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Project Suspended Personal Platform Procedure

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1.0 PURPOSE

This procedure establishes the requirements for the use of personnel platforms (man baskets), the equipment requirements, and operating procedures for the safe hoisting of personnel in platforms suspended on load lines from cranes or derricks.

2.0 SCOPE

The scope of this procedure applies to all works performed under all Government Construction Contracts executed throughout the Kingdom of Saudi Arabia.

3.0 DEFINITIONS

Definitions	Description
JHA	Job Hazard Analysis
STARRT	Safety Task Analysis and Risk Reduction Talk
Suspended Personnel Platform	a personnel platform or man-basket, with properly designed guardrail and suspension system, suspended from a crane load line that has been specifically designed to transport personnel to an elevated work site.
WMS	Work Method Statement
HSSE	Health Safety Security and Environment
OSHA	Occupational Safety and Health Administration
CFR	Code of Federal Regulations
PPE	Personal Protective Equipment
SCBA	Self-Contained Breathing Apparatus

4.0 REFERENCES

- OSHA 29 CFR 1926 Subpart CC Cranes and Derricks in Construction.
- EPM-KSH-PR-000004 Project Respiratory Protective Equipment Procedure.
- EPM-KSS-PR-000013 Project Working on or Near Water Procedure.
- EPM-KSS-PR-000018 Project Crane and Lifting Operation Procedure.

5.0 RESPONSIBILITIES

Leadership is the single largest factor for success in the establishment of an injury-free workplace. By their actions, leaders cascade, manage, and drive execution, reinforce the safety culture, and instill operational discipline, and work to ensure that the entire workforce complies with Safety and Health requirements.

5.1 Site Manager

The Site Manager is responsible to make sure adequate resources, people, equipment, and training are made available to facilitate compliance with the requirements of this Procedure and for ensuring that the requirements of this Procedure are effectively implemented. The Site Manager demonstrates operational discipline by personally ensuring that this procedure's requirements are established and enforced.

5.2 Project HSSE Manager

The Project HSSE (Health Safety Security and Environment) Manager is responsible for the development of this Procedure and for the assessment of the Project's compliance with its requirements.

5.3 Superintendent

The Responsible Superintendent is responsible for coordinating and monitoring the Projects compliance with the requirements of this Procedure. He/she shall be knowledgeable of the requirements of this Procedure and shall verify that the Contractor's provisions, instruction, and practices comply with these requirements.

5.4 Contractor/Subcontractor

Subcontractors shall:

- Implement procedures that are in compliance with this elevating work platform procedure.
- Provide appropriate elevating work platform training to their personnel and verify competence.
- Inspect elevating work platforms daily prior to use.
- Maintain elevating work platforms in safe working condition.
- Operate elevating work platforms in a safe manner, as required by this procedure and as recommended by the manufacturer.

5.5 Responsible Person

The Responsible Person is the member of the organization who is directly responsible for directing the compliance in relation to this procedure. (e.g., craft supervisor, foreman or general foreman). The Responsible Person shall instruct personnel on the requirements of this procedure and provide evidence that the requirements have been understood and accepted.

5.6 Project Personnel

Project personnel using Suspended Platforms are responsible and accountable for complying with the requirements set forth in this Procedure.

6.0 RISK ASSESSMENT

Hoisting employees in a personnel platform is prohibited except when the use of conventional means of reaching the work-site, such as personal hoist, ladder, stairway, mobile elevated work platform, or scaffold, would be more hazardous or would not be possible because of structural design or work-site conditions.

The originator of the Personnel Lift Plan must determine whether an alternative means of reaching the work-site location is available.

The decision to use a suspended personnel platform over other conventional means must be reviewed and approved by the following individuals prior to first use of the platform:

- Site Manager
- Site HSSE Representative
- Project Engineer

A risk assessment, to include a Job Hazard Analysis (JHA) or Method Statement (as applicable) must be conducted before a lifting plan is prepared. The responsible parties listed above shall also sign and approve the JHA or Method Statement.

