


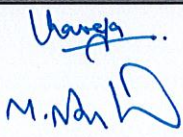
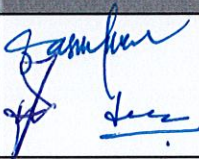

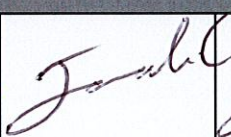
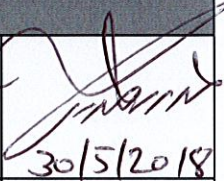



# HSE INSTRUCTION FOR LIFTING ACTIVITIES

Instruction NO: IN-250-HSE-13

Date of first issuance: April 1992

Approved By	Name	Jonathan Cook	 5/6/18
	Position	Chief HSE Officer	

Rev#	Date	Prepared by	Reviewed By			
0	24/05/2018	 M. N. Al-Hadi	 HSSE Support / Safety Manager	 MGM (Vinyl)	 TGM	 MGM (SC/PE) 30/5/2018

 <b>QAPCO</b> شركة قطر البتروكيماويات QATAR PETROCHEMICAL COMPANY	<b>HSE INSTRUCTION FOR LIFTING ACTIVITIES</b>	Procedure	:	IN-250-HSE-13
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Revision / Modification History

Rev#	Date	Page	Section	Reason of Revision / Modification
0	24/5 2018	All		<ul style="list-style-type: none"> <li>• Procedure PR-251-SF-10 converted as instruction In-250-HSE-13 as per BT requirements</li> <li>• Instruction revised to integrate QAPCO PTW system with QVC PTW after merging</li> <li>• Categorization of lifting activities as light, Heavy and Critical</li> <li>• Excluded Safety Agent from signing of Lifting certificate</li> <li>• Updated the definition list</li> <li>• Updated the reference list</li> <li>• Updated the responsibilities matrix</li> <li>• New form for Lifting Certificate</li> <li>• New form for Lifting Plan calculations</li> <li>• Job readiness Audit added</li> </ul>

**Distribution:**

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### 1. PURPOSE:


These instructions lays down the requirements for safe systems of work to be administrated and maintained to ensure the safe execution of lifting activities. It outlines the controls to be practices, specifies requirements for defining the precautions to be taken, and for identifying any consequent limitations that may become applicable.

This instruction provides the guidelines on completing the Lifting certificate form and to follow safe practices during any lifting activities in QAPCO premises.

### 2. SCOPE

These instructions applies to QAPCO complex for lifting works that required to use mobile or tower or truck mounted cranes. Overhead cranes and Logistics cranes (shore & straddle carrier) are not part of the scope of this instruction. Employees and contractors who responsible to perform the crane work activities must follow this instruction.

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### 3. ABBREVIATION AND DEFINITION:

#	Abbreviation / Key word	Definition summary
1	SWL ( Safe working Load)	A maximum load, which can be handled by crane at specified position and specified conditions. SWL is included hook and lift handling devices.
2	Radius	Horizontal distance between the axis of rotation of the crane and the vertical centerline passing through the load lifting attachment.
3	Permit Issuer / Issuing Authority	QAPCO authorized person appointed as Permit issuer and responsible for the asset/area under his control. He is responsible for issuing the work permit to the Job Lead Executor. He must be successfully trained in the Permit to work system of QAPCO.
4	Execution Supervisor/ Planner	QAPCO Employee direct supervise Lead Executor or responsible to plan & execute the task and extensive knowledge about task. (He can be from QAPCO maintenance/ ESD/ Technical development/ Project representative).
5	Lead Executor	Is a person who is trained and qualified for QAPCO work permit system and responsible to ensure that all conditions of the permit, agreed to with the Permit Issuer, are being fulfilled at all times throughout the job. He can be a QAPCO staff or a contractor employee
6	Work permit	It is a written document issued for performing any intervention work on QAPCO assets. It authorizes the holder of the completed document to carry out a specific task at a specific location at a specific time and lists out the potential hazards and the appropriate precautions to be taken for performing the intervention safely.
7	Job Safety Analysis	One of the risk assessment tools to ensure all hazards associated with a job are proactively identified before starting it and suitable controls are identified to mitigate the risk to as low as reasonably practicable (ALARP).
8	Restricted area	Plant area within the safety gates is called the restricted area where the plant equipment and processing operations are carried out and is the area in which exists or may exist a hazardous atmosphere.
9	Non-Plant Area	Any area outside the plant inside Qapco complex which includes (Buildings, Contractor Yard, Waste Storage Yard, Logistics Warehouses, Roads, Gates, Avenues, Car Parking, etc.)
10	Lifting plan	Is a document that details the method statement for the lifting activity, the lifting tools, equipment to be used, the dimensions, rigging study, safety instructions and the control measures in place to manage the risks This document can be a separate document or part of another lifting plan that has to be prepared for simple lifts and critical lifts.


