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| **Risk Management** | | | | | | | | | |
| Operation / Work activity being assessed: |  | | | | | | | | |
|  | Routine | |  | Non-routine | | | | |
| Generated by: Vessel  (record the name) | | | | | | Office | | | |
| Code number (to be assigned by the Office): | | |  | | | Version: |  | Date: |  |

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| **FREQUENCY CATEGORY** | | |  | **CONSEQUENCE CATEGORY** | | | | |  | **RISK MATRIX** | | | | | | |
| **5** | Frequent - Possibility of repeated incidents | More often than once per voyage |  | **4** | Human losses / fatalities | Major pollution /  Full scale response | Excessive / high-cost damage  > $1000000 | Major national & international impact |  |  | | **FREQUENCY** | | | | |
| **4** | Probable - Possibility of isolated incidents | Once per year |  | **3** | Serious injury to personnel | Moderate pollution/  Significant resources commitment | Moderate cost or damage  ($100000 –$1000000) | Considerable impact |  |
| **1** | **2** | **3** | **4** | **5** |
| **3** | Occasional- Possibility of occurring sometime | Once per 5 years |  | **2** | Number of minor injuries / Medical treatment for personnel | Little pollution /  Limited response of short duration | Little cost or damage  ($10000 – $100000) | Slight impact |  | **CONSEQUENCE** | **1** | **L**(1) | **L**(2) | **L**(3) | **M**(4) | **M**(5) |
| **2** | **L**(2) | **M**(4) | **M**(6) | **M**(8) | **H**(10) |
| **2** | Remote- Not likely to occur | Once per 10 years |  | **1** | Few minor injuries | Minimum pollution / Little or no response needed | Minimum cost / damage  < $10000 | Zero impact |  | **3** | **L**(3) | **M**(6) | **M**(9) | **H**(12) | **H**(15) |
| **1** | Very unlikely- Practically impossible | Once per 30 years or more |  |  | **4** | **M**(4) | **M**(8) | **H**(12) | **H**(16) | **H**(20) |
|  |  |  |  |  |  |  |  |  |  | **High**=Intolerable Risk **Medium**=Tolerable Risk **Low**=Negligible Risk | | | | | | |

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| **Risk Assessment** | | | | | | |
|  | **Risk Identification** | | **Risk Analysis** | **Initial risk evaluation** | | |
| **No** | **Hazard** | **Potential**  **hazardous event** | **Existing control measures** | **F** | **C** | **R** |
| 1 | Slippery surface | Serious injury to personnel | Use of PPE as per company’s PPE matrix | 3 | 3 | 9 |
| 2 | Mechanical Injury |  |  | 3 | 3 | 9 |
| 3 | Eye Injuries |  |  | 1 | 3 | 3 |
| 4 | Inadequate familiarization/training of the user. | * Serious injury to personnel   Moderate cost or damage | * UMMS chapter 7.9.14.3.3 Training of personnel   UMMS chapter 7.9.14 Safe working practices for lifting operations | 3 | 3 | 9 |
| 5 | Inadequate supervision/work instructions. |  | * UMMS chapter 7.9.2 Work plan meetings   C.O.S.W.P. ( M.C.A ) Section 21 (Lifting Plant) | 4 | 3 | 12 |
| 6 | Fatigue. |  | * UMMS chapter 7.11.1 Fatigue   UMMS chapter 7.11.2 hours of rest | 3 | 3 | 9 |
| 7 | Back hurt when lifting weights | Serious injury to personnel | Lift the weight as straight as possible, with a firm & balanced stance close to the load, with the feet being kept slightly apart | 1 | 3 | 3 |
| 8 | Hernia when lifting weights below the knee level |  | Adopt a crouching position with the knees bent but the back should be kept straight to ensure that the legs take the strain | 1 | 3 | 3 |
| 9 | Loose hand grip |  | The load should be gripped with the whole of the hand, close to the body and lifted by straightening the legs | 1 | 3 | 3 |
| 10 | Lose hand grip when lifting weight in two stages |  | Use a bench or support to make the lift in two stages. Adjust the grip as necessary for carrying or lifting to a second level | 1 | 3 | 3 |
| 11 | Trip & fall |  | The load should be carried in such a manner as to ensure that vision is not obscured | 1 | 3 | 3 |
| 12 | Back hurt and / or hernia when putting down weights |  | The legs should do the work of lowering, with the knees bent, back straight and the load kept close to the body | 1 | 3 | 3 |
| 13 | Hand injury from sharp edges, splinters and protruding nails |  | Attention should be given to sharp edges, protruding nails or splinters, greasy, wet & other slippery surfaces | 1 | 3 | 3 |
| Note F: Frequency, C: Consequence, R: Risk | | | | | | |

