

**SKILLS FRAMEWORK FOR SEA TRANSPORT  
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

<b>TSC Category</b>	Ship Handling and Seamanship					
<b>TSC</b>	Chartwork					
<b>TSC Description</b>	Using charts, chartwork instruments and position-fixing techniques to create voyage plans					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
	<b>STP-SHS-1001-1.1</b>	<b>STP-SHS-2001-1.1</b>				
	Acquire chartwork knowledge to plot a position and lay off a safe course to a specified position	Plot a position and establish the safe passage of a ship				
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>Charts and chart symbols</li> <li>Latitude and longitude</li> <li>Navigational instruments</li> <li>Navigational marks</li> <li>Tides</li> <li>Compass</li> <li>Measurement basics</li> <li>Weather information</li> <li>Position-fixing methods</li> </ul>	<ul style="list-style-type: none"> <li>Charts and chart symbols</li> <li>Latitude and longitude</li> <li>Navigational instruments</li> <li>Navigational marks</li> <li>Tides</li> <li>Compass</li> <li>Measurement basics</li> <li>Weather information</li> <li>Position-fixing methods</li> </ul>				
<b>Abilities</b>	<ul style="list-style-type: none"> <li>Using nautical charts</li> <li>Lay off a safe course between two known positions</li> <li>Convert safe courses to compass courses to steer using deviation card and variations off-chart</li> <li>Determine estimated times of arrival (ETA)</li> <li>Determine dead reckoning position, given a speed and course</li> <li>Give a position in latitude and longitude and by bearing and range from a charted point</li> </ul>	<ul style="list-style-type: none"> <li>Select appropriate charts, publications and navigational instruments as information sources</li> <li>Obtain required information from publications</li> <li>Calculate dead reckoning and estimated positions from given data</li> <li>Estimate courses correctly</li> <li>Estimate distance made good</li> <li>Estimate appropriate estimated times of arrival at a given point</li> <li>Use position lines and horizontal angles to fix the position of a vessel</li> </ul>				

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	<ul style="list-style-type: none"> <li>• Fix vessels' points by means of compass cross-bearings</li> <li>• Identify a lighthouse from the characteristics shown on navigation charts</li> </ul>	<p>and to establish distance and time off specified points</p> <ul style="list-style-type: none"> <li>• Set correct courses to steer to counteract current and leeway</li> <li>• Establish correct speed required to arrive at a given position at a given time</li> <li>• Use a single position line to make an acceptable landfall</li> </ul>				
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