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11	Light Lift	<ul style="list-style-type: none"> <li>- Gross load is less than 5 tons</li> <li>- Lifting of the load;             <ol style="list-style-type: none"> <li>1. <b>Shall NOT</b> requires the use of multiple cranes.</li> <li>2. <b>Shall NOT</b> exceeds <b>75%</b> of the crane's rated capacity within the lift configuration of the crane.</li> <li>3. <b>Shall NOT</b> requires exceptional care in handling because of size, weight, close-tolerance installation, high susceptibility to damage or other unusual factor.</li> <li>4. <b>Shall NOT</b> requires exceptional care in handling because it is being lifted above a critical item (e.g. life pipelines).</li> <li>5. If dropping, upset or collision <b>Shall NOT</b> cause or result in any one of the following:                 <ol style="list-style-type: none"> <li>a. Damage that would result in serious economic consequences.</li> <li>b. Damage that would result in unacceptable delay to schedule or other significant deleterious programmatic impact (such as loss of vital data)</li> <li>c. Undetectable damage that would jeopardize future operations or safety of a facility.</li> <li>d. Significant release of radioactive or other hazardous material to the environment or creation of an undesirable condition.</li> <li>e. Personnel injury or significant adverse health impact, either onsite or offsite.</li> </ol> </li> </ol> </li> </ul>
12	Heavy Lift	<ul style="list-style-type: none"> <li>- Gross load is more than 5 tons</li> <li>- Lifting of the load;             <ol style="list-style-type: none"> <li>1. <b>Shall NOT</b> requires the use of multiple cranes.</li> <li>2. <b>Shall NOT</b> exceeds <b>75%</b> of the crane's rated capacity within the lift configuration of the crane.</li> <li>3. <b>Shall NOT</b> requires exceptional care in handling because of size, weight, close-tolerance installation, high susceptibility to damage or other unusual factor.</li> <li>4. <b>Shall NOT</b> requires exceptional care in handling because it is being lifted above a critical item (e.g. life pipelines).</li> <li>5. If dropping, upset or collision <b>Shall NOT</b> cause or result in any one of the following:                 <ol style="list-style-type: none"> <li>a. Damage that would result in serious economic consequences.</li> <li>b. Damage that would result in unacceptable delay to schedule or other significant deleterious programmatic impact (such as loss of vital data)</li> <li>c. Undetectable damage that would jeopardize future operations or safety of a facility.</li> <li>d. Significant release of radioactive or other hazardous material to the environment or creation of an undesirable condition.</li> <li>e. Personnel injury or significant adverse health impact, either onsite or offsite.</li> </ol> </li> </ol> </li> </ul>

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13	Critical Lift	<p>A lift shall be designated critical if <b>The Gross load is greater than 25 tons</b></p> <ul style="list-style-type: none"> <li>- Lifting of personnel (e.g. Man Riding operations)</li> <li>- Any of the following conditions are met:             <ol style="list-style-type: none"> <li>1. Any lift that requires the use of multiple cranes.</li> <li>2. Any lift that exceeds 75% of the crane's rated capacity within the lift configuration of the crane.</li> <li>3. The item to be lifted requires exceptional care in handling because of size, weight, close-tolerance installation, high susceptibility to damage or other unusual factor.</li> <li>4. The item, although non-critical, requires exceptional care in handling because it is being lifted above a critical item (e.g. life pipelines).</li> <li>5. If dropping, upset or collision could cause or result in any one of the following:                 <ul style="list-style-type: none"> <li>• Damage that would result in serious economic consequences.</li> <li>• Damage that would result in unacceptable delay to schedule or other significant deleterious programmatic impact (such as loss of vital data)</li> <li>• Undetectable damage that would jeopardize future operations or safety of a facility.</li> <li>• Significant release of radioactive or other hazardous material to the environment or creation of an undesirable condition.</li> </ul> </li> </ol> </li> </ul>
14	Rigger	Trained and certified person who is responsible for attaching/de-attaching the lifting gears from/to the crane prior and after lifting phase and direct the lifting operations during the lifting phase.
15	Lifting gears	Set of equipment that is being used for lifting loads. This includes shackles, slings, hoists, hooks, chains, eyebolts, shear legs, windlasses, hydraulic lifting pads, air lift bags.
16	Maximum Load Limit (MLL)	It is the maximum load which should ever be applied to the sling, even when the sling is new and when the load is uniformly applied.
17	Crane Operator	person who is operating the crane for the purpose of positioning loads or erection of the crane
18	Lifting equipment	work equipment (e.g. crane) for lifting or lowering loads, including attachments used for anchoring, fixing or supporting the load
19	Method statement	document produced by the appointed person to describe how the lifting operation is to be carried out

