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EUROPEAN COMMITTEE FOR
DRAWING UP STANDARDS
IN THE FIELD OF INLAND NAVIGATION

Draft standards of competence for the operational level

Communication from the Secretariat

The CESNI working programme adopted on 2 June 2016¹ foresees the drafting of a standard for competence for Operational Level (OL) (CESNI-2016-36). The working programme refers to the proposal of the EU directive on professional qualifications (COM (2016) 82 final).

The Secretariat is submitting the draft standard for competence for operational level (OL) as amended by the Temporary Working Group on professional competence during its meeting of 6 September 2017.

The text of directive (EU) 2017/2397 on professional qualifications in inland navigation and proposals to improve the draft as agreed on by the Working Group on professional qualification have been taken into account.

The Working Group has invited the Secretariat to submit the revised draft standard to the CESNI meeting on 10 April 2018.

CESNI experts examined the draft and decided to put it on the agenda of the CESNI meeting on 8 November 2018 for adoption.

Annex

¹ CESNI (16) 21 final

OL 1 - Navigation

1.1 The boatman shall be able to assist the management of the craft in situations of manoeuvring and handling a craft on inland waterways. The boatman shall be able to do so, on all types of waterways and all types of ports.

In particular the boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. assist with mooring, unmooring and hauling (towage) operations;</p>	<ol style="list-style-type: none"> 1. Knowledge of equipment, material and procedures used on board for mooring, unmooring and hauling (towage) operations. 2. Ability to use required equipment on board e.g. bollards and winches for mooring and unmooring and hauling manoeuvres. 3. Ability to use materials available on board such as ropes and wires considering relevant safety measures including the use of personal protective and rescue equipment. 4. Ability to communicate with the wheelhouse using intercom communication systems and hand signals. 5. Knowledge of the effects of water movement around craft and local effects on sailing circumstances including the effects of trim, shallow water relating to craft's draught. 6. Knowledge of the water movement affecting the craft during manoeuvring, including the interaction effects when two craft pass or overtake each other in narrow fairways, and the interaction effects on a craft moored alongside when another craft proceeds in the fairway and passes at a short distance.
<p>2. assist with coupling operations of push barge combinations;</p>	<ol style="list-style-type: none"> 1. Knowledge of equipment, material and procedures used for coupling operations. 2. Ability to connect and disconnect push/barge combinations using required equipment and materials. 3. Knowledge of safe working rules including the use of personal protective and rescue equipment. 4. Ability to apply safe working rules and to communicate with crew members involved.

<p style="text-align: center;">COLUMN 1 COMPETENCE</p>	<p style="text-align: center;">COLUMN 2 KNOWLEDGE AND SKILLS</p>
<p>3. assist with anchoring operations;</p>	<ol style="list-style-type: none"> 1. Knowledge of anchoring equipment, materials and procedures in various circumstances. 2. Ability to assist with anchor manoeuvres, e.g. prepare anchor equipment for anchoring operations, to present anchor, to give sufficient amount of cable/chain to veer initially, to determine when the anchor holds the craft at its position (anchor bearing), to secure anchors on the completion of anchoring, to use dragging anchors in various manoeuvres and to handle the anchor signs. 3. Knowledge of safe working rules including the use of personal protective and rescue equipment.
<p>4. steer the craft complying with helm orders, using steering gear properly;</p>	<ol style="list-style-type: none"> 1. Knowledge of functions and types of various propulsion and steering systems. 2. Ability to steer craft under supervision and comply with helm orders.
<p>5. steer the craft complying with helm orders, taking the influence of wind and current into account;</p>	<ol style="list-style-type: none"> 1. Knowledge of the influence of wind and current on sailing and manoeuvring. 2. Ability to steer the craft under supervision taking into account the influence of wind on sailing and manoeuvres in waterways with or without currents and with wind characteristics.
<p>6. use navigational aids and instruments under supervision;</p>	<ol style="list-style-type: none"> 1. Knowledge of the navigation aids and instruments such as rudder indicator, radar, rate of turn indicator, sailing speed indicator. 2. Ability to use the information provided by navigation aids such as light and buoyage system and charts. 3. Ability to use navigation instruments such as compass, rate of turn indicator and sailing speed indicator.
<p>7. undertake necessary actions for safety of navigation;</p>	<ol style="list-style-type: none"> 1. Knowledge of safety regulations and checklists to follow in dangerous and emergency situations. 2. Ability to recognize and respond to unsafe situations and follow-up actions according to the safety regulations. 3. Ability to immediately warn the craft's management.

