**CRANE OPERATOR TRAINING RECORD**

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| Vessel: |  | Rank/ Name of Trainer: |  |
| Training Period: |  | Rank/ Name of Trainee: |  |

**Scope:** This training form is applicable to all vessels in TCC Tanker Fleet

**Purpose:** To carry out training of Ship’s crew involved in safe use of lifting gear (Hose Handling Cranes, Provision Cranes, Engine Room Crane) including use of hose handling crane at offshore terminals and personal transfer between vessels using ship’s crane and personal transfer basket.

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| **part (a) Planning, Organizing and Execution of relevant operations** |
| * All lifting operations must be adequately planned and risks assessed. Plan should include Risk Assessment and appropriate method of slinging lifting of the load. For more complicated or complex lifting operations like Transfer of Personnel, specific plan must be generated and full risk assessment in the form of JHA carried out with the crew members involved in the job to discuss sequence of events and hazards associated. * Lifting operations with cranes must always be carried out with a minimum of three persons/roles involved viz. **(A) The Lifting Appliance Operator, (B) Signaler** and **(C) Slinger**. * No lifting operations must be carried out with fewer staff than the pre-defined minimum number. Whether extra personnel are required in addition to the minimum number must be considered during the planning of lifting operations. * During **Transfer of Load**, command is given by the Signaler directly. When lowering the load, it should be brought to a halt short distance above the landing site to allow it to be steadied, its position and position of any landing pads checked to ensure all personnel are clear of the danger area. Before slackening off the slings, checks should be made to ensure that the load is safe and stable. If not, it should be lifted slightly and landing blocks / pads adjusted accordingly. * As per OCIMF Recommendations, all personnel involved in the transfer operation of personnel between two vessels should be sufficiently trained an able to provide evidence of their competence. Key personnel are the crane operator, signaler and responsible person. They should be provided with: * Theoretical training that includes company policies and procedures for crane operations and the transfer of personnel by crane. * Practical Training. This should familiarize crew with the specific equipment aboard their vessel. * The competence of key personnel should cover the following: * The safe use of cranes for transferring personnel. * The correct use and limitations of lifting equipment * Best practices for operating cranes. * Pre-operational checks and shutdown procedures * Effective planning of lifting operations. * Operation of the crane in a safe and controlled manner with regards to the safety of personnel. * Use of the manual hydraulic pump for slewing and lowering of the crane, if fitted. * Contingency planning requirements. * Signaling and terminology used during a personnel transfer operation. |

| **1.** | **Lifting Appliance Operator shall** | **Yes ()** |
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|  | Be Intimately familiar with all functions of controls, overrides and limits switches |  |
|  | Be in charge of and ensure the safety of each and every lift |  |
|  | Plan each lifting operation |  |
|  | Select appropriate lifting gear |  |
|  | Ensure that the lifting appliance and lifting gear are in good condition for the purpose and in accordance with the manufacturer’s instructions for use, specifications and instructions |  |
|  | Ensure that the lifting appliance is maintained in accordance with the maintenance program |  |
|  | Carry out pre-use check of the lifting appliance |  |
|  | Ensure necessary announcement of ongoing lifting operations |  |
|  | Ensure that necessary communication is established between all personnel involved in the operation |  |
|  | Coordinate the lifting operation in relation to other ongoing activities |  |
|  | Abide instructions and signals from signaler, and obey stop signal no matter who gives it |  |
|  | Operate the equipment in accordance with the capacities and limitations that apply for the lifting appliance |  |
|  | Stop a lifting operation if there is doubt about safety. The operation shall not resume before safety is addressed and re-established |  |
|  | Not participate in lifting operations if he feels physically or mentally unwell |  |
|  | Not participate in other tasks that can distract him during the operation of the lifting appliance |  |
|  | Carry out post-use check of the lifting appliance |  |
|  | Report any undesirable events |  |
|  | When transfer of personnel between two vessels |  |
|  | Understand agreed crane signals |  |
|  | Understand characteristics and limitations of the crane |  |
|  | Understand and be able to execute the personnel transfer plan. |  |
|  | Understand personnel transfer procedures and how these differ from the other crane operations |  |
|  | When engaged in lifting operations at offshore terminals:   * Understanding the limitations of the hose handling cranes (design criteria) * Understanding the effect of swell and local wind waves or their combined effect to ship’s motions and therefore to dynamic loading of the crane * Understanding the effect of roll, roll induced acceleration at the boom tip of hose handling crane in deep water and shallow waters * Understanding the inadequacy of design values for side-lead when lifting of hoses with the main lifting wire misaligned with plane of crane boom |  |
|  | Crane operators often fail to fully understand dynamic capacity of hose handling cranes, and its utilization in dynamic lifting applications at offshore terminal, which leads to damage to crane wires and associated equipment, potential injury to personnel, excessive delays in cargo operations, stress, wasted man hours, and inflate costs |  |