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20	3 <sup>rd</sup> party	A competent organization/ company hired by QAPCO or Contractor to perform the thorough examination of lifting equipment/gears.
21	Lifting appliance	Machine or device used for vertical movement of a load, with or without horizontal movement (e.g. cranes)
22	Flagman /Banksman	Trained and certified person who coordinates with crane operator visually or by radio during the crane movement.
23	Certification	Certification is an approved and legally compliant method of inspecting and providing written evidence that a piece of equipment has been examined and meets required standards
24	CHSSEO	Chief HSSE Officer
25	MGM	Manufacturing Group Manager
26	TGM	Technical Group Manager
27	HOD	Head of Section

#### 4. REFERENCE DOCUMENTS:

S.no	Document ID	Document Title
1	M-250-QSS- 01	HSE-IMS (Integrated Management System) Manual
2	IN-250 –HSE-0	Cold work Permit Instructions
3	PR-QSS-114	Work Permit Procedure
4	PR-QSS-110	Incident Reporting and investigation Procedure
5	IN-250-HSE-03	QAPCO 12 Golden Rules at work
6	IN-250-HSE-08	Instruction for Hot work permit ( Crane Entry requirement inside plant)
7	PR-QSS-127	Job safety Analysis
8	IN-223-ID-113	Lifting equipment inspection instruction
9	F-250- HSSE-05	Lifting certificate

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## 5. GENERAL SAFETY REQUIREMENTS:

- 1) All the Mobile crane shall be inspected and certified by 3rd party.
- 2) All lifting gears (Shackles, slings, belts, hooks, etc.) should be inspected and certified by 3rd party and fit for use.
- 3) If lifting load is more than 5 ton a lifting plan to be prepared and approved by Safety.
- 4) Any change from approved lifting plan consider as invalid lifting plan, requestor have to revise the lifting plan and get approved.
- 5) **Lifting Plan:** prepared & reviewed by the requestor of the crane work and approved by Safety department, *Following but not limited must be clearly addressed in lifting Plan document:*
  - The nature and weight of the load and the lifting points
  - Loading charts
  - Lifting calculations and drawings pertinent to the lifting site
  - Communication methods to be used
  - Emergency and rescue plans
  - Restrictions on the lift such as weather, lighting, plant process conditions.
- 6) All lifting equipment shall be proof load test and certified by 3<sup>rd</sup> party.
- 7) Equipment owner should put "Not to be used" sign on equipment when 3<sup>rd</sup> party certificate is expired until satisfactory inspection is performed
- 8) Lifting equipment to be retested as proof load test whenever major repair or alteration
- 9) The area around the swing radius of the crane shall be cordoned off and warning signs placed during a lifting activity and no body allowed under the suspended load
- 10) The crane operator is responsible for setting up the crane level and in position for safe rotation and operation
- 11) For mobile cranes no lifting operation is allowed without the outriggers fully extended and the outrigger pads supported by stable footing.
- 12) The crane operators are required to respond to only the certified assigned rigger. However, he shall obey an emergency stop signal at all times, no matter who gives it.
- 13) There shall be only one certified rigger assigned for signaling for a single lift even though there are 2 cranes.