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
	<ol style="list-style-type: none"> 4. Ability to use personal protective and rescue equipment. 5. Knowledge of verification commissioned by the supervisor regarding the presence, usefulness, water tightness and securing of the craft and its equipment. 6. Ability to execute the work according to the checklist on deck and living quarters such as waterproofing and securing of the hatches and holds. 7. Ability to execute the work according to the checklist in the engine room; to store and secure loose items, to fill the day service tanks and check vents.
<p>8. describe the characteristics of main European inland waterways, ports and terminals for voyage preparation and steering;</p>	<ol style="list-style-type: none"> 1. Knowledge of the most important national and international inland waterways. 2. Knowledge of the main port and terminals located in the European inland waterway transport (IWT) network. 3. Knowledge of the influence of engineering structures, waterway profiles and protection works on navigation. 4. Knowledge of the classification characteristics of rivers, canals and inland waterways of maritime character: bottom width, bank type, bank protection, water level, water movement, vertical and horizontal bridge clearance and depth. 5. Knowledge of navigational aids and instruments needed when navigating on inland waterways with maritime character. 6. Ability to explain the characteristics of various types of inland waterways for voyage preparation and steering.
<p>9. respect the general provisions, signals, signs and marking system;</p>	<ol style="list-style-type: none"> 1. Knowledge of agreed set of rules applicable in inland navigation and police regulations applying to the relevant inland waterways. 2. Ability to handle and maintain the craft's day and night marking system, signs and sound signals. 3. Knowledge of the buoyage and marking system SIGNI (Signalisation de voies de Navigation Intérieure) and IALA (International Association of Marine Aids to Navigation and Lighthouse Authorities) part A.

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>10. follow procedures while passing locks and bridges;</p>	<ol style="list-style-type: none"> 1. Knowledge of the shape, layout and facilities of locks and bridges, lockage (locking process), types of locks, bollards and stairs, etc. 2. Ability to apply procedures during approach, entering, locking and leaving the lock or bridge.
<p>11. use systems of traffic control.</p>	<ol style="list-style-type: none"> 1. Knowledge of various traffic control systems in use such as day and night signs on locks, weirs and bridges. 2. Ability to identify day and night signs on locks, weirs and bridges and to follow instructions of the competent authority such as bridge- and lockkeepers and traffic control operators. 3. Ability to use radio equipment in emergency situations. 4. Knowledge of Inland AIS and Inland ECDIS.

OL 2 - Operation of the craft**2.1 The boatman shall be able to assist the management of the craft in controlling the operation of the craft and in the care of persons on board.**

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
1. distinguish various types of craft;	1. Knowledge of most common types of craft including convoys used in European IWT and their corresponding construction, dimensions and tonnages. 2. Ability to explain the characteristics of the most common types of craft including convoys sailing in European IWT.
2. apply knowledge of the construction of inland waterway craft and their behaviour in water, especially in terms of stability and strength;	1. Knowledge of the effects of the craft's movement in various circumstances caused by longitudinal and transversal stresses and of different loading conditions. 2. Ability to explain the craft's behaviour in different loading conditions, related to the craft's stability and strength.
3. apply knowledge of the craft's structural parts and identify the parts by name and function;	1. Knowledge of the craft's structural elements with respect to the transport of different types of cargo and passengers, including the longitudinal and transversal structure and local reinforcements. 2. Ability to name the craft's structural parts and to describe their functions.
4. apply knowledge of the craft's watertight integrity;	1. Knowledge of watertight integrity of IWT craft. 2. Ability to check watertight integrity.
5. apply knowledge of the documentation required for the craft's operation.	1. Knowledge of the craft's obligatory documentation. 2. Ability to explain their importance in relation to (inter)national requirements and legislation.