A risk assessment, to include a Job Hazard Analysis (JHA) must be conducted before a lifting plan is prepared.

An integral aspect of the work planning process is the performance of a proper Risk Assessment. Risk Assessments must be conducted at the Planning Stage to identify the hazard risks and determine control measures.

The Risk Assessments that shall be conducted at the Planning Stage are as follows:

- Project Risk Assessment.

- Work Method Statements (WMS)
- Job Hazard Analysis (JHA).
- Safety Task Analysis and Risk Reduction Talk (STARRT).

It is imperative that prior to beginning any work activity, a STARRT briefing occurs to discuss the contents of the WMS/JHA which includes mitigations for any other hazards noted by the crew at the jobsite. The discussion shall also include job steps, expected hazards associated with the activity, and the mitigation and protection methods that shall be implemented to prevent incidents.

The Hierarchy of hazards control shall be used to reduce the likelihood of an incident occurring.

- ***Elimination*** (Remove the Hazard)
- ***Substitution/Isolation*** (Replacing material, process or hazard with a lower risk one/separate people from the hazard, use suitable guarding, distance, etc.)
- ***Engineering Controls*** (Redesign or replacement of plant and equipment, Isolate People from the hazards)
- ***Administration Controls*** (Procedures, training, signage, change the way people work)
- **PPE - PERSONAL PROTECTIVE EQUIPMENT**

No work is to commence until the above has been implemented and signed by the relevant Supervisor in charge.

7.0 GENERAL

7.1 Suspended Personnel Platform (Man Basket) Criteria

For this Procedure, a *suspended personnel platform,* also referred to synonymously as a *man-basket,* shall meet the following criteria:

- Consist of a single-level platform/basket to be used to carry/transport personnel to an elevated work site.
- Platforms used for lifting personnel must be designed with a minimum safety factor of five by a qualified engineer or a qualified person competent in structural de-sign (i.e., capable of supporting its own weight and at least five times the maximum intended load).
- The suspension system must be designed to minimize tipping due to personnel movement on the platform or due to other effects such as wind loading/gusts.
- Load lines shall be capable of supporting, without failure, at least seven times the maximum intended load, except that where rotation resistant rope is used, the lines shall be capable of supporting without failure, at least ten times the maximum intended load.
- All bridles and associated rigging for attaching the personnel platform/basket to the hoist line must not be used for any other purpose.
- Wire rope, shackles, rings, master links, and other rigging hardware must be capable of supporting, without failure, at least five times the maximum intended load applied or transmitted to that component (where rotation resistant rope is used, the slings shall be capable of supporting without failure at least ten times the maximum intended load).
- Each personnel platform/basket must be provided with a standard guardrail system that is enclosed from the toe-board to the mid-rail to keep tools, materials, and equipment from falling on employees below.
- The platform/basket must have an inside grab rail, ad-equate headroom for employees, and a plate or other permanent marking that clearly indicates the platform's weight and rated load capacity or maximum intended load.
- When personnel are exposed to falling objects, over-head protection on the platform and the use of hard hats are required.
- An access gate, if provided, must not swing outward during hoisting and must have a restraining device to prevent accidental opening.
- All rough edges on the platform must be ground smooth to prevent injuries to employees.
- Platforms/basket shall be of solid construction with only welded joints and seams assembled construction using clips, bolts, pins, or any other form of semi-permanent construction is prohibited;

- All welded joints and seams on the personnel plat-form/basket and its components must be performed by a qualified welder who is familiar with weld grades, types, and materials specified in the platform design.
- As may be required by platform/basket manufacturers, annual inspections shall be performed and documented by personnel qualified to do so.

