ISLAND VIEW SHIPPING SERVICES

TO : AS PER DISTRIBUTION LIST OUR REF : 05/ 2024

FROM : DPA DATE : 15 Jan 2024

COMPANY CIRCULAR 05/2024
FLEXIBLE HOSE – PMS and MONITORING

Dear Masters/Chief Engineering Officers

Following an incident onboard one of the vessels of our fleet where a flexible hose containing hydraulic oil burst spilling hydraulic fluid onto the Main Deck, the following corrective actions have been implemented: The process management of vessels planned maintenance on FLEXIBLE HOSES is paramount. The following will be incorporated into the SMS at the end of 2023. This serves as an instruction for all to ensure that the procedures are in place with immediate effect.

Roles and Responsibility
The Master is the responsible person for implementation and compliance with all management systems on board our vessels. The CEO and CNO assists him in implementing that the process is carried out effectively. The Junior officers are NOT to be left alone when doing maintenance on machinery/equipment, constant supervision and mentoring to take place to ensure this policy is adhered to.

Purpose

- The hoses are ESSENTIAL equipment on board, especially when it comes to operating of safety equipment, and preventing oil spills.
- To ensure that hoses are treated, stored and fitted in the correct manner as per good industry practices.
- Chief Engineers and Captains are to mentor and train inexperienced persons to complete complicated tasks at all times. Although rudimentary it may seem, a hose is important in the way it is fitted and stored for future effective use. Its pressure rating must be suitable for the system it services.
- Proper documentation, recording source of supply, pressure ratings etc must be kept on record in BASSNet.
- To instil a thorough inspection regime into the crew on board, by setting guidelines in the PMS – this is the one most fundamental instrument of control that is required in care of hoses on board the ships. THOROUGH INSPECTION. The crew need to be made aware that when they see a damaged hose during their walk abouts, they need to report it and implement corrective action as a priority.
- Very important, is that the crew made aware that it takes 2 persons to start up hydraulicc systems. One starting up, and the other walking around to ensure there is no leaks, they must be on radio contact during this start up. Bridge/OOW needs to be informed of this operation. People need to understand that you may need to stop this in an emergency as soon as it has started.
- This applies to all hoses fitted on deck that is exposed to weather, UV, which could become a pollution hazard.

Scope
All vessels under Island View Sipping Services, keeping them abreast of findings on operating equipment. This circular pertains to but is not limited to:

- Winches
- Hatch cover hydraulic systems
- Lifeboat and rescue boat systems

Procedure

1. Hose maintenance needs to be supervised by the Chief Engineer.
2. He can delegate the job to both 2EO and CNO but needs to be present for most of the time during maintenance processes related to flex hoses.
3. Chief Engineer is to ensure the persons conducting the maintenance have been briefed on the repair/maintenance process, ensure the crew have read the makers manuals, has made reference to technical bulletins etc. If in doubt contact his Ship Manager.
4. The quarterly, annual and 5 yearly inspection regime maintenance is covered in BASSNet as scheduled jobs. All records of maintenance to be religiously updated in BASSNet. When hoses are renewed please ensure paperwork of hoses and supplier details are posted into BASSNet into the job order.
5. Every 60 months or at every special docking - All open/external/subjected to UV flexible hoses to be renewed.
6. Every 3 months - All fitted hoses on board internal or external to have a BASSNET routine, are to have a THROUGH inspection.
7. Every 12 months, the denso tape fitted around all fittings as per item 11 below needs to be renewed.
8. All spare hoses on board to be stored at room temperature, either hanging up, or on a shelf where they are not stacked one on top of each other.
9. Each spare hose, when received new, the internal needs to be filled with oil and then drained properly before storing. This protects the inner layer from deteriorating. The outer layer has a more robust layer that is designed for withstand rougher atmospheres. New hoses are normally delivered with end caps, do not discard these, use at all times. If any hose is missing these caps, you can cling wrap the ends with shrink plastic. This keeps hot air from flowing through the hoses and stops ingress of dust particles.
10. During quarterly inspections, any sign of deterioration either from UV, or mechanical damage, the hose needs to be replaced before it is used again. The CEO needs to be informed and the item placed in the defects list.
11. Annually - All fittings on Flexible hoses needs their denso tape to be renewed. When renewing please ensure the paint on the fittings is still good, grease is applied, then the denso tape is applied tightly until the grease squeezes out. Wipe any excess grease off, allow to settle and dry for a few days, then paint over in yellow, the colour code symbol of hydraulic lines.
12. Hose assemblies must conform to the relevant hose and hose connector, see instructions in relevant manuals and/or the ISO 6803, DIN 20066 part 1.
13. If the hose and connectors have different nominal pressure rating then the lower of the rating needs to be used as the max working pressure.
14. All hoses and connectors need to conform to the max allowable working pressure of the system, check the manual for operating pressures.
15. All hoses must display the markings of the maker, date of manufacture, max permitted working pressure. The delivery notes, Copy of PO etc. needs to be kept in a plastic sleeve together with the set of hoses received.
16. All hoses should be obtained as far as possible from the original maker, ordered from the ships manuals. Hoses which are made up in workshops should be used in emergency situations only and time bar limited to the vessel obtaining the makers hose.
17. Spares - Very important, best practice indicates that the lifespan of hoses is between 4 and 5 years, whether in storage or in use. It is critical to ensure that we keep min spares in stock, and to also ensure we ask for date of manufacture of the hoses when we are ordering. We should not accept hoses that are over 3 months old from manufacture date before they get offered to us. When we speak of minimum spares, we should have at least one set of hoses for one complete hatch system. For winches, you should have one of each

size hose as well. For cranes you should have one complete crane set on board. For Lifeboat davits you should have one of each size. You should also all allow to have a few of the critical nipples and unions, as these normally need renewing, when the hoses need to be renewed, which is dependent on the quality of application of the denso tape.

18. Macgregor standards for control of hydraulic hoses and fittings make use of ISO 6803, DIN 20066 part 1. CEO to make use of these standards.
19. When in doubt to contact his Ship Manager and/or the Fleet Manager for guidance.