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- 14) The certified rigger shall perform the task of only directing the lifting operations during the lifting phase.
- 15) The certified rigger will be identified by wearing a high visibility vest.
- 16) All riggers must be trained and certified by third party, certificate should be valid.
- 17) There shall be no riding on mobile cranes.
- 18) Loads must be kept under control and tag lines must be used for all lifts.
- 19) The crane route to be surveyed and must be marked on vehicle entry route map ( F-250-HSSE-03) and only that route shall be followed.
- 20) All crane movements within the plant area must be directed by a flagman to ensure no equipment is struck by the boom.
- 21) Any lifting activity with regard to wind speed has to be considered as follows,
  - Lifting activities are permissible when the wind speed is equal to or below 10 m/sec and does not exceed the Original Equipment Manufacturer (OEM) certified maximum safe operating wind speed.
  - Use of cranes above 10 m/s wind speed can only be considered on a case-by-case basis, subject to comprehensive risk assessment and Job Safety Analysis supported by the OEM's certified maximum safe operating wind speed.
- 22) The load to be lifted shall not exceed 75% of the crane safe working load for the prescribed lift conditions and crane set up. (If lifting load is more than 75% of crane SWL a detail JSA & Lifting plan should prepared and approved).
- 23) If the crane shall be assembled in QAPCO premises then an independent load test will be performed and certified by a competent third party.
- 24) Crane should have self-mounted anemometer to monitor the wind speed & automatic load indicator installed inside the operator cabin.
- 25) Any crane which undergone **major** maintenance works or modification is to be re-inspected and re-certified by third party.
- 26) No lifting will be performed unless the load item weight is determined accurately.
- 27) All lifting activity has to be suspended in times of poor illumination. The executor and permit issuer has the prerogative to decide on the degree of illumination required for the lift to progress.
- 28) Crane shall not move when boom is extended.

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- 29) Cranes shall not be used for dragging a load, load should be vertically and center under crane hook
- 30) Job readiness audit is mandatory for lifting activities, field operator shall ensure its compliances before issuing the work permit.
- 31) Job readiness audit shall be perform by safety agent with lead executor and area operator.
- 32) If job is inside the plant area, additional control measures to be applied.( Hot work permit)

#### **6. PLANNING:**

For every lifting operation the risks have to be assessed and controlled. For critical lifts, a detail lifting plan & JSA to be performed which must cover following but not limited:

- Communication and language difficulties
- Weight, size, shape and center of gravity of load
- Availability of approved lifting points on load
- Method of slinging/attaching/detaching the load
- Overturning/load integrity/need for tag lines
- Suitability and condition of Lifting Equipment to be used
- Initial and final load positions and how it will get there
- Ground and underground considerations
- Lifting over live equipment
- Number and duration of lift(s)
- Conflicting tasks in area
- Environmental conditions including weather and permissible limits
- Lighting in the pick-up and lay-down areas
- Proximity hazards, obstructions, path of load (e.g. potentially live electrical, hydraulic or pneumatic lines, underground conduits & overhead structures)
- Working under suspended loads
- Access and emergency escape routes for the Lifting Appliance Operator and load handlers (e.g. Banksman, Slinger)
- Experience, competency and training of personnel
- Number of personnel required for task
- Pre-Use Inspection of equipment by Operator
- Visibility of the load at all times by either the Lifting Appliance Operator or the person guiding the load (Banksman). He must maintain communication with the Operator at all times either via hand signals, radio or a relay Signal Banksman.

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### 6.1 Categorization of Lift:

Lifting operations are categorized as simple, heavy and critical, to reflect increasing risk and increasing level of control required as per categorization scheme as given below:

Category of Lift <sup>[*]</sup>	Documentation/Controls	Competent Personnel
<b>Light Lift</b>	<ul style="list-style-type: none"> <li>- Lifting certificate</li> <li>- Crane 3<sup>rd</sup> party inspected</li> <li>- Certified lifting gears</li> <li>- Equipment Pre-use inspection</li> <li>- PTW Compliances</li> <li>- LMRA</li> <li>- Toolbox Talk</li> <li>- Route Survey (if required)</li> <li>- Job Readiness Audit</li> </ul>	<ul style="list-style-type: none"> <li>- Certified Crane Operator</li> <li>- Certified Banksman and / or Slinger/ Rigger</li> <li>- Competent Supervisor</li> </ul>
<b>Heavy Lift</b>	<ul style="list-style-type: none"> <li>- Lifting Plan.</li> <li>- All other requirements for Light Lift.</li> <li>- Job Readiness Audit</li> </ul>	<ul style="list-style-type: none"> <li>- All requirements for Light Lift.</li> </ul>
<b>Critical Lift</b>	<ul style="list-style-type: none"> <li>- JSA</li> <li>- All other requirements for Heavy Lift</li> <li>- Job Readiness Audit</li> </ul>	<ul style="list-style-type: none"> <li>- Execution supervisor</li> <li>- All other requirements for heavy lift.</li> </ul>

**[\*] Refer to Section (3) Abbreviation and Definition for detailed categorization of Light, Heavy and Critical Lifts.**