2.2 The boatman shall be able to use the equipment of the craft.

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
1. use anchors and handle anchor winches;	<ol style="list-style-type: none"> 1. Knowledge of different kinds of anchors and anchor winches used on board craft. 2. Ability to name and recognize different kinds of anchors and anchor winches used on board craft and explain their specific use. 3. Ability to safely handle different types of anchors and anchor winches in various situations and conditions.
2. use deck equipment and lifting devices;	<ol style="list-style-type: none"> 1. Knowledge of equipment used on deck of craft such as (coupling) winches, hatches, lifting devices, car cranes, pipe systems, fire hoses, etc. 2. Ability to name and recognize deck equipment and lifting devices and explain their specific use. 3. Ability to safely handle deck equipment and lifting devices.
3. use equipment specific to passenger vessels.	<ol style="list-style-type: none"> 1. Knowledge of specific construction requirements, equipment and devices for passenger vessels. 2. Ability to name and recognize equipment used on board passenger vessels only and explain its specific use. 3. Ability to safely handle equipment used on board passenger vessels.

OL 3. Cargo handling, stowage and passenger transport

3.1 The boatman shall be able to assist the management of the craft in the preparation, stowage and monitoring of cargo during loading and unloading operations.

The boatman shall be able to:

<p>COLUMN 1 COMPETENCE</p>	<p>COLUMN 2 KNOWLEDGE AND SKILLS</p>
<p>1. read stowage and stability plans;</p>	<ol style="list-style-type: none"> 1. Knowledge of the impact of types of cargo on stowage and stability plans. 2. Knowledge of stowage and stability plans. 3. Ability to understand stowage plans. 4. Knowledge of numbering and divisions of the holds of dry cargo vessels and of the tanks of tanker vessels (N, C or G), and knowledge of stowing the various types of cargo. 5. Ability to identify ADN labelling of dangerous goods.
<p>2. monitor the stowage and securing of cargo;</p>	<ol style="list-style-type: none"> 1. Knowledge of the methods of stowing the craft with various cargoes in order to ensure safe and efficient transport. 2. Knowledge of procedures to prepare the craft for loading and unloading operations. 3. Ability to safely apply loading and unloading procedures, i.e. by opening or closing the holds, perform watch-keeping on deck during loading and unloading operations. 4. Ability to establish and maintain effective communications during loading and unloading. 5. Knowledge of the effect of cargo on the stability of the craft. 6. Ability to monitor and report damage of cargo.

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
3. distinguish various types of cargo and their qualities;	<ol style="list-style-type: none"> 1. Knowledge of various types of cargo, for example break bulk cargo, liquid bulk cargo and heavy goods, etc. 2. Knowledge of the logistic chain and multimodal transport. 3. Ability to prepare craft operation connected to loading and unloading procedures e.g. communicate with land side and prepare hold.
4. use of ballast system;	<ol style="list-style-type: none"> 1. Knowledge of the function and use of the ballast system. 2. Ability to use ballast system for example by filling or emptying the ballast tanks.
5. check the amount of cargo;	<ol style="list-style-type: none"> 1. Knowledge of manual and technical methods of determination of the cargo weight on various types of craft. 2. Knowledge of methods to determine the amount of cargo loaded or discharged. 3. Knowledge of the calculation of the amount of liquid cargo using the soundings and/or tank tables. 4. Ability to read draught marks and draught scales
6. work according to regulations and safe working rules.	<ol style="list-style-type: none"> 1. Knowledge of safe working rules and procedures applicable during preparation, loading and discharging phase of craft with various types of cargoes. 2. Ability to comply with safe working rules and procedures applicable during loading and unloading and to use personal protective and rescue equipment. 3. Ability to establish and maintain effective verbal and non-verbal communications with all partners involved with loading and unloading procedures. 4. Knowledge about technical means for handling cargoes in/from craft and ports, and labour safety measures during their use.

