

SUPPLEMENT No. 525

Laur Uno:

Report. Damage to bow visor locking devices of passenger car ferry "DIANA II" in January, 1993, and preliminary conclusion i.r.o. the loss of the bow visor of m.v. "ESTONIA" on September 28th, 1994.

Tallinn 1994.

To the members of the Joint Accident Investigation
Commission

REPORT

Damage to bow visor locking devices of passenger car ferry "DIANA II" in January, 1993. and preliminary conclusion i.r.o. the loss of the bow visor of m.v. "ESTONIA" on September 28th, 1994

Referring to the *Detailed Report of Survey No. HBG/93/7-A* made by a surveyor of *Bureau Veritas* and appropriate photos it should be noted that a casualty similar to "Estonia" disaster was going to take place with m.v. "Diana II" in January 1993.

According to the above mentioned Report and photos a damage survey together with damage repairs of locking devices of m.v. "Diana II" was carried out on January 16 - 17, 1993.

Extract from the Report

...following damages were found on the bow door.

The lug for SB lock plunges was lost.

The lug in center line (the "Atlantic lock") was bent and the weld cracked.

The lug for Port side plunges was bent and the weld cracked.

A minor crack at the hinge on SB side.

The girder in center line and two webs on SB side cracked.

Following repairs carried out:

The lug SB side renewed with doubling plate on the back side.

The lug in center line faired and rewelded. The stay above the lug renewed.

The lug Port side faired and the crack chiselled and welded.

The crack at SB hinge chiselled and welded.

The cracks at the girder and the webs chiselled and welded.

Function test of the bow door carried out and found to be in order.

According to information available the "Diana II" was in January, 1993, trading on regular passenger/cargo line between Trelleborg and Rostock with a distance between those ports about 95 n.m. A weather report of *Estonian Meteorological and Hydrological Institute* says that South, South Westerly and Westerly winds up to 20 metres per second were prevailing in this area on January 15 - 16, 1993.

Taking into account that the above mentioned area is exposed to South Westerly winds the damage to the locking devices of m.v. "Diana II" was presumably caused when proceeding from Trelleborg to Rostock on January 15th and/or 16th, 1993.

Since the bow construction of m.v. "Estonia" and m.v. "Diana II" was identical it would be considered highly regrettable that *Bureau Veritas* had not taken any preventive measures in respect of the bow visors of all vessels of this type classed by the same classification society.

If they had the tragic loss of the "Estonia" could have been avoided. Unfortunately resolute measures were taken and appropriate instructions given only after the disaster.

Please find attached:

1. Copy of the *Detailed Report of Survey No. HBG/93/7-A* of *Bureau Veritas*.
2. Copy of the *Weather Report of Estonian Meteorological and Hydrological Institute*.
3. Copy of a fax message of *Bureau Veritas No. 1463*, of 1.10.1994.
4. "DIANA II" picture of the damaged bow visor's SB side lock.
5. "DIANA II" picture of the damaged bow visor's Port side lock.
6. "ESTONIA" picture of the damaged bow visor's SB side lock.
7. "ESTONIA" picture of the damaged bow visor's Port side lock.

I suppose comparing the above pictures of very similar damages of the both ships together with other details available it would be possible to find out the real sequence of separating the bow visor of m.v. "Estonia" on the tragic night of September 28th, 1994.

Kindly



Uno Laur
Master Mariner
Member of the Joint Accident Investigation Commission

10. December 1994
Tallinn

Encls.



Bureau Veritas

MARINE BRANCH

DETAILED REPORT OF SURVEY

Annex No to Report No Page No Total Pages

Register Number Name of Shlp

Cart. concerned

| | | | | | | | |
|------|--|------|-----|----|----|------|--------------------------|
| PROV | HULL <input checked="" type="checkbox"/> | MACH | AUT | MB | AB | RMCI | <input type="checkbox"/> |
|------|--|------|-----|----|----|------|--------------------------|

 (one square only to be ticked off)

Visa No endorsed or survey of C.S. or D.S. Items (continuation to AdE 2528)

Survey carried out from to

REPORT OF SURVEY

On request by the Chief Engineer survey of the closing devices for the bow door carried out and following damages were found on the bow door.

The lug for SB lock plunges was lost.

The lug in center line (the "Atlantic lock") was bent and the weld cracked.

The lug for Port side lock plunges was bent and the weld cracked. A minor crack at the hinge on SB side.

The girder in center line and two webs on SB side cracked.

Following repairs carried out:

The lug SB side renewed, with a doubling plate on the back side.

The lug in center line faired and rewelded. The stay above the lug renewed.

The lug Port side faired and the crack chiselled and welded.

The crack at SB hinge chiselled and welded.

The cracks at the girder and the webs chiselled and welded.

