

# Internship report,

period 3.10 12.10 2023 carried out on board the ship CMA CGM Volga

The undersigned Assoc professor Sabău Adrian at Maritime University of Constanta carried out a training internship through an Erasmus+ mobility on board the container ship CMA CGM Volga in the period 3.10 - 12.10.2023.

The purpose of this mobility was to familiarize ourselves with the new management system developed by companies on board commercial ships, with the new systems, installations and equipment existing on board and mainly to study and directly observe the activities carried out by the cadets on board to be able to improve their training.

The CMA CGM Volga ship is a container ship, commissioned in 2015 with a length of 299 m and a width of 48 m, with propulsion provided by a slow two-stroke engine with an installed power of 47430 kW.

The most special systems of the ship that could be studied on board the ship was:

- Centralized control and supervision system with UMS
- Electronic MAN engine with all specific systems, dedicated monitoring system of the main engine and monitoring system of the indicated parameters;
- Fully automated generators with operation at high voltage;
- Exhaust gas washing system with scrubber to reduce polluting emissions, especially SOx and smoke;
- Ballast water treatment system;
- System for stabilizing ship movements

The activity carried out on board mainly concerned:

- Studying the daily activities carried out on board the ship, the organization of the service and the repair and maintenance operations on board;
- Monitoring the management system applied in the engine compartment and the on-board document circuit. The activity of the engine compartment cadet was closely monitored and detailed information was requested regarding the requirements and expectations that the company and the rest of the engine compartment crew have in terms of their theoretical and practical training. In fact, this was the main goal pursued by both the Company and the University, the accumulation of concrete information that would allow the improvement of the training of students and mainly of future cadets with concrete and up-to-date information that would facilitate their integration and accommodation as easily as possible with requirements on board merchant ships
- Familiarization with the ship's specific installations and equipment;
- Studying the main engine installations, both the physical part and the existing documentation on board. Its mode of operation in automatic and manual control, in marching and maneuvering was followed. Emphasis is placed on main engine and diesel generator operating procedures:
  - preparation of the main engine;
  - operation of the main engine when maneuvering;
  - a change of fuel (high and low sulfur) depending on the navigation area
  - mode of operation of the exhaust gas washing plant, parameters, operating conditions, monitoring system alarms
  - the main engine control system, local and remote alarms and monitoring systems
- The operation of the ballast water treatment plant, the mode of operation, the monitoring of parameters and the alarm system were studied
- I participated in crew roles exercises: Fire, Abandon, Man over board,

During the entire period of the internship, we enjoyed the competition of all the staff on board, mainly Mr. chief engineer Zaharia Erik, who facilitated our familiarization with the existing installations and equipment in the machine compartment and provided us with all the necessary documentation.

The conditions provided were very good and the atmosphere on board was relaxed and professional, based on mutual respect in the presence of a multinational crew on board.

The transport and access on board were fully and operatively ensured by the CMA SHIPS S.A.S./CMA CGM GROUP Company through the representative office in Romania, even if during the internship some unexpected changes to the program were necessary.

**Conclusion:**

From my point of view, this internship was a particularly useful one. It allowed me to observe the concrete working conditions on board the ships, to familiarize myself with the management system and with the modern facilities and equipment on board. I had direct contact with mainly the cadets and the crew on board the ship and was able to objectively analyze the necessary training requirements and the challenges they must be able to face. I will use all this accumulated experience to improve and update the teaching materials, with the aim of increasing the quality of the educational act and reducing the impact of the transition from school to life on board ships.

In this way, I would like to thank the Company CMA SHIPS S.A.S./CMA CGM GROUP which, through the representative office in Romania, managed to make this internship possible, which will bring long-term benefits to all parties involved and will increase the number of students at the Maritime University of Constanța embarked on company's ships.

Assoc professor Sabău Adrian