Correct Installation Techniques

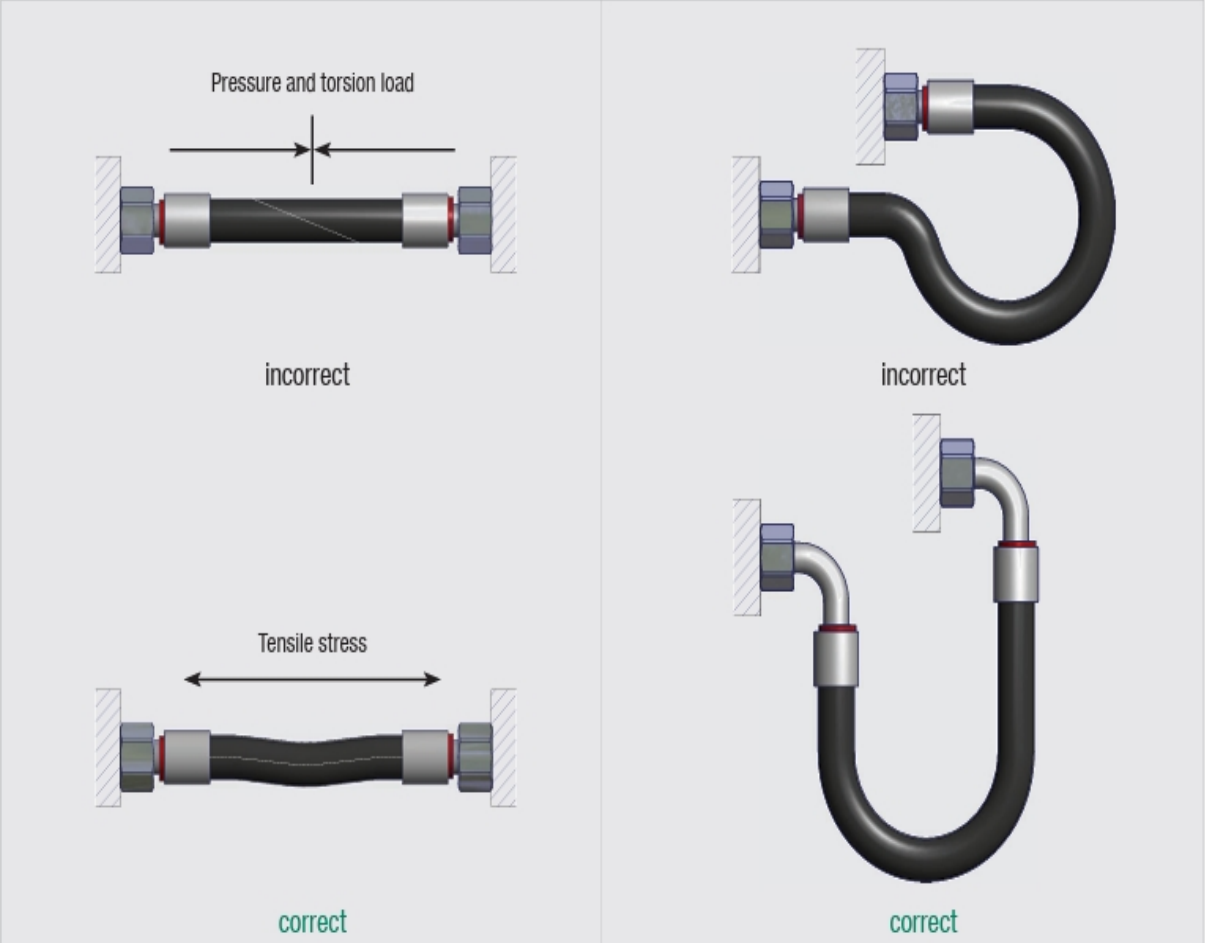
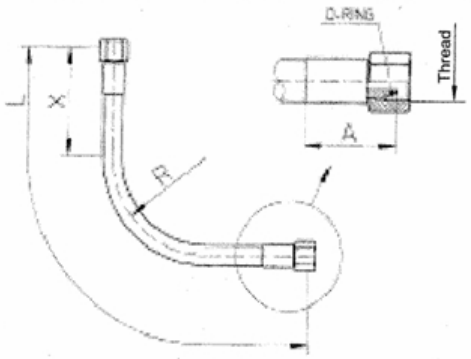


Fig. 1

Avoid twisting the hose. Hoses must be installed in such a way there is no resultant tensile stress except from the own weight of hose (see Fig. 1).

Fig. 2

Wherever possible, hoses should be installed in accordance with their natural position, whereby the bending radius must not be less than the minimum permitted bending radius (see Fig. 2).



Size	For pipe Ø	Thread	Outside diameter	Inside diameter	R min	X	A	WP MPa	Mass Hose kg/m	Pair of fittings kg	Min length 90°-hose
3	12	M20x1,5	19	9,5	63,5	125	55	33	0,42	0,2	600
4	16	M24x1,5	22	13	90	150	70	27,5	0,51	0,34	600
5	20	M30x2	25	16	102	150	82	28	0,74	0,48	800
6	25	M36x2	32,2	19	121	175	80	28	0,93	0,69	1000
7	30	M42x2	39,7	25	152	200	100,5	28	1,93	1	1000
8	38	M52x2	45,5	32	419	225	113	28	2,90	1,8	1200

WP is max working pressure.

Hose length recommendation table

Size	Length range (mm)	Step (mm)
3	400...1200	100
4	500...1400	100
5	600...1400	100
6	700...1400	100
7	800...1400	100
8	800...1500	100

5.0 References

1. Grindrod Shipping SMS
2. ISO 6803

DIN 20066 Part 1

REGARDS

p.p

Rennie Govender
Fleet Manager

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