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## 7. RESPONSIBILITIES

Role	Responsibilities
Line Manager	<ul style="list-style-type: none"> <li>Responsible to ensure that guidelines are followed</li> </ul>
Plant Section Head	<ul style="list-style-type: none"> <li>Accountable for all works undertaken within his area of control</li> <li>Knowledge of the Crane work activities (IN-250-HSE-13)</li> <li>Ensure that there is no conflicting activities in the area that may introduce the additional hazards and he should ensure that hazards are identified for conflicting and non- routine activities and control measures are in place.</li> <li>Ensure systematic PTW system audit is being carried out by his team.</li> </ul>
Inspection Section:	<ul style="list-style-type: none"> <li>Responsible for planning, scheduling &amp; organizing of lifting equipment &amp; gears 3<sup>rd</sup> party inspection.</li> <li>Communicate any abnormalities to the owner of equipment</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>Inform the inspection section to carry out major repair or replacement for sling, shackle or other lifting equipment in order to arrange the periodic inspection and proof load test if required.</li> </ul>
Lead Executor/ Execution Supervisor	<ul style="list-style-type: none"> <li>Review and ensure that the Lifting Certificate details are correct.</li> <li>Perform pre-task route survey with permit issuer and suggest safe execution plan</li> <li>Inspect work site with executor and ensure that proposed hazard /precautions are adequately identified</li> <li>Ensure that all personnel training and equipment certifications are valid &amp; up to date.</li> <li>Prepare, Lifting plan, JSA and Method of Statement whenever applicable.</li> </ul>
Permit Issuer	<ul style="list-style-type: none"> <li>Check the Lifting Certificate and ensure that right information was given.</li> <li>Verify equipment and asset tag no</li> <li>Ensure lifting plan, JSA is prepared and approved whenever applicable.</li> <li>Carryout site visit with Responsible Supervisor to ensure proposed hazard /precautions are adequately identified whenever required.</li> <li>Sign the work permit for the task after confirming the above mentioned points.</li> </ul>
Crane Operator	<ul style="list-style-type: none"> <li>Check crane safety functions (reverse alarm, swing table alarm, hook alarm and other functions and ensure its functionality.</li> </ul>

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	<ul style="list-style-type: none"> <li>Position the crane properly, assess the potential hazards and communicate with Lead Executor if any additional hazard.</li> <li>Clarify communication protocols</li> <li>Sign the Lifting Certificate after confirming the above mentioned point.</li> </ul>
Sr. Safety Officer	<ul style="list-style-type: none"> <li>Ensure that hazards are identified for the job appropriate control measures are recommended.</li> <li>Ensure JSA &amp; Lifting plan approved by safety team whenever applicable</li> <li>Onsite Coaching of people about safety system.</li> <li>Perform frequent audits and safety checks, advise the workers and ensure related safe systems are followed.</li> </ul>
Lead Executor	<ul style="list-style-type: none"> <li>Understand the job and risks associated &amp; control measures to be implement.</li> <li>Know the overhead limitation and communicate with crew.</li> <li>Obtain required approvals from concerns.</li> <li>Sign the Lifting Certificate <ul style="list-style-type: none"> <li>Conduct the LMRA and perform Toolbox Talk</li> <li>Ensure that the Job Safety analysis , method of Statement and Toolbox Talk</li> </ul> </li> <li>are adhere during the execution of the work</li> <li>If the conditions or the risks of the work change reassess the job and suspend if considered necessary.</li> <li>Ensure weather conditions are acceptable (No Rain, control wind speed, proper illumination etc.)</li> </ul>
Field Operator/ Contractor Safety Officer	<ul style="list-style-type: none"> <li>Knowledge of this instructions</li> <li>Validate the PTW and ensure Lifting Certificate is correctly completed and attached to the Permit</li> <li>Ensure that all safety equipment are available &amp; functional</li> <li>Ensure LMRA completed and if zero energy required it shall be completed as well.</li> </ul>
Safety Agent	<ul style="list-style-type: none"> <li>Support working team for safety related issues.</li> <li>Perform the Job Readiness Audit</li> <li>Conduct site verifications and ensure the compliance with QAPCO procedures/instructions.</li> </ul>

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## 8. PROCESS:

Lifting certificate divided into following sections:

1. Job Scope identification
2. Safety Precautions
3. Approval
4. Close Out
5. Route Marking ( In case Crane inside the plant area)

• **Sequence of Certificate issuance signatures is as follows;**

1. Requestor
2. Crane Operator
3. Lead Executor and Execution supervisor
4. Lead Executor and Asset/Area Owner for Certificate for close out.