***After completion of Training of Part A1 – Lifting Appliance Operator:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **2.** | **The Slinger shall** | **Yes ()** |
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|  | Participate in the planning of each lifting operation |  |
|  | Select and use lifting gear in accordance with the standard and the **company’s** Governing Documents and policy |  |
|  | Check the lifting gear before and after use (SWL and condition for the load) |  |
|  | Make sure the load and load carrier are carefully prepared and secured before the lifting operation is started, secure a messenger line to control/ prevent swinging |  |
|  | Hook the straps on and off the load and the crane hook or lifting gear |  |
|  | Inform the signaler when the load is ready for lifting and when the hook is free again at the end of the lift |  |
|  | Not touch a load that is swinging or rotating |  |
|  | Not touch a load that is above hip height (above 1.30m) |  |

***After completion of Training of Part A2 – The Slinger:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **3.** | **The Signaler shall** | **Yes ()** |
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|  | Wear a hi-visibility jacket in order to separate the roles clearly when lifting  operation with crane is performed |  |
|  | Participate in the planning of each lifting operation |  |
|  | Clear the lifting route and ensure the necessary cordoning off to keep  personnel not involved in the lifting operation outside the exposed area |  |
|  | Make sure the slinger is in a safe area when the load is lifted and lowered |  |
|  | Give the start-up signal for and direct the safe movement of the lifting appliance and the hook load |  |
|  | Communicate in accordance with the requirements of this guideline standard |  |
|  | Inform everyone involved in the lifting operation that the new signaler is, if a new signaler has to take over. The new signaler must confirm that he takes over the responsibility |  |
|  | Stay in visual or radio contact with the slinger at the beginning and the end of operation |  |
|  | Supervise the lifting operation at all times |  |
|  | When involved in transfer of personnel between two vessels using ship’s crane:   * Understand agreed crane signals * Understand characteristics and limitations of the crane * Understand and be able to execute the personnel transfer |  |
|  | Understand personnel transfer procedures in company SMS as well as in OCIMF information paper, “Transfer of Personnel by Crane between vessels” |  |

***After completion of Training of Part A3 – The Signaler:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **4.** | **Handling Practices for Different Components of Lifting Gear shall** | **Yes ()** |
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|  | All the referenced Lifting Gear and accessories shall be tested (SWL) and so Certified |  |
|  | Use and check of lifting gear shall be in accordance with the manufacturer’s instructions for use, and TCC mandated procedures |  |

***After completion of Training of Part A4 – Handling Practices for Different Components of Lifting Gear:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **5.** | **The Slings shall** | **Yes ()** |
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|  | The load shall be attached to the hook by means of slings or other suitable lifting gear |  |
|  | Lifting hook lever (lock) is in place to prevent accidental unshipping of sling |  |
|  | Protective material shall be placed between the slings and any sharp edges and a check shall be carried out to ensure that the bend diameter complies with the manufacturer’s instructions for use |  |
|  | If several slings are used in the same eye or hook they shall not lay on top of each Other. When slings or chains are used, consideration shall be given to the number of legs, the angle and other factors that alter the capacity of the sling. The sling shall be wrapped twice around the object to be lifted, if possible. The sling shall be tensioned with care, and not jerked. Care shall be taken to ensure that the load is distributed evenly between the legs |  |

