NAVALIMPIANTI - TECNIMPIANTI
G R O U P

TECHNICAL BULLETIN

The present Technical Bullettin contains technical information aimed to support/improve Navalimpianti Tecnimpianti equipment in operation.

This Technical Bullettin applies to: Gantry Davits Electric Travelling for life rafts type GDET-RF35P

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S E R V I C E

Technical Bulletin Nr. 006-14

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Technical Bulletin Nr. 006-14
February 12th, 2014

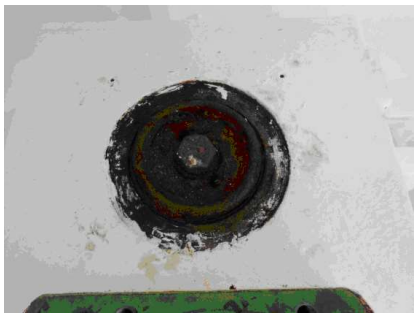
Product:	Gantry Davits Electric Travelling for life rafts type GDET-RF35P
Purpose:	Maintaining the efficiency of the end shaft on travelling reduction gear
Summary:	This bulletin contains the root cause of a recent failure and relevant recommendations
Application:	The improvement is recommended for Gantry Davits Electrically Travelling type GDET-RF35P

Event description:
It has been brought to our attention a case where during the manual launching operations of the liferafts stations davits, using all the levers, the relevant mechanisms and gears resulted difficult to operate and noisy.
Our technical dept. investigated this issue with the customer and following findings have been highlighted.
Root causes :
1. Presence of rust and evident traces of corrosion into the gear box and free end of the transmission shaft, with the consequent breakage of the ball bearing.

the corrosion of the bearing started due to damaged sealing.

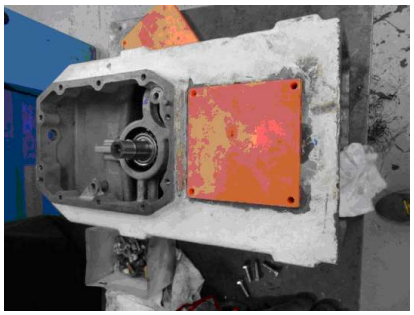
2. Inadequate, and in some cases lack of a sufficient maintenance and protection of the free end shaft of gear box.

The external position of the shaft, its exposed position, and lack of maintenance have resulted in the presence of rust that damaging and accelerate the aging of lip seal. (1)



(1)

(2)



3. Lack of a sufficient level of oil inside the mechanical gearbox casing or not sufficient rotation speed with result of lack shaking lubrication . (2)

The bearings and the mechanical parts inside the gearbox casing were not properly lubricated and showed the beginning of rust due to lack shaking lubrication, since the gearbox is more frequently manually used than by electrical power.

As a general instruction,

Routine maintenance includes visual inspection and protection / greasing of all the components of LSA system.
Moreover, greasing interval should be adjusted to the service conditions of each single station. Visual inspection is recommended every month as a general checking before each operation.

Corrective actions – Root causes no.1,2 & 3

The above combined events may lead to a damage of the gear box, therefore the following instructions and improvements are recommended:
1. Increase the oil level inside the gear box in way to put under corrosion protection the shaft bearings in due of the manual operation of the system. Increasing the oil level there created an internal protection of the ball bearing , but it is necessary to pay more attention for leakages from the lip seal at the end of the shaft.
2. Protection with grease of the shaft end and lip seal. This is part of routine maintenance as indicated in OMM.
3. Reduce the exposition of the gear box end shaft by providing a protective cover. This is an improvement that have low a cost impact but will enhance the safety integrity level of the system. It requires the installation of part number 72/1/10-19-20.
The recommended improvements should be applied all together, depending of the frequency of manual or electric operation, if the manual operation is only in emergency, the increasing of oil level is not recommended.
For any further information please contact our service department.

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