### 8.1 SECTION -1 Job scope identification

- a) Requestor will complete the information for section-1 (MN #, WP #, location, type of crane, crane detail, execution party and lift category. ( see Appendix 12.4)
- b) Certificate will be issued only for job, once job is completed certificate will expired.
- c) Based on lift category requestor will prepare lifting plan for heavy & critical lifts. ( Appendix-12.3)
- d) Requestor / originator will sign of certificate after confirming that all information is correct and valid.
- e) If job to be performed inside the plant area, requestor will prepare the Hot work permit and Vehicle Route map


### 8.2 SECTION -2 Safety Precautions:

- a) Based on information provided in section 1 of Certificate Lead Executor and Execution Supervisor (QAPCO) will check and confirm the safety precaution mention in section -2 (safety Precautions) on corticated form.
- b) Execution supervisor (QAPCO) ensure that all hazards associate to crane lifting activity must be identified & control measures are suggested.

### 8.3 SECTION- Approval

- a) Before approving the lifting certificate, Lead Executor and Execution Supervisor (QAPCO) shall understand the scope of work, hazards identified and precautionary measures then sign on the certificate to confirm that all conditions mentioned above are met.

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- b) It will be the Lead Executor responsibility to ensure that the safety precautions (Section-2) are followed by personnel working under his control. He must notify the Area/Asset Owner upon completion / suspension of the work.
- c) LEAD EXECUTOR is responsible to conduct the Tool box talk with all crew members and discuss the crane communication requirement.
- d) Anyone has authority to stop the crane activities if it develops a situation where there may be danger to the life of employee, contractor or asset.

**8.4 SECTION-4 Close Out:**

- a) It is the responsibility of the Lead Executor to remove the crane or lifting equipment from site once task is completed and perform housekeeping of the area then initiate the close out of lifting certificate.
- b) Area/Asset Owner shall inspect the work area and confirm that it is restored to normal condition and crane is remove from site.
- c) Before closing of certificate, area owner shall ensure that associate work permits shall be closed.
- d) Closing of certificate by area owner shall be considered as final closing.
- e) Area/Asset Owner signed the certificate after the confirmation of task completion, equipment removed and area cleaned.
- f) If any isolation was performed, a cancellation of isolations to be performed only after closing of all the work permits linked with the isolation.

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## 9. SUSPENSION AND CANCELLATION OF CERTIFICATE:

- a) If the Lead Executor has to **suspend** his job due to job of higher priority he has to inform the permit issuer and leave the certificate and work permit in the control room.
- b) If the copy of the Work Permit or Lifting Certificate is lost during the task, a Lead Executor shall immediately stop the work and approach the permit Issuer to close the work Permit/ certificate. Lead Executor should inform the reason for closure of permit/ certificate.
- c) In case of any **incident** related to activities performing under specific certificate or its associate permits, Lead Executor should stop the job & inform to CCR (permit Issuer) or Area/Asset Owner. Relevant the permits/ certificate will be closed and new permits/ certificates will be issued.
- d) If plant **Emergency siren sounds** at any time during the job: Stop all work, lifting certificate is cancelled automatically in both affected and non-affected areas. Refer to the Emergency Response Procedure and action Plan for more details. Crane and other related equipment must be turned off and secured as quickly as possible.


- 
1. ***Fire & Safety Representatives must inspect the job site after a work stoppage due to emergency or incident to revalidate jobs in this site.***
  2. ***Area Operator/Contractor Safety Officer shall immediately barricaded the area in case of any incident happen to preserve the scene for investigation purposes.***
- 

- e) If **Changes in conditions** (such as Work method, scope of work or tools and equipment during validity of the certificate, Permit Issuer and Job Lead Executor must review the changes and work must be stopped, If changes affect the certificate conditions (e.g. crane configuration) then new Certificate must be issued.

## 10. CERTIFICATE DISTRIBUTION

- The original or the first copy will remain in the control room (Permit issuer) or with Area/Asset Owner.
- The hard copy will be at the work site and held by the Lead Executor during the duration of the job.
- The hard copy can be requested at any time by any QAPCO responsible person.

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## 11. FOLLOW UP AND RECORDS

- After closing of the Certificate, the hard copy **(with all attachments)** will remain with the Permit issuer in the CCR and the original (first copy) will be kept by the Executor department.

