## TSC Category
Marine Manufacturing

## TSC
Lift Planning and Management

## TSC Description
Implement rigging procedures to ensure safe operation of lifting gears by employing prescribed slinging techniques depending upon load and external conditions

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<tr>
<th>TSC Proficiency Description</th>
<th>Level 1 MAR-MMF-1006-1.1</th>
<th>Level 2</th>
<th>Level 3 MAR-MMF-3006-1.1</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
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<tbody>
<tr>
<td>Execute rigging, heaving, lowering, slewing and other crane operations to assist in new build, repair and conversions</td>
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<td>Draft plans for slinging, rigging and use of lifting gears prior to production or assembly processes that are in line with limit and load analysis, and workplace safety and health (WSH) precautions</td>
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### Knowledge
- Types of cranes and unsafe work conditions and practices related to marine and offshore
- Work areas, locations and contexts of crane operations related to marine and offshore
- Types of workplace emergencies related to marine and offshore
- Organisational workplace emergency handling procedures and policies
- Duties and responsibilities of persons at work under the Workplace Safety And Health (WSH) Act and subsidiary legislations
- Types and interpretation of safety signage
- Organisational procedures for pre-operational WSH checks on work areas related to marine and offshore

- Ground assessments to ensure that conditions are safe for lifting operations
- Types of legislations on lifting operations
- Roles and duties of personnel undertaking lifting operations and lifting supervisors
- Safe work procedures and risks related to personnel involved in lifting operations
- Types of loads, load charts and related terminologies
- Types and functions of cranes, components, rigging equipment, lifting gears and accessories
- Types and functions of communication equipment
- Steps and measures to exclude unauthorised entry into lifting zones
- Procedures for reporting abnormalities and
<table>
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<tr>
<th>Common hazards arising from work activities and the corresponding control measures involving lifting operations</th>
<th>Organisational safe work procedures</th>
<th>Use of personal protective equipment (PPE) and tag lines for personnel undertaking lifting operations</th>
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<tbody>
<tr>
<td>Defects of crane and associated equipment</td>
<td>Preventive measures and hazard control of lifting accidents</td>
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**Abilities**

- Identify own duties and responsibilities under WSH and subsidiary legislations
- Perform house-keeping of crane cabins before starting operations
- Identify hazards by conducting pre-operational safety checks on work areas and cranes, and implement risk controls
- Check to ensure proper use of appropriate PPE and tag lines for personnel involved in lifting operations

- Identify relevant legislations, organisational safe work procedures and criteria for proper use of PPE and tag lines for adherence to lifting operations
- Interpret load charts to verify whether the intended lift is within the safe working load (SWL) of cranes
- Verify pre-lift inspections of cranes, lifting gears and accessories
- Identify requirements of rigging equipment, lifting gears and accessories for specific lifting loads
- Verify set-ups of communication equipment, serviceability of communications equipment and functionality of radio channels for safe lifting operations and load rigging
- Report and rectify abnormalities and defects in cranes, lifting equipment
<table>
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<th>Gears, accessories and communications equipment</th>
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<td>• Apply preventive measures and hazard control for lifting accidents according to organisational procedures</td>
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