7.2 Steps for Approval of Personnel Platform Use

Prior to any use of a suspended personnel platform, the following steps must be followed:

7.2.1 Personnel Lift Data Sheet

Complete a Personnel Lift Data Sheet (Attachment 1) for the lift to be performed. Include the required information for both the Test Lift and the actual Personnel Lift. Obtain the project required approvals.

7.2.2 Inspection

The Competent/Qualified Person, Supervisor in charge of the activity, along with the crane operator, will perform a thorough visual inspection of the personnel platform, rigging, and the crane. Check general condition of man basket and rigging, including signs of rust, corrosion and damage.

7.2.3 Test Lift

The platform and rigging must be proof load tested to 125% of the platform's rated capacity. With the test weight evenly distributed, the platform shall be hoisted and held in a suspended position for at least 5 minutes.

7.2.4 Trial Lift

Prior to hoisting personnel in a suspended personnel platform, a trial lift of the unoccupied personnel platform will be conducted. During the trial lift, the platform is to be loaded to at least the weight expected during the actual lift. The trial lift is to mimic the actual lift as much as possible (i.e. the unoccupied basket is to be hoisted to all locations that it will be hoisted to during the actual lift with two taglines attached).

During the trial lift, the equipment operator will determine that all systems, controls, and safety devices are operating properly. The equipment operator will also verify that the crane may be operated to all lift points without going beyond 50% of the crane's rated capacity (as determined from the capacity chart, based upon the crane's lift radius, boom angle, and boom length).

7.2.5 Post Lift-Trial Lift Inspection

Immediately following the test and trial lifts, the supervisor and operator will conduct a final visual inspection of the crane, rigging, personnel platform, and crane base support to determine if the testing exposed any defects or adverse conditions. Any defects found during the inspections will be corrected before hoisting personnel.

7.2.6 Pre-Lift Meeting

Immediately prior to the personnel lift, a pre-lift meeting will be held to discuss the operation, roles and responsibilities, and safety topics associated with the lift. Some of the common risks that can be discussed include but not limited to:

- Avoidance of overhead cables/wires.
- Avoidance of protruding objects, structures.
- Avoidance of falling materials.
- Training requirements.

- Power supply (if applicable)
- Rigging methods.
- Inspection & testing.
- General access arrangements.
- Interface with other operations.
- Weather conditions.

7.2.7 Trial Lift Occupied Platform

Just prior to hoisting personnel to perform work, the occupied platform will be hoisted a few inches off the ground and inspected to ensure that it is secure and properly balanced.

7.3 Repairs

Any repairs or modifications made to a personnel platform must be performed per manufacturer's requirements, and only original manufacturer parts shall be used to ensure that the new components are compatible with their original counterparts and required third party certificate prior to use.

After any repair or modification of a personnel platform, the platform and rigging will be proof-tested to 150% of the platform's rated capacity. The platform will not be used for hoisting personnel until the proof testing and inspection requirements are satisfied.

7.4 Working Over Water

When personnel lifts are conducted over water, personnel flotation devices must be used. Personnel fall protection devices with quick release features shall be used attached when personnel are lifted over land and detached while personnel are over water.

A boat with appropriate rescue personnel shall be present and available when personnel are lifted over water. Refer to EPM-KSS-PR-000013 Working over or Near Water Procedure for more information.

7.5 Boom-Mounted Personnel Platforms

This section addresses personnel platforms that are mounted directly to the boom of a crane or hoist equipment which is not specifically designed for personnel lifting.

Where these platforms have no platform-mounted controls, or partial platform-mounted controls requiring operation from outside the platform, the requirements of this Procedure must be followed. This includes a case where the primary power source may become inoperable.

Use of boom-mounted platforms must be approved by the hoisting equipment manufacturer.

Occupants of a boom-mounted platform with controls must be qualified to operate the controls.

7.6 Respiratory Protection Consideration

When personnel are hoisted in a crane basket in an area where the potential for the incidental release of hazardous chemicals exists, the requirements of EPM-KSH-PR-000004 Project Respiratory Protective Equipment Procedure will be followed. A comprehensive risk assessment must be made and control measures are implemented.

