

PHYSICAL SCALE MODEL OF KORMORAN II SHIP  
FOR ELECTROMAGNETIC FIELD STUDIES AND SIMULATIONS

KORMORAN II  
MAGNETIC MODEL



The physical scale model allows (together with dedicated equipment and stands in CTM's magnetic fields laboratory) studies and tests of:

- coils' system for minimization of permanent and induced magnetic fields;
- electromagnetic fields originating from eddy currents induced in hull due to roll and pitch movements of the ship in geomagnetic field;
- magnetic fields from small ferromagnetic masses modelling selected equipment;
- systems controlling the minimization of magnetic and electromagnetic fields;
- impact of technological processes on magnetic and electromagnetic characteristics of the hull;
- operation of the system in simulated conditions.

The physical scale model is used for experimental studies and investigations of the ship's magnetic and electromagnetic field distribution and for simulation of the onboard degaussing system. Results of magnetic field simulation and measurements using the physical scale model together with outcomes of calculations and computer modelling and simulations of magnetic field distribution and minimization are necessary during development and optimization of the degaussing system for KORMORAN II ship.

TECHNICAL PARAMETERS

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| Scale:   | 1:14   |
| Length:  | 4,0m   |
| Beam:  | 0,72m  |
| Material – austenitic steel with:                          | $\mu_r=1,02$   |
| Degaussing system consists of multiple coils of each type: | M-type – 19 coils<br>L-type – 11 coils<br>A-type – 9 coils |