unincorporated bus lines
not necessarily through a city or town
which can be used, either to connect points not yet
connected and connect small and country cities for whom it
is difficult to run a line.

or glands which it does & processes according to some 3rd stage
and now regards it, in its initial stages, as a simple and

the more work I do, the more I am learning, and the more I am learning, the more I am doing.

s.s. "EMPIRE ENDURANCE" ex s.s. "ALSTER"
The approximate extent of the damages to the shell plating due to
collision (No. 3 damage) and striking a quay (Nos. 1 and 2 Damages)
is shown on the sketches overleaf.

It will be noticed that shell plates H5, J16, and H15 & H16 were found fractured, although the character of the indents in way was such as would not generally result in fractured plates. The extensive fractures, the approximate extent of which is shown on the sketches, in our opinion started at the rivet holes. There were also some minor fractures which had definitely started at rivet holes.

The results of tests, shown on the attached sheet, taken on standard test pieces cut from in way and clear of the fractures on the condemned plates, as shown on the sketches, both for tensile and bend were found to be satisfactory. In addition, the attached analysis, was made of the steel. The nitrogen content which was also estimated confirms that the steel is not of "Thomas" origin; the silicon content indicates that it is "Brimmed" steel.

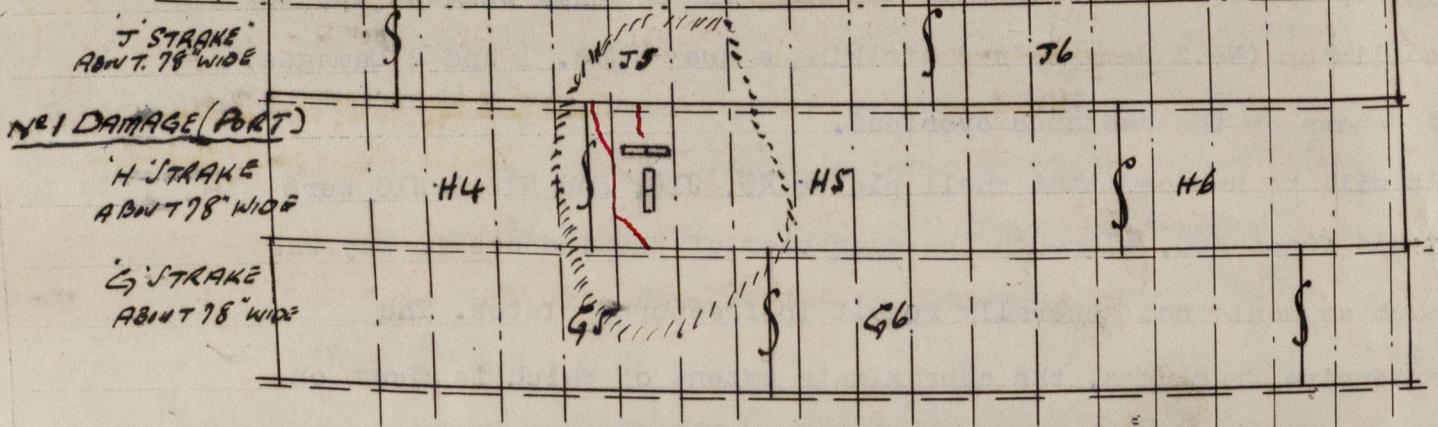
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EMPIRE ENDURANCE ex ALSTER

← FOR'D

SKETCHES SHOWING APPROXIMATE EXTENT OF DAMAGES AFT →

2ND DK.



EXTENT OF FRACTURES SHOWN IN RED.
MAXIMUM INDENT ABOUT $\frac{1}{4}$ " IN WAY OF FRACTURES.

TEST PIECES ARE SHOWN THUS

N^o 2 DAMAGE (PORT)L STRAKE
ABOUT 77" WIDEK STRAKE
ABOUT 78" WIDE

J STRAKE

H STRAKE

G STRAKE

UPPER DK.

2ND DK.

MAXIMUM INDENT ABOUT 3"

N^o 3 DAMAGE (PORT)

K STRAKE

J STRAKE

H STRAKE

G STRAKE

F STRAKE

2ND DK.

EXTENT OF FRACTURES SHOWN IN RED.MAXIMUM INDENT ABOUT 5" IN WAY OF FRACTURES

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