WORK AT HEIGHT PROCEDURE

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Rev 00	Initial Release	Navendra Singh	Sanjay Kale	Shrinivas Katti
Rev 01	Standardization of Procedure	Anil Jain (Head – Operation – Trombay)	Navendra Singh (Group Head – P & CB; Corp Safety.)	Vijay Chourey (Chief – Corp Safety)
Rev 02	Periodic review	Mr. Anand Gurav Group head- Office Safety & Strategy Deployment; Corp safety	Navendra Singh Head- Safety (T&D) Corp safety	Suresh Khetwani Chief - Corporate Safety & Environment

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1. **OBJECTIVE:** Objectives of this procedure is to provide rules and procedures to protect employees from the hazards of working at heights and to establish mandatory requirements for practices to protect personnel from hazards associated with Working at Heights

2. **SCOPE:** This procedure applies to all operating and project sites of Tata Power Group companies **including JVs/ Subsidiaries**.

