

STCW Code Table A-V/4-2

Specification of minimum standard of competence in advanced training for ships operating in polar waters

Ref: <https://www.edumaritime.net/stcw-code>

Source: IMO

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Plan and conduct a voyage in polar waters	<p><i>Knowledge of voyage planning and reporting:</i></p> <ul style="list-style-type: none"> .1 information sources .2 reporting regimes in polar waters .3 development of safe routeing and passage planning to avoid ice where possible .4 ability to recognize the limitations of hydrographic information and charts in polar regions and whether the information is suitable for safe navigation .5 passage planning deviation and modification for dynamic ice conditions <p><i>Knowledge of equipment limitations:</i></p> <ul style="list-style-type: none"> .1 understand and identify hazards associated with limited terrestrial navigational aids in polar regions .2 understand and recognize high latitude errors on compasses .3 understand and identify limitations in discrimination of radar targets 	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> .1 approved in-service experience .2 approved training ship experience .3 approved simulator training, where appropriate .4 approved training programme 	<p>The equipment, charts and nautical publications required for the voyage are enumerated and appropriate to the safe conduct of the voyage</p> <p>The reasons for the planned route are supported by facts obtained from relevant sources and publications, statistical data and limitations of communication and navigational systems</p> <p>Voyage plan correctly identified relevant polar regulatory regimes and need for ice-pilotage and/or icebreaker assistance</p> <p>All potential navigational hazards are accurately identified</p> <p>Positions, courses, distances and time calculations are correct within accepted accuracy standards for navigational equipment</p>

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
	<p>and ice features in ice-clutter</p> <p>.4 understand and recognize limitations of electronic positioning systems at high latitude</p> <p>.5 understand and recognize limitations in nautical charts and pilot descriptions</p> <p>.6 understand and recognize limitations in communication systems</p>		
<p>Manage the safe operation of vessels operating in polar waters</p>	<p><i>Knowledge and ability to operate and manoeuvre a vessel in ice:</i></p> <p>.1 preparation and risk assessment before approaching ice, including presence of icebergs, and taking into account wind, darkness, swell, fog and pressure ice</p> <p>.2 conduct communications with an icebreaker and other vessels in the area and with Rescue Coordination Centres</p> <p>.3 understand and describe the conditions for the safe entry and exit to and from ice or open water, such as leads or cracks, avoiding icebergs and dangerous ice conditions and maintaining safe distance to icebergs</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <p>.1 approved in-service experience</p> <p>.2 approved training ship experience</p> <p>.3 approved simulator training, where appropriate</p> <p>.4 approved training programme</p>	<p>All decisions concerning navigating in ice are based on a proper assessment of the ship's manoeuvring and engine characteristics and the forces to be expected while navigating within polar waters</p> <p>Demonstrate communication skills, request ice routing, plot and commence voyage through ice</p> <p>All potential ice hazards are correctly identified</p> <p>All decisions concerning berthing anchoring, cargo and ballast operations are based on a proper assessment of the ship's manoeuvring and engine</p>

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
	<p>.4 understand and describe ice-ramming procedures including double and single ramming passage</p> <p>.5 recognize and determine the need for bridge watch team augmentation based upon environmental conditions, vessel equipment and vessel ice class</p> <p>.6 recognize the presentations of the various ice conditions as they appear on radar</p> <p>.7 understand icebreaker convoy terminology, and communications, and take icebreaker direction and move in convoy</p> <p>.8 understand methods to avoid besetment and to free beset vessel, and consequences of besetment</p> <p>.9 understand towing and rescue in ice, including risks associated with operation</p> <p>.10 handling ship in various ice concentration and coverage, including risks associated with navigation in ice, e.g. avoid turning and</p>		<p>characteristics and the forces to be expected and in accordance with the Polar Code guidelines and applicable international agreements</p> <p>Safely demonstrate progression of a vessel through ice, manoeuvring vessel through moderate ice concentration (range of 1/10 to 5/10)</p> <p>Safely demonstrate progression of a vessel through ice, manoeuvring vessel through dense ice concentration (range of 6/10 to 10/10)</p> <p>Operations are planned and carried out in accordance with established rules and procedures to ensure safety of operation and to avoid pollution of the marine environment</p> <p>Safety of navigation is maintained through navigation strategy and adjustment of ship's speed and heading through different types of ice</p> <p>Actions are understood to permit use of anchoring system</p>

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
	<p>backing simultaneously</p> <p>.11 use of different type of propulsion and rudder systems, including limitations to avoid damage when operating in ice</p> <p>.12 use of heeling and trim systems, hazards in connection with ballast and trim in relation with ice</p> <p>.13 docking and undocking in ice-covered waters, including hazards associated with operation and the various techniques to safely dock and undock in ice-covered waters</p> <p>.14 anchoring in ice, including the dangers to anchoring system – ice accretion to hawse pipe and ground tackle</p> <p>.15 recognize conditions which impact polar visibility and may give indication of local ice and water conditions, including sea smoke, water sky, ice blink and refraction</p>		<p>in cold temperatures</p> <p>Actions are carried out in accordance with accepted principles and procedures to prepare for icebreaker towing, including notch towing</p>
<p>Maintain safety of the ship's crew and passengers and the operational</p>	<p><i>Knowledge of safety:</i></p> <p>.1 understand the procedures and techniques for</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p>	<p>Response measures are in accordance with established plans and procedures, and are</p>

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
condition of life-saving, firefighting and other safety systems	abandoning the ship and survival on ice and in ice-covered waters .2 recognize limitations of fire-fighting systems and life-saving appliances due to low air temperatures .3 understand unique concerns in conducting emergency drills in ice and low temperatures .4 understand unique concerns in conducting emergency response in ice and low air and water temperatures	.1 approved in-service experience .2 approved training ship experience .3 approved simulator training, where appropriate .4 approved training programme	appropriate to the situation and nature of the emergency