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| **Risk Treatment** | | | | **Residual risk evaluation** | | | |
| **Hazard No.** | **Additional Risk Control Measures** | **Responsible** | **Action Timeline** | | **F** | **C** | **R** |
| 1  2 | Ensure area is kept clear of oil, grease and equipment. | Officer supervise the work | Prior to work | | 1  1 | 3  3 | 3  3 |
| During lifting heavy objects, all personnel should keep clear away from the dangerous zone. | Officer supervise the work | During the work | |
|  | Any lifting appliance to be used should be checked / inspected prior to use. | Officer supervise the work | Prior to the work | |  |  |  |
| 4 | Personnel who handle lifting equipment shall be thoroughly trained in the use and maintenance of the equipment and the application of safety measures to protect against hazards. | C/E / C/O | Prior to the work | | 1 | 3 | 3 |
| 5 | The work should be supervised by an experienced crewmember. | C/E / C/O | Prior to/during the work | | 1 | 3 | 3 |
|  | A work-related safety meeting should be conducted prior to the work discussing work planning arrangements and relevant safety precautions and individual duties/responsibilities. | C/E / C/O | Prior to the work | |  |  |  |
|  | No Portable Lifting Appliance (PLA) and Loose Gear (LG) should be used unless it has been tested by the C/O or C/E (as applicable) within the previous year. | C/E / C/O | During work preparation | |  |  |  |
|  | It must be ensured that derricks, cranes and chain blocks to be used to be clearly marked with their Safe Working Load (SWL) and, where appropriate, the operating angle. | C/E / C/O | Prior to the work | |  |  |  |
|  | All lifting slings, strops, running wires, lifting wires, hooks and shackles must be clearly marked with their SWL and have a proper Certificate that gives the SWL or the minimum breaking load to which the item has been tested. | C/E / C/O | Prior to/during the work | |  |  |  |
|  | 1. Attention must be given in order:  * The SWL of a running lifting wire must be 8 times higher than the force induced to this wire by the SWL of the lifting appliance. * The SWL of a standing rigging wire rope must be 5 times higher than the force induced to this wire by the SWL of the lifting appliance.   The SWL of a single sling must be 20% of its breaking load, as stated on the relevant Certificate. | C/E / C/O | Prior to/during the work | |  |  |  |
|  | Swivel lifting hooks should always be used in order to prevent rotational damage to lifting wires. | C/E / C/O | Prior to/during the work | |  |  |  |
|  | The angle of separation between any two legs of a lifting sling, or any two strops used in concert, must not exceed 30 degrees. Rope slings and strops should not be used for lifting purposes. | C/E / C/O | Prior to/during the work | |  |  |  |
|  | When necessary, it is permissible to manually splice a running wire, provided such a splice has been inspected by the C/O or C/E prior to use. | C/E / C/O | Prior to/during the work | |  |  |  |
| 6 | Depending on the type/duration of the work and the environmental conditions, adequate measures (rotation, work breaks etc.) must be taken with the aim of minimizing fatigue. | C/E / C/O | Prior to/during the work | | 1 | 3 | 3 |
| **Note**: F: Frequency, C: Consequence, R: Risk | | | | | | | |

| **ALTERNATIVE WAYS TO CONDUCT THE WORK (a new RA should be conducted for the alternative way decided)** |
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| **Are any amendments to UMMS required (related to the above Additional Risk Control Measures)?** | | | |
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| **Yes** |  | Describe: |  |
| **No** |  | | |

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| **Contingency plans** (to facilitate safe management and recovery of the situation in case of any unplanned occurrences) | |
| Emergency case | Contingency Plans |
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| **Risk Management Team** | | | |
| Name | Rank / Title | Signature | Date |
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| Remarks: | | | |

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| **Risk Assessment reviewed/approved by:** | | | |
| Name | Rank / Title | Signature | Date |
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| Remarks: | | | |