Function test of the bow door carried out and found to be in order.



The latest published Rules of the Bureau Veritas Marine Branch and the General Conditions there in applicable. Le dernier édition des Règlements de la Branche Marine du Bureau Veritas ainsi que les Conditions Générales qui y figurent sont applicables.



FAX

Paris-La-Défense,
Date :

1st October 1994

BRANCHE MARINE
MARINE BRANCH
DNS / 33 (1) 42.91.52.93Ref.: 1463
Nbre de pages: 1
Nb of pages: 2 1

| | |
|------------------|---------------|
| <i>At To</i> | ALL DISTRICTS |
| <i>De / From</i> | DNS |

| | |
|------------------------|---|
| <i>Objet / Subject</i> | SHIPS WITH SERVICE NOTATION - PASSENGER FERRY - ROLL ON ROLL OFF PROVIDED WITH BOW VISOR AND FORWARD RAMP |
|------------------------|---|

1. Head Office has decided to submit for inspection the bow visor and forward ramp arrangements of ships in caption at the next call at the home port.
2. You are kindly requested to contact the managers of such ships by Monday 3rd October 1994 in order to plan the immediate inspection as soon as the ships are in the home port.
3. You must establish a list of such ships belonging to your district and to communicate the same to your MO and CM by Tuesday PM, 4th October 1994, at the latest.
4. All ships covered by this scheme of inspections must be inspected prior to 17th October 1994.
5. The extent of the inspection to be conducted is as follows:

5.1 BOW VISOR

To verify the condition of:

- plating and internal structure
- packing and the fastening devices
- manual or remote closing and securing devices

Note: All parts of the locking devices, irrespective of their type, including their attachments to the hull or visor are to be carefully inspected.

- bow visor deck hinges and their supporting devices, including the attachments on the deck and to the bow visor.
- bow visor closing indicators (locally and on bridge) where applicable. They should indicate that the door is properly closed and secured.
- test operation of bow visor and power pack system to be carried out, including verification that the locking devices are fully engaged

5.2 FORWARD RAMP

To verify the condition of:

- plating and internal structure.
- packing and the fastening devices
- hinges and their attachments to hull and ramp.
- locking and securing devices.
- ramp door closing indicators (locally, if any, and on bridge). They should indicate that the ramp is properly closed and secured.
- operation of the video camera, checking its efficiency, if no video camera is provided the checking of the leak detection system.
- operation of all ramp doors, including verification that all locking and securing devices are fully engaged, and the efficiency of the power pack.
- hose test to be carried out.

6. Further to the above inspections the surveyor will have to request immediate repairs in case defects are found or mal functioning of the equipment. In case repairs cannot be undertaken immediately, the MO must be informed by the fastest means of communication for instructions. In all cases the MO, copy to CM, must be informed immediately of any damages or defects.

7. On completion of the inspections, the surveyor must endorse the hull certificate with the following visa:

"Occasional survey of hull for inspection of Bow Visor and Forward Ramp Door"

8. The survey will be at Owner's cost.

9. The usual procedure for invoicing and reporting is to be applied.

Regards


G. Chaves

BUREAU

VERITAS

FAXMARINE DIVISION
DNS / 33(1)42.91.52.93Ref.:
Page No.: 1/2TO:FROM:SUBJECT : SHIPS WITH SERVICE NOTATIONPASSENGER FERRY
ROLL ON - ROLL OFF

Dear Sirs,

- Bureau Veritas has decided to carry out inspections of ships' types "PASSENGER FERRIES" and "ROLL ON - ROLL OFF" provided with bow visor and forward ramp at the next call to their home port.
- We have instructed our local representative to contact you in order to make the necessary arrangements for this intervention which we shall endeavour to be completed by the 17th October 1994.
- The scope of these inspections will be as follows :

BOW VISOR

To verify the condition of :

- plating and internal structure,
- packing and the fastening devices,
- manual or remote closing and securing devices.

Note : All parts of the locking devices, irrespective of their type, including their attachments to the hull or visor are to be carefully inspected.

- Bow visor deck hinges and their supporting devices, including the attachments on the deck and to the bow visor.
- Bow visor closing indicators (locally and on bridge) were applicable. They should indicate that the door is properly closed and secured.
- Test operation of bow visor and power pack system to be carried out, including verification that the locking devices are fully engaged.



FAX

Ref. :
Page N° 212

FOREWARD RAMP

To verify the condition of :

- plating and internal structure,
 - packing and the fastening devices,
 - hinges and their attachments to hull and ramp,
 - locking and securing devices,
 - ramp door closing indicators (locally, if any, and or bridge). They should indicate that the ramp is properly closed and secured.
 - Operation of the video camera, checking its efficiency, if no video camera is provided the checking of the leak detection system.
 - Operation of all ramp doors, including verification that all locking and securing devices are fully engaged, and the efficiency of the power pack.
 - Hose test to be carried out.
- In the meantime, you are kindly requested to instruct your staff to conduct an immediate examination of the above items. In the event of any defects being found would you kindly notify us and we shall arrange our Surveyor to attend.