In addition, the following respiratory protection requirements specifically apply to the use of suspended personnel platforms:

- The crane operator will have at least 15 minutes of breathing air immediately available. This may be in the form of a self-contained breathing apparatus (SCBA) or a 15-minute escape pack.

- A 5-minute emergency escape breathing apparatus (air capsule) will be provided for each person in the basket.
- The signal person, if not in the basket, will have at least a 5-minute emergency-escape breathing apparatus (air capsule) immediately available.

8.0 ATTACHMENTS

1. EPM-KSS-TP-000018 - Personnel Platform Lift Data Sheet Template
2. EPM-KSS-TP-000019 - Project Crane-Suspended Personnel Platform Approval and Checklist

Attachment 1 - EPM-KSS-TP-000018 - Personnel Platform Lift Data Sheet Template

Project:		**Originator:**		**Date:**	
Job No.:		**Checker:**		**Date:**	
Lift Company:		**Preparing Co.:**			
Lift Description:					
Rigging Bill of Material's - Tabulate rigging weights if not included with basket weight					
Description			**Quantity**	**Wt./each**	**Weight**
Total Rigging Weight:					
Crane Details	**Manufacturer:**		**Model No.:**		
Boom Type:		Block Capacity:		Jib Type:	
Boom Length:		Parts Line Used:		Jib Length:	
CWT's - Main:		Reeved Capacity:		Jib Offset:	
Basket Details	**Manufacturer:**		**Model No.:**		
Serial No.:		Rated Capacity (wt):		Max. Occupancy:	Persons

Lift Weight Calculation	**Test Lift**	**Actual Lift**	
Personnel Basket			
Rigging (if not included with basket)			
Personnel (250#/Person), Tools & Materials - **Not to exceed Basket Ratings**			
Test Weight (for Test Lift)			
Main Load Block			
Main Load Line			
Jib Block or Ball			
Aux. (Whip) Line			
Aux Boom Sheaves			
Jib or Boom Extension (Stowed or Erected)			
Other (specify):			
Total Lift Weight:			

Attachment 2 - EPM-KSS-TP-000019 - Project Crane - Suspended Personnel Platform Approval and Checklist

1. JOB DESCRIPTION

Project:_____Job No._____ Date:_____

Lift Description:_____

Job

Originator: _____

2. LIFT EVALUATION

Based upon the evaluation of alternative methods of access (scaffolding, fixed stairs, ladders, Manlifts, etc.), the use of a suspended personnel platform (Manbasket) is thought to be less hazardous than the alternatives considered.

Job Originator: _____
ES&H Supervisor_____

3. INSPECTION CHECKLIST

Users must ensure that all items in this checklist are satisfied, including compliance with all safety requirements prior to making a lift. All precautions and instructions on the decals attached to the crane and the platform must be strictly adhered to.

Crane Requirements

NO	YES	
☐	☐	All crane inspections are current per requirements, including inspection of the crane hooks.
☐	☐	The crane is configured per the completed Personnel Lift Data Sheet, and per manufacturer's specifications
☐	☐	The crane hook from which the basket will be suspended has a positive locking hook latch.
☐	☐	The correct load chart is with the crane and the operator is thoroughly familiar with all special notes and manufacturer recommendations given on the chart.
☐	☐	All operational aids and safety devices in the crane are functioning and the operator is fully versed in their operation.
☐	☐	The load lines have a 7:1 safety factor (10:1 when using rotation-resistant cable). NOTE: This is achieved by a 50 percent de-rating of the crane load chart.
☐	☐	The crane is on a firm, level surface, the crane is level within 1 percent (1 foot in 100 feet), outriggers are fully extended, down, and locked as applicable.
☐	☐	All load lines are properly reeved, are laying properly on the drums and sheaves, and are free of kinks or other damage.