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Diving Survey

Following groundings.
Necessary information prior to installation
of «Miko Plaster»

ATTENTION:

DERES REF.:/YOUR REF.: Salvage kit
VÅR REF.:/OUR REF.:
NESBRU-NORWAY DEN/DATE: 03.05.2007

RE. Dive survey prior to installation of Miko Plaster®

Miko Plaster® is a heavy duty special “hat shape” patch intended for providing a temporary watertight seal over openings in ships hulls following groundings etc. The patch is secured to the hull by means of securing a “frame” around the edges of the Miko Plaster®. The frame is secure to the hull by means of bolts that are fixed through the hull, by using an underwater tool HD200. The Miko Plaster® will provide a temporary seal in emergency situations and/or limit the extend of pollution and keep water on the outside of the patch. The basic design of the patch is a “hat shape” design allowing the tarpaulin to form a watertight seal even when indents, protrusions, significant deformations and double curved plates are present.

There are however limitations in using this method for keeping oil on the inside and water on the outside of the hull. Our experience shows that puncturing the patch when pressuring it over protrusions and/or sharp edges represents the highest risk. In order to provide the operators of the vessel with the best possible overall solutions, it is important to prepare for, investigate and identify as many possible “traps” and uncertainties prior to ordering and installing the Miko Plaster®.

This questionnaire is designed to assist the divers and installers of the Miko Plaster® to identify and prepare for an efficient patching of the damaged vessel with a smallest possible risk of something unexpectedly to happen.

Your comments to this questionnaire and method is highly appreciated. Please do not hesitate contacting the undersigned for more information.

Yours sincerely.

Nicolai Michelsen
Miko Marine AS

Miko Marine AS
Last update: 04.05.07

OTHER MIKO COMPANIES: MIKO AS – MIKO TRADING AS – MIKO PLAST AS

Questionnaire

1.0 General

- 1.1 Type of vessel -----
- 1.2 Main dimentions (Length, Beam, Depth, Draught) -----
- 1.3 Present position of vessel -----
- 1.4 Vessel bound for -----
- 1.5 Waterdepth at location ? -----
- 1.6 Current at location -----
- 1.7 Tide difference -----
- 1.8 Swell conditions -----
- 1.9 Visibility at location -----
- 1.10 Access to general services and infrastructure -----
- 1.11 Is vessel loaded with cargo. If yes “what type” -----
- 1.12 Access to damaged area -----
- 1.13 For what intention will the Miko Plaster[®] be used ? -----
- 1.14 Other relevant general information -----

2.0 Description of damage to ship's hull

- 2.1 Reason for damage – description of incident -----
- 2.2 General description - type of damage? -----
- 2.3 Where on the vessel is the damaged area ?
(bow area, flat bottom, side shell, bilge area ?) -----
- 2.4 Waterdepth at damaged area ? -----
- 2.5 Keel clearance in way of damaged area -----
- 2.6 Length of damaged area (from sound material to sound material)
NOTE Sound material means also free from indents -----
- 2.7 Width of damage (from sound material to sound material)

OTHER MIKO COMPANIES: MIKO AS – MIKO TRADING AS – MIKO PLAST AS

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- 2.8 Curvature (Natural) in way of damaged area
- 2.9 Size of indents ? (Width, length, depth and profile) -----
- 2.10 No of cracks -----
- 2.11 Size and geometry of cracks and openings -----
- 2.12 Vertical or horizontal cracks -----
- 2.13 Description of internal damage, eg as seen from the outside
 damage to main frames and transvers Bulkheads? -----
- 2.14 Distance between frames in damaged area -----
- 2.15 Platethickness in damaged area -----
- 2.16 Are there protrusions present ? -----
- 2.17 Description of size, sharpness and geometry of protrusions

- 2.18 Fluid on the inside of the damaged area (oil, water, gas) -----
- 2.19 Corrosion and marine growth -----
- 2.20 Sketch of damages with frame no. and transverse
 BLH as reference -----
- 2.21 Other relevant information related to the damage -----
- 2.22 Blueprint of patch on vessel (give dimensions.) -----
- 2.23 Other information related to the damage -----
- 3.0 Personal opinions**
- 3.1 No of Miko Plaster® needed -----
- 3.2 Possibilities to protect the patch against protrusions and
 sharp edges (Removal, protection with rubber mats etc) -----
- 3 3 Availability of materials incl. Cutting equipment -----
- 3.4 Other options / recommendations -----



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4.0 The Miko Plaster®

4.1 Size of patch including an overlap of min. 0,3 m onto
sound material on all sides of the damage area -----

4.2 Additional protection, reinforcement, webbing or
protection with rubber matting? -----

4.3 Additional information -----