***After completion of Training of Part A5 – The Slings:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **6.** | **The Chains & Shackles shall** | **Yes ()** |
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|  | Special care shall be exercised when using chain. The pre-use check shall focus in particular on corrosion and flexibility of each link |  |
|  | For all lifts of material or personnel, only shackles with double locking shall be used, for example nut plus split pin or screwed connection with split pin.  Other types of pin shall not be used. For securing static loads, other types of shackle can be used. Shackles without rotating bolt should not be used in permanently installed lifting arrangement due to the danger of transferring rotating forces to the shackle bolt. If shackle without rotating bolt is used in lifting arrangement, the bolt shall be properly secured to withstand any rotating forces transferred to the shackle bolt |  |

***After completion of Training of Part A6 – The Chains & Shackles:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **7.** | **Eye bolts and eye nuts shall** | **Yes ()** |
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|  | Eye bolts and eye nuts shall always be screwed into the point where the entire collar is in contact with the surface. Pre-use check shall include a check of the threads in the material in which the eyebolt will be mounted, and that the thread dimension and type are the same |  |

***After completion of Training of Part A7 – Eye bolts and eye nuts:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **8.** | **Wire rope clamps & turnbuckles shall** | **Yes ()** |
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|  | Wire rope clamps shall be of a type with two gripping surfaces. U-bolt clamps shall not be used on lifting equipment. When using wire rope clamps, the minimum breaking load of the wire rope shall be reduced in accordance with manufacturer’s instructions for use, and the correct number of clamps shall be used |  |
|  | If turnbuckles are used in the lifting arrangement, they shall be certified and approved for lifting |  |

***After completion of Training of Part A8 – Wire rope clamps & turnbuckles:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **9.** | **Single and multi-sheave block shall** | **Yes ()** |
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|  | When securing snatch block to the load bearing structure, the operator shall ensure that all split pins, locking and safety pins are in place and in good Condition. The user shall ensure that the load bearing structure is strong enough to withstand the resultant force (load plus wire tension and any friction forces) and that the snatch block is correctly positioned such that the wire rope does not rub against the side plates. For complex arrangements, an enterprise of competence should verify the correct set-up and calculations of resultant forces. |  |

***After completion of Training of Part A8 – Wire rope clamps & turnbuckles:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **part (B) COMMUNICATION** |
| * When lifting operation is in progress on deck the signaler should remain in continuous contact with the lifting gear Operator. Signaler must follow the standard signals as Follows: * The following sets of coded signals are examples of those implemented by the EU Directive 92/58/EEC, but where there are accepted national signals in common use (as indicated \*) these too are acceptable. |
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***After completion of Training of Part B – Communication:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **part (C) hose handling crane & provision cranes** |
| The operator must be intimately familiar with function of all “controls”, overrides & limit switches etc. |

| **1.** | **General Precautions for Crane Operator shall** | **Yes ()** |
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|  | **Following Best practices and use common sense:** | |
|  | Never apply the load exceeding the capacity prescribed in the specifications. The Crane has been designed to be most efficient to lift the specified load |  |
|  | The crane must never be used to lift load in excess of its assigned SWL |  |
|  | Observe the limit load at the maximum swiveling radius prescribed in the Specification by the hoist of the jib, as in the case of this crane |  |
|  | Overturning, Upsetting or breakage due to overload and over-radius are often seen in jib type cranes |  |
|  | Lifting loads exceeding the prescribed value may result in damage to the machine, Breakage of rope, damage / loss of the load, or injury or death |  |
|  | Pulling obliquely will apply unnatural force to various parts, shorten the life of the machine and lead to a serious accident. It must never be attempted |  |
|  | During **Personnel Transfer Operations using Personnel Carrier Basket** ensure to post additional lookouts |  |
|  | **Do not remove safety:** | |
|  | The safety devices supplied are carefully adjusted and fixed at specific  locations |  |
|  | Do not remove them, nor change the adjusted locations, unless anything unusual happens. |  |