3.2 The boatman shall be able to assist the management of the craft in providing services to passengers and provide direct assistance to disabled persons and persons with reduced mobility in accordance with the training requirements and instructions of Annex IV of Regulation (EU) No 1177/2010¹.

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
1. respect regulations and conventions regarding passenger transport;	1. Knowledge of the applicable regulations and conventions regarding passenger transport. 2. Ability to provide direct assistance to disabled persons and persons with reduced mobility in accordance with the training requirements and instructions of Annex IV of Regulation (EU) No 1177/2010.
2. assist in safe movement of passengers when embarking and disembarking;	1. Knowledge of procedures applying before and during embarkation and disembarkation of passengers. 2. Ability to position and place the embarkation and disembarkation equipment and to apply safety measures.
3. assist in supervising passengers during emergency situations;	1. Knowledge of existing life-saving equipment for emergency situations, of procedures to follow in case of leakage, fire, person over board, evacuation including crisis and crowd management and of medical first aid on board vessel. 2. Ability to assist in the case of leakage, fire, man over board, collision and evacuation including crisis and crowd management, to use life-saving equipment in emergency situations and to perform medical first aid on board vessel.
4. communicate effectively with passengers.	1. Knowledge of standardised communication phrases for evacuation of passengers in the case of emergency. 2. Ability to use service-oriented behaviour and language.

¹ Regulation (EU) No 1177/2010 of the European Parliament and of the Council of 24 November 2010 concerning the rights of passengers when travelling by sea and inland waterway and amending Regulation (EC) No 2006/2004 (OJ L 334, 17.12.2010, p. 1).

OL 4 - Marine engineering and electrical, electronic and control engineering**4.1 The boatman shall be able to assist the management of the craft in marine, electrical, electronic, and control engineering to ensure general technical safety.**

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. assist in monitoring the engines and propulsion system</p>	<ol style="list-style-type: none"> 1. Knowledge of principles of propulsion system. 2. Knowledge of different types of engines and their construction, performance and terminology. 3. Knowledge of the function and operation of air delivery, fuel delivery, lubrication cooling and engine exhaust system. 4. Knowledge of main and auxiliary engines. 5. Ability to carry out basic checks and ensure regular functioning of engines.
<p>2. prepare main engines and auxiliary equipment for operation;</p>	<ol style="list-style-type: none"> 1. Knowledge of starting systems of main engines, auxiliary equipment and hydraulic and pneumatic systems according to instructions. 2. Knowledge of principles of reversing systems. 3. Ability to prepare the machinery in the engine room according to checklist for departure. 4. Ability to use the starting system and auxiliary equipment according to instructions, e.g. steering equipment. 5. Ability to start the main engines following starting procedures. 6. Ability to use hydraulic and pneumatic systems.
<p>3. react adequately to malfunctions of engines;</p>	<ol style="list-style-type: none"> 1. Knowledge of control equipment in the engine room and of reporting procedures for malfunctions. 2. Ability to recognize malfunctions and to take appropriate measures in the case of malfunction including reporting to the craft's management.