## 12. APPENDIX:

12.1: Crane work certificate form


12.2: Process flow chart

12.3: Lifting plan

12.4: Lift categorization check list

12.5 Job readiness Audit

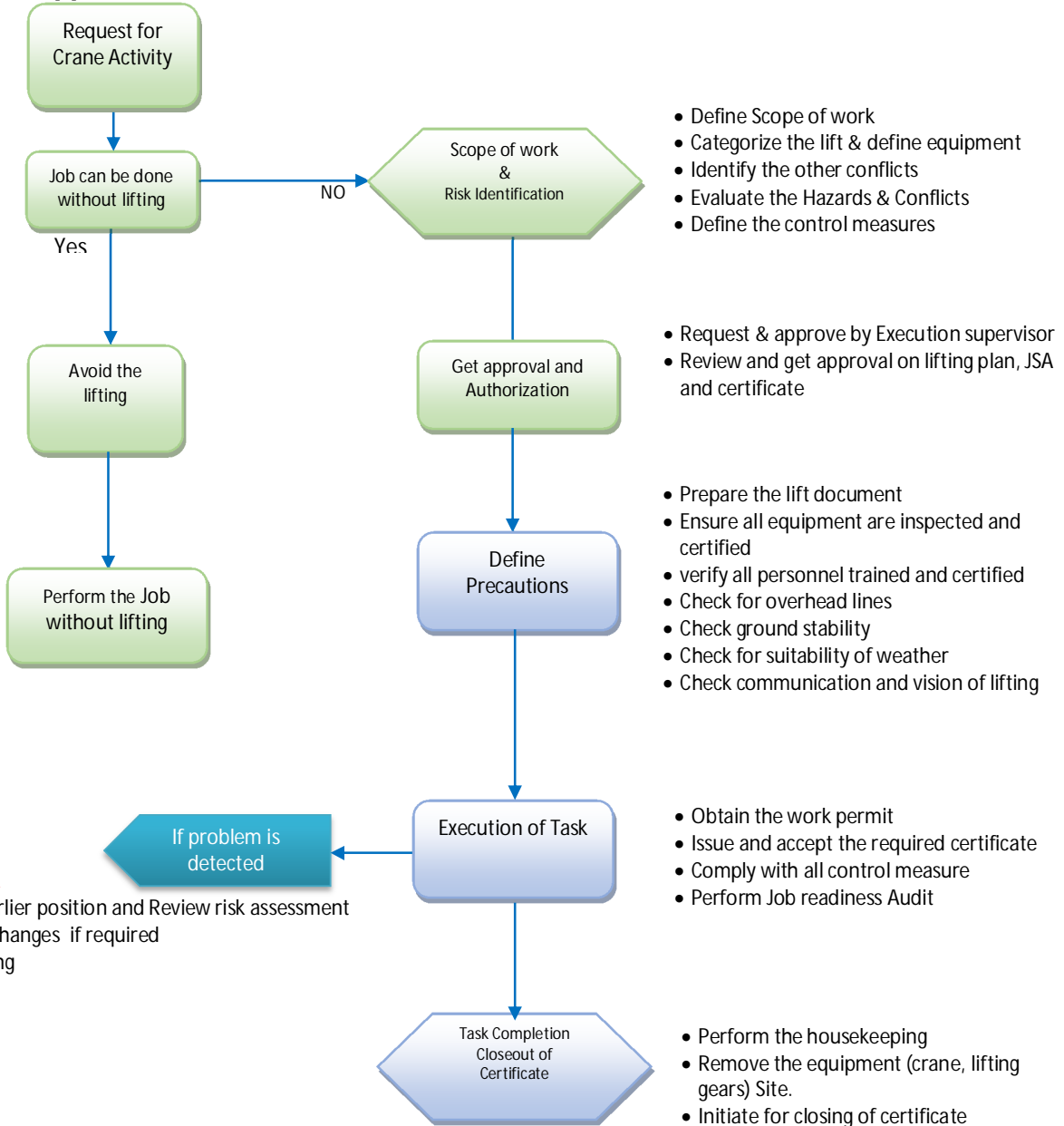
<b>Prepared by</b>	Sr. HSSE/ Safety Officer	<b>Reviewed by</b>	HSSE Support / Safety Manger	MGM (Vinyl)	TGM	MGM (SC/PE)	<b>Approved By</b>	CHSSEO
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## 12.1 Appendix: Crane Work Certificate Form (F-250- HSSE-05)

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## 12.2 Appendix: Process Flow chart:



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### 12.3 Appendix: Lifting Plan (Sample)


Crane work certificate No.		Location:	
Lift category: <input type="radio"/> Heavy <input type="radio"/> Critical			
A	Crane Capacity	Ton	
	Counter Weight	Ton	
B	Lifting Gears	Type:	SWL              Ton
		Type:	SWL              Ton
		Type:	SWL              Ton
		Type:	SWL              Ton