***After completion of Training of Part C1 – General Precautions for Crane Operator:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **2.** | **Precautions at the time of operation shall** | **Yes ()** |
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|  | **Safety of Operation:** | |
|  | Crane handles heavy cargo. If the cargo falls from a height, or is shaken, serious accidents may occur |  |
|  | Considering the weight and size of the cargo, or other people or things which might be in the way of operation; operate the crane with sufficient care |  |
|  | **Smooth Operation:** | |
|  | Do not start or stop with a jerk. Operate the crane smoothly: it will reduce the wear of various parts and prolong life of the machine. Avoid operating the machine with full load and at full speed, or starting stopping more often than is necessary (inching operation) |  |
|  | While operating the operator should be alert to any abnormal sound, vibration or generation of heat. If any abnormality arises, stop the operation immediately, examine the cause and consider countermeasure |  |

***After completion of Training of Part C2 – Precautions at the time of operation:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **3.** | **Preparation before operation shall** | **Yes ()** |
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|  | Check the oil –gauge of hoisting & slewing reduction gears along with hydraulic power unit’s tank. Confirm the oil gauge is full with lubrication oil |  |
|  | Apply grease to necessary points |  |
|  | Switch “ON” power breaker of switch box |  |
|  | Remove locking devices for jib and hook |  |
|  | Raise jib without load |  |
|  | Make sure that each limit valve properly operates without load |  |
|  | Make sure that there is nothing wrong with each motor, brake and cylinder |  |
|  | **Prescribed Condition for Use:** | |
|  | The Crane to be used in the following conditions:  Ship’s heel: Less than 5 degree  Ship’s trim: Less than 2 degree  Ambient temp: -10 degC ~ +40 degC | |
|  | If the Cranes were used in the conditions which exceed the above mentioned, it might cause damage or trouble to the Crane. Hench Attention must be paid prior use of Cranes |  |

***After completion of Training of Part C3 – Preparation before operation:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **4.** | **During operation shall** | **Yes ()** |
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|  | Notify responsible Officer before taking crane into operation |  |
|  | Make sure that there is nobody in the crane working area who might be injured |  |

***After completion of Training of Part C4 – During operation:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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| **part (D) ship specific requirements for using the crane safeLy**  **(Attach ship-specific procedures and manuals)** |
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| **1.** |  | **Yes ()** |
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***After completion of Training of Part D – Ship Specific Requirements for using the crane safely:***

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| Read and Understood by Trainee  Sign & Date |  | Verified by Trainer for understanding  Sign & Date |
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**SUMMARY**

As defined in SMS Vol. V, Chapter 26, subparagraph 26.1.2: Competent person is a person possessing the knowledge and experience required for the performance of thorough examinations and tests of lifting appliances and loose gear and who is acceptable to the competent authority. Such Competent person is also authorized to conduct on board training & certification for safe operation of cranes & other lifting appliances, including transfer of personnel by crane between vessels & hose handling at offshore terminals.

As per SMS Vol V, Chapter 26, section 26.25 Training:

A Chief Engineer should carry out a thorough training of all the crew members on board, which are engaged in lifting operations in a role of either the crane operator, Slinger, Signaler and assisting crew. On completion of training included in this SMS form, which involves generic safe operating practices, ship specific crane operator training, followed by a detailed practical demonstration, a certificate of attendance will be issued to attending crew members on satisfactory completion of this training module, based on oral examination/ assessment & verification by Master/ Chief Engineer.

I have read and understood all of the above documents.

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| Name of Trainee | : |  |
| Rank | : |  |
| Signature | : |  |
| Date of Completion | : |  |
| Name of Master/ Training Officer | : |  |
| Signature | : |  |