We would be grateful for your full cooperation to expedite these inspections.

Best regards,



"DIANA II"

PICTURE OF THE DAMAGED BOW VISOR'S SB SIDE LOCK



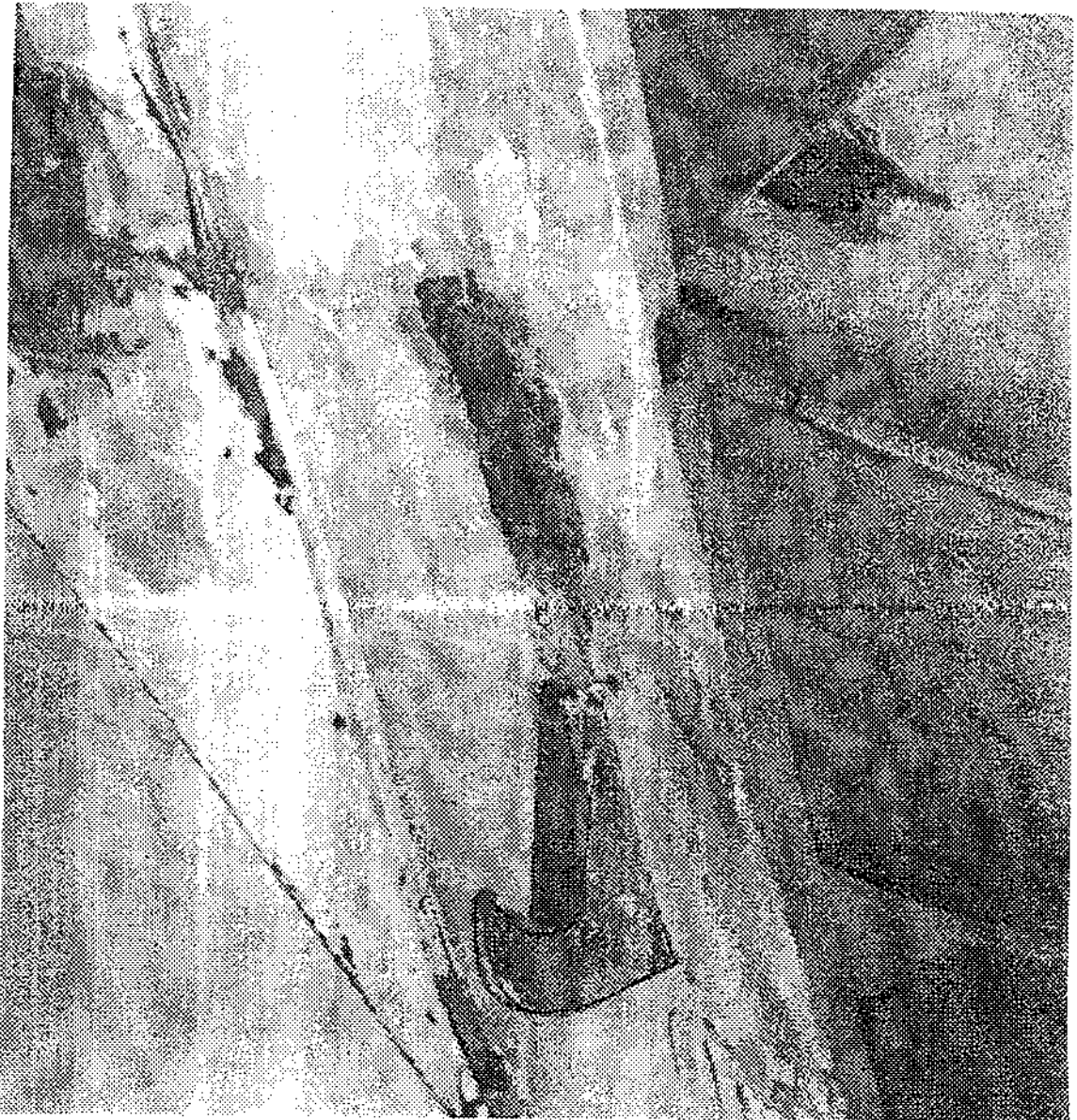
"DIANA II"

PICTURE OF THE DAMAGED BOW VISOR'S PORT SIDE
LOCK



"ESTONIA"

PICTURE OF THE DAMAGED BOW VISOR'S SB SIDE
LOCK



"ESTONIA"

PICTURE OF THE DAMAGED BOW VISOR'S PORT SIDE
LOCK