C: Load Detail		D: Crane Detail	
Description of load:		Boom length:	Meter
Weight of Load:                      Kg / Ton		Working Radius:	Meter
Dimension:		Corresponding SWL:	Kg / Ton
<b>Lifting Calculation:</b>			
Weight of Load:	Kg / Ton	Crane Capacity Usage (%)	
Lifting Gear weight	Kg / Ton	$\frac{\text{Total Weight (Kg/Ton)}}{\text{Corresponding SWL (Kg/Ton)}} \times 100$	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> %
Hook Weight	Kg / Ton		
Total Weight	Kg / Ton		

**Note:** Sketch must be attached at as separate sheet

Prepared By:	<b>Name:</b>	<b>Signature</b>	<b>Date</b>
Reviewed By:	<b>Name:</b>	<b>Signature</b>	<b>Date</b>
Approved By:	<b>Name:</b>	<b>Signature</b>	<b>Date</b>

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## 12.4 Appendix: Lift Categorization Check list (Guideline to categorize a Lift)

### Part- 1

S. NO	Item	Yes	No
1	Gross Load is less than 5 ton	<input type="checkbox"/>	<input type="checkbox"/>
2	Are you experienced with the load of weight, procedure and all the lifting equipment and gear to be used?	<input type="checkbox"/>	<input type="checkbox"/>
3	Is weather condition (Wind, illumination, visibility etc.) will not impact on load	<input type="checkbox"/>	<input type="checkbox"/>
4	Is the lift in an area free from obstructions and other possible hazards?	<input type="checkbox"/>	<input type="checkbox"/>


If All Answers yes, consider as *Light Lift* (If the answered of any of above is No Then proceed to Part-2 check list)

### Part-2

S. NO	Item	Yes	No
1	Gross Load is less than 25 ton	<input type="checkbox"/>	<input type="checkbox"/>
2	Do you know the weight of the load and does the lifting operation appear to be straight forward	<input type="checkbox"/>	<input type="checkbox"/>
3	Is there a crane or certified support steelwork (e.g. spreader bar or lifting eye) directly above the load	<input type="checkbox"/>	<input type="checkbox"/>
4	Does the load have certified lifting points (lifting eyes eyebolts etc.) fitted and if not, can slings be wrapped around easily (e.g. no sharp edges, load not fragile, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>
5	Is the load free to be lifted (e.g. sea fastenings released, all hold-down bolts removed, not jammed etc.)?	<input type="checkbox"/>	<input type="checkbox"/>
6	Is the lift stable (e.g. center of gravity below lifting points?)	<input type="checkbox"/>	<input type="checkbox"/>
7	Is working area free from overhead obstacles?	<input type="checkbox"/>	<input type="checkbox"/>
8	Is there a suitable laydown area?	<input type="checkbox"/>	<input type="checkbox"/>
9	Is the load travelling path suitably controlled / cordoned off and clear of any obstructions	<input type="checkbox"/>	<input type="checkbox"/>

If all answered Yes, consider lift as *Heavy lift*. If any of above Answered No consider as *Critical lift*.

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## 12.5 Job Readiness Audit (Lifting activities)

PTW #						
S.No.	ACTIVITY	Yes	No	NA	* Action Taken (If No)	**status
1.	Is the job scope clearly identified?					
2.	Does lift category and detailed work description clearly understood by the crew?					
3.	Ensure lifting plan is understood by the crew and complied.					
4.	Ensure lifting gears are inspected, possess valid certificates and safe to use?					
5.	Does the wind speed is within permissible limit and the visibility is clear?					
6.	Does the crane operator and riggers involved are aware of the gross weight to be lifted including boom length, radius, counter weight and lifting gears required?					
7.	JSA, lift plan requirements understood and complied by the crew?					
8.	Ensure area barricaded and boom radius is within the cordoned area.					
9.	Does the PTW requirements met and complied by all involved?					
10.	Check for any overhead/underground/nearby electric cables or pipelines (if yes crane operator and rigger are aware of it)					
11.	Does the crane details such as registration #, third party certification & capacity verified?					
12.	Check crane operator and riggers are trained certifications.					

\* Action taken to mitigate risk if answer is NO

\*\* Verify the condition of equipment/ requirement after actions taken

- If the answer for any of the above check points is NO, the work shall not commence and concerned superiors shall be notified
- This check list is valid only for one shift, if the work duration exceeds more than a shift, the next incoming Area Operator shall ensure that PTW and relevant certificate requirements are complied
- The check list should be attached to the cardboard (executor) copy of cold/hot work permit and available at site

**Check and confirm by:**

Checked By	Name	Signature	Date/ Time
Sr. Safety agent			

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