Ship simulator exercises for emergency situations

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Abstract

CERONAV Constanta has 4 types of simulators: Full Mission Bridge Simulator, Full Mission Engine Room Simulator, GMDSS and Tanker simulators.

Our department is responsible of two of these simulators (Full Mission Engine Room simulator and tankers simulators).

Generally, all exercises are carried out with a view to provide good practice for daily normal operation of the ship’s equipment.

During the exercises the instructors introduce certain “malfunctions” and the trainees must solve the problem in order to maintain efficient operation of the ship.

Some serious malfunctions can lead to a total breakdown.

Many times, we propose to start the exercise from this breakdown point. The ship is thus in an emergency situation (e.g. black out, spillage, broken LNG cargo tank or others alike) and the trainees must find the best solutions to restore previous conditions and operate all ship’s systems.

Through this kind of exercises we intend to achieve following objectives:
- The trainees get used with various crisis situations;
- The trainees learn how to avoid confusion and state of panic;
- The trainees learn the best ways of action under these circumstances;
- The trainees are able to restore the nominal run points of ship’s equipment;
- The trainees build up team spirit;
- The trainees learn how communication between ship and authorities in the emergency situations (e.g. spillage and environmental pollution) should be carried out.

The paper will show several such emergency situations and how they can be solved.

*Teodor Popa graduated Galati University in 1996. He joined Merchant Marine Institute “Mircea cel Batran” Constanta (RO) as university assistant. Started at sea in Navy for one year, came back in the institute and followed a teaching carrier till 1996. From 1996 until today he has been working for CERONAV Constanta (RO). At the same time he served at sea in VLCC’s, Product Carriers and Gas industry for various companies or international organizations. While working for SIGTTO in London, he participated in three main projects
for gas industry. He obtained a PhD Diploma in thermodynamics in 1999 and attended many courses and training programs. The most important are: “Basic Offshore Safety Induction & Emergency Training Course”, „Assess Workplace Competence Using Direct and Indirect Methods”, „ISO 9000 Auditor Course” – Course of second and third part for ISO 9000, or „Environmental Management Systems Auditor/Lead Auditor Training Course” – Based on ISO 14001:2004. He was involved in some projects: „STCW ON-COURSE”, „Methodology for accreditation and operation of oil, chemical and gas liquefied terminals” – PROGRAM IMPACT and “Student transition from student status to employee”.

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**Dorel Popa** graduated the Merchant Marine Institute "Mircea cel Batran" in Constanta in 1976. He joined NAVROM Constanta as electrical officer and served at sea on various types of ships: General Cargo, Ro-Ro, and Crude Oil Tanks. Since 1982 he is Chief Electrical Engineer. From 1986 to 1989 he worked in NAVROM as superintendent and then he joined CERONAV occupying various positions: Expert Adviser, Head of Department, Safety Director and General Manager. He obtained a PhD diploma in electro-corrosions in 2005 and attended many courses and training programs. The most important are: “Ship Fire Protection”, “Instructor training of GMDSS-GOC simulator”, “Basic Offshore Safety Induction & Emergency Training Course”, „Assess Workplace Competence Using Direct and Indirect Methods”, „ISO 9000 Auditor Course” – Course of second and third part for ISO 9000, or „Environmental Management Systems Auditor/Lead Auditor Training Course” – Based on ISO 14001:2004. He was involved in some EU co-funded projects: PLATINA, EWITA and NELI, and from 1997 he acted as IMO competent person for STCW implementation in Mozambic, Slovenia, Vanuatu, and Serbia.

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