

Subject :

Maintenance for electro-hydraulic cranes

# **NKTECHNICAL INFORMATION**

No. : 199

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To Shipowners and Shipbuilders concerned

Casualties occurred to jibs of over-10-years-old electro-hydraulic cranes installed on board some NK class ships. The casualties were such that jibs of the cranes fell suddenly and sustained damages when lowered without cargo after the cranes were started.

The circumstance and the result of the investigation into the cranes damaged suggest possible causes of the fall of the jibs which are ; (1) insufficient warming up operations of the cranes at the cold temperature (about -10°C) might have kept the viscosity of the system oils of the electro-hydraulic systems high resulting in the systems not functioned as designed, and (2) deterioration of the oil motors as a result of insufficient maintenance work for the electro-hydraulic systems might have caused irregular rotations of the oil motors.

While assuming that you have done warming up operations and maintenance work for electro-hydraulic cranes installed on board your ships in accordance with the Operation and Maintenance Manuals of the respective manufacturers, we sincerely recommend in view of the above that you should pay due attention to the following and take appropriate measures where necessary.

1. Warming up operations for sufficient periods at cold temperature in winter seasons. After warming up operations, jibs should be lowered/uplifted without cargo several times near the jib rests.
2. Clean-up of oil filter elements, periodical checking of the system oils in respect of cleanliness, viscosity, etc., and renewal of the respective components where necessary.
3. Any other maintenance work in accordance with Operating and Maintenance Manuals of the manufacturers.

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