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>4. operate machinery including pumps, piping systems, bilge and ballast systems;</p>	<ol style="list-style-type: none"> 1. Knowledge of safe operation and of control of the machinery in the engine room, ballast compartments and bilge following procedures. 2. Ability to control the safe function, operation of machinery in the engine room and to maintain the bilge and ballast system including: reporting incidents associated with transfer operations and ability to correctly measure and report tank levels. 3. Ability to prepare and operate shut-off-operations of the engines after operation. 4. Ability to operate pumping bilge, ballast and cargo pumping systems.
<p>5. assist in monitoring electronic and electrical devices;</p>	<ol style="list-style-type: none"> 1. Knowledge of electronic and electrical systems and components. 2. Knowledge of AC and DC current. 3. Ability to monitor and evaluate control instruments. 4. Knowledge of magnetism and the difference between natural and artificial magnets. 5. Knowledge of electro hydraulic system.
<p>6. prepare, start, connect and change generators, and control their systems and shore supply;</p>	<ol style="list-style-type: none"> 1. Knowledge of the power installation. 2. Ability to use switchboard. 3. Ability to use shore supply.
<p>7. define malfunctions and common faults, and describe the actions to prevent damage;</p>	<ol style="list-style-type: none"> 1. Knowledge of malfunctions outside the engine room and of procedures to follow to prevent damage and procedures to follow if malfunctions occur. 2. Ability to identify common faults and take action to prevent damage to mechanical, electrical, electronic, hydraulic and pneumatic systems.
<p>8. use required tools to ensure general technical safety.</p>	<ol style="list-style-type: none"> 1. Knowledge of characteristics and limitations of processes and materials used for maintenance and repair of engines and equipment. 2. Ability to apply safe working practices when maintaining or repairing engines and equipment.

4.2 The boatman shall be able to perform maintenance work on marine, electrical, electronic, and control engineering equipment to ensure general technical safety.

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. perform the daily maintenance work on the main engines, auxiliary machinery and control systems;</p>	<p>1. Knowledge of procedures to follow for maintenance and good care of the engine room, main engine, main machinery, auxiliary equipment and control systems.</p> <p>2. Ability to maintain main engines, auxiliary equipment and control systems.</p>
<p>2. perform the daily maintenance work on machinery including pumps, piping systems, bilge- and ballast systems;</p>	<p>1. Knowledge of daily maintenance procedures.</p> <p>2. Ability to maintain and to take care of pumps, piping systems, bilge- and ballast systems.</p>
<p>3. use required tools to ensure general technical safety;</p>	<p>1. Knowledge of use of maintenance material and repair equipment on board, including their qualities and limitations.</p> <p>2. Ability to choose and use maintenance material and repair equipment on board.</p>
<p>4. follow procedures of maintenance and repair;</p>	<p>1. Knowledge of manuals and instructions for maintenance and repair.</p> <p>2. Ability to conduct maintenance and repair procedures according to applicable manuals and instructions.</p>
<p>5. use technical information and document technical procedures.</p>	<p>1. Knowledge of technical documentation and manuals.</p> <p>2. Ability to document maintenance work.</p>

OL 5 - Maintenance and Repair**5.1 The boatman shall be able to assist the management of the craft in maintaining and repairing the craft, its devices and its equipment.**

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. work with different types of materials and tools used for maintenance and repair operations;</p>	<ol style="list-style-type: none"> 1. Knowledge of the required tools and maintenance of equipment and of safe working and environmental protection rules. 2. Ability to use relevant methods for craft maintenance including ability to choose different materials. 3. Ability to correctly maintain and store tools and maintenance equipment. 4. Ability to conduct maintenance work according to safe working and environmental protection rules.
<p>2. protect health and environment when performing maintenance and repair;</p>	<ol style="list-style-type: none"> 1. Knowledge of applicable cleansing and preserving procedures and rules of hygiene. 2. Ability to clean all accommodation spaces, the wheelhouse and keep the household in a proper way complying to rules of hygiene, including taking responsibility for their own accommodation space. 3. Ability to clean the engine rooms and engines using the required cleaning materials. 4. Ability to clean and to preserve the outer parts, the hull and the decks of the craft in the correct order using the required materials according to environmental protection rules. 5. Ability to take care of the craft and household waste disposal according to environmental protection rules.
<p>3. maintain technical devices according to technical instructions;</p>	<ol style="list-style-type: none"> 1. Knowledge of technical instructions for maintenance and maintenance programmes. 2. Ability to take care of all technical equipment according to instructions and to use maintenance programmes (including digital) under supervision.

<p style="text-align: center;">COLUMN 1 COMPETENCE</p>	<p style="text-align: center;">COLUMN 2 KNOWLEDGE AND SKILLS</p>
<p>4. safely handle wires and ropes;</p>	<ol style="list-style-type: none"> 1. Knowledge of characteristics of different types of ropes and wires. 2. Ability to use and store them according to safe working practices and rules.
<p>5. make knots and splices according to their use and maintain them;</p>	<ol style="list-style-type: none"> 1. Knowledge of procedures to follow in order to ensure safe towage and coupling with means available on board. 2. Ability to splice wires and ropes. 3. Ability to apply knots according to their use. 4. Maintain wires and ropes.
<p>6. prepare and carry out working plans as a member of a team and check the results.</p>	<ol style="list-style-type: none"> 1. Knowledge of principles of team work. 2. Ability to carry out maintenance and simple repairs independently as part of the team. 3. Ability to carry out more complex repairs under supervision. 4. Apply various working methods including team work according to safety instructions. 5. Ability to evaluate the quality of work.

OL 6 – Communication

6.1 The boatman shall be able to communicate generally and professionally, which includes the ability to use standardised communication phrases in situations with communication problems.

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. use information and communication systems;</p>	<ol style="list-style-type: none"> 1. Knowledge of intercom installation for intra-craft or terminal communication, of the craft's (mobile) phone, radio, (satellite) TV and camera system. 2. Ability to use the craft's (mobile) phone system, the craft's radio, (satellite) TV and camera system. 3. Knowledge of operation principles of the Inland AIS system. 4. Ability to use Inland AIS data to address other craft.
<p>2. solve different tasks with the help of different types of digital devices, information services (such as River Information Services (RIS)) and communication systems;</p>	<ol style="list-style-type: none"> 1. Knowledge of digital devices available in inland waterway transport. 2. Ability to use the craft's digital devices according to instructions to perform simple tasks.
<p>3. collect and store data including backup and data update;</p>	<ol style="list-style-type: none"> 1. Knowledge of the craft's communication system for data collection, storage and update. 2. Ability to process data under strict supervision.

<p style="text-align: center;">COLUMN 1 COMPETENCE</p>	<p style="text-align: center;">COLUMN 2 KNOWLEDGE AND SKILLS</p>
<p>4. follow instructions for data protection;</p>	<ol style="list-style-type: none"> 1. Knowledge of data protection regulations and professional secrecy. 2. Ability to process data according to data protection regulations and professional secrecy.
<p>5. present facts using technical terms;</p>	<ol style="list-style-type: none"> 1. Knowledge of the required technical and nautical terms as well as terms related to social aspects in standardised communication phrases. 2. Ability to use required technical and nautical terms as well as terms related to social aspects in standardised communication phrases.
<p>6. obtain nautical and technical information to maintain safety of navigation.</p>	<ol style="list-style-type: none"> 1. Knowledge of the available information sources. 2. Ability to use information sources to obtain necessary nautical and technical information to maintain safety of navigation.

6.2 The boatman shall be able to be sociable.

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. follow instructions and communicate with others in terms of shipboard duties;</p>	<ol style="list-style-type: none"> 1. Knowledge of importance of orders given by the craft's management, formal and informal instructions, rules and procedures and of the importance of being a role model for inexperienced crew members. 2. Ability to follow up orders given by the craft's management and other instructions and rules, as well as to accompany inexperienced crew members. 3. Knowledge of company/on board rules. 4. Ability to comply with company/on board rules.
<p>2. contribute to good social relations and cooperate with others on board;</p>	<ol style="list-style-type: none"> 1. Knowledge of cultural diversity. 2. Ability to accept different cultural standards, values and habits. 3. Ability to work and live in a team. 4. Ability to participate in team meetings and to carry out the distributed tasks. 5. Knowledge of importance of respect for team work. 6. Ability to respect sexually-related and cultural differences and to report related problems including mobbing and (sexual) harassment.
<p>3. accept social responsibility, conditions of employment, individual rights and duties; acknowledge dangers of alcohol and drug abuse and adequately respond to misconduct and dangers;</p>	<ol style="list-style-type: none"> 1. Ability to identify misconduct and potential dangers. 2. Ability to proactively respond to misconduct and potential dangers. 3. Ability to work independently according to instructions. 4. Knowledge of individual workers' rights and duties. 5. Knowledge of the dangers of the use of alcohol and drugs in the working and social environment. (Awareness of police regulation rules on toxicology). 6. Ability to identify dangers to safe craft operation related to alcohol and drugs.

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
4. plan, purchase and prepare simple meals.	<ol style="list-style-type: none">1. Knowledge of possibilities of food provision and of principles of healthy nutrition.2. Ability to prepare simple meals in keeping with rules of hygiene.

OL 7 - Health and safety and environmental protection**7.1 The boatman shall be able to adhere to safe working rules, understand the importance of health and safety rules and the importance of the environment.**

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. work according to instructions and rules for safety at work and prevention of accidents;</p>	<ol style="list-style-type: none"> 1. Knowledge of the advantages of safe working practices. 2. Knowledge of the nature of on board hazards. 3. Ability to prevent dangers related to on board hazards, for example: <ul style="list-style-type: none"> • movements of the craft; • provision for safe embarkation and disembarkation of the craft (e.g. gangplank, ship's boat); • safely stowing movable objects; • working with machinery; • recognising electric hazards; • fire precautions & firefighting; • professional use of hand tools; • professional use of portable power tools; • compliance with health and hygiene; • removal of slip, fall and tripping hazards. 4. Knowledge of relevant health and safety working instructions during activities that take place on board. 5. Knowledge of applicable regulations concerning safe and sustainable working conditions. 6. Ability to prevent accidents in activities which might be hazardous to personnel or craft related to <ul style="list-style-type: none"> • loading/unloading cargoes; • mooring and unmooring; • working aloft; • working with chemicals; • working with batteries; • presence in engine-room; • lifting loads (manually and mechanically); • entry into and working in enclosed spaces. 7. Ability to understand orders and to communicate with others in relation to on-board duties.

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>2. use personal protective equipment to prevent accidents;</p>	<ol style="list-style-type: none"> 1. Knowledge of personal protective equipment. 2. Ability to use personal protective equipment, for example: <ul style="list-style-type: none"> • eye protection, • respiratory protection, • ear protection, • head protection, and • protective clothing.
<p>3. take required precautions before entering enclosed spaces.</p>	<ol style="list-style-type: none"> 1. Knowledge of the hazards associated with entering enclosed spaces. 2. Knowledge of precautions to be taken and tests/measurements to be carried out to determine whether or not an enclosed space has been made safe for entry, and while working in enclosed space. 3. Ability to apply safety instructions before entering certain spaces on board for example: <ul style="list-style-type: none"> • holds, • coffer dams, and • double hull. 4. Ability to take precautions concerning work in enclosed spaces.

7.2 The boatman shall be able to acknowledge the importance of training aboard and act immediately in the event of emergencies.

The boatman shall be able to:

<p style="text-align: center;">COLUMN 1 COMPETENCE</p>	<p style="text-align: center;">COLUMN 2 KNOWLEDGE AND SKILLS</p>
<p>1. act in the case of emergencies according to applicable instructions and procedures;</p>	<ol style="list-style-type: none"> 1. Knowledge of various types of emergencies. 2. Knowledge of routine to follow in the case of an alarm. 3. Knowledge of procedures applicable in the case of an accident. 4. Ability to act according to instructions and procedures.
<p>2. perform medical first aid;</p>	<ol style="list-style-type: none"> 1. Knowledge of general principles of first aid including appreciation of body structure and functions on board a craft after assessment of a situation. 2. Ability to maintain physical and mental condition and personal hygiene in the case of first aid. 3. Knowledge of relevant measures in the case of accidents in accordance with recognized best practices. 4. Ability to assess needs of casualties and threats to own safety. 5. Ability to perform required measures in cases of emergency, including to: <ol style="list-style-type: none"> a) position casualty, b) apply resuscitation techniques, c) control bleeding, d) apply appropriate measures of basic shock management, e) apply appropriate measures in the event of burns and scalds, including accidents caused by electric current. f) rescue and transport a casualty. 6. Ability to improvise bandages and to use materials in emergency kit.

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>3. use and maintain personal protective equipment and shipboard life saving equipment;</p>	<ol style="list-style-type: none"> 1. Knowledge of periodical checks of personal protection, escape routes and rescue equipment as regards function, damage, wear and other imperfections. 2. Ability to react in the case of identified imperfections including relevant communication procedures. 3. Ability to use personal life-saving appliances, for example: <ul style="list-style-type: none"> • lifebuoys including relevant equipment, and • lifejackets including relevant equipment on lifejackets, such as fixed or flashing lights and whistle firmly secured by a cord. 4. Knowledge of functions of the ship's boat. 5. Ability to prepare, launch, sail, recover and stow the ship's boat.
<p>4. provide assistance in the case of rescue operations and swim;</p>	<ol style="list-style-type: none"> 1. Ability to rescue and transport a casualty. 2. Ability to use swimming skills for rescue operations.
<p>5. use emergency escape routes;</p>	<p>Ability to keep escape routes free (according to local features on board).</p>
<p>6. use internal emergency communication and alarm systems.</p>	<p>Ability to use emergency communication and alarm systems and equipment</p>

7.3 The boatman shall be able to take precautions to prevent fire and shall use the firefighting equipment correctly.

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. distinguish the elements of fire and types and sources of ignition;</p>	<ol style="list-style-type: none"> 1. Knowledge of the possible causes of fire during different activities as well as knowledge of the classification of fires according to the European Standard EN or equivalent. 2. Knowledge of the elements of the combustion process. 3. Ability to apply the basics of fire-fighting.
<p>2. use different types of fire extinguishers;</p>	<ol style="list-style-type: none"> 1. Knowledge of different characteristics and classes of fire extinguishers. 2. Ability to apply various methods of firefighting and use extinguishing equipment and fixed installations taking into account for example: <ul style="list-style-type: none"> • the use of different types of portable fire extinguishers, and • the influence of wind while approaching the fire.
<p>3. act according to shipboard fire-fighting procedures and organisation;</p>	<ol style="list-style-type: none"> 1. Knowledge of on board systems to fight fire. 2. Ability to tackle fire and to take relevant notification measures.
<p>4. follow instructions concerning: personal equipment, methods, extinguishing agents and procedures during firefighting and rescue operations.</p>	<ol style="list-style-type: none"> 1. Knowledge of procedures to avoid personal danger. 2. Ability to act according to the emergency procedure.

7.4 The boatman shall be able to perform duties taking into account the importance of protecting the environment.

The boatman shall be able to:

COLUMN 1 COMPETENCE	COLUMN 2 KNOWLEDGE AND SKILLS
<p>1. protect the environment in accordance with relevant regulations;</p>	<ol style="list-style-type: none"> 1. Knowledge of the national and international regulations concerning the protection of the environment. 2. Ability to use available documentation and information systems concerning environmental issues according to instructions. 3. Knowledge of the consequences of possible spills and pollutants into the surface and air. 4. Knowledge of dangerous goods and classifications with regards to environmental aspects.
<p>2. take precautions to prevent pollution of the environment;</p>	<ol style="list-style-type: none"> 1. Knowledge of general precautions to prevent pollution of the environment. 2. Ability to follow general precautions and to apply safe bunkering procedures. 3. Ability to take measures according to instructions in the event of collision, for example by sealing of leaks.
<p>3. use resources efficiently;</p>	<ol style="list-style-type: none"> 1. Knowledge of efficient use of fuel consumption. 2. Ability to use materials in an economical and energy saving way.
<p>4. dispose of waste in an environmentally friendly fashion.</p>	<ol style="list-style-type: none"> 1. Knowledge of applicable regulations concerning waste. 2. Ability to carry out the collection, delivery and consumption of: <ul style="list-style-type: none"> • craft oil and fat, • cargo residues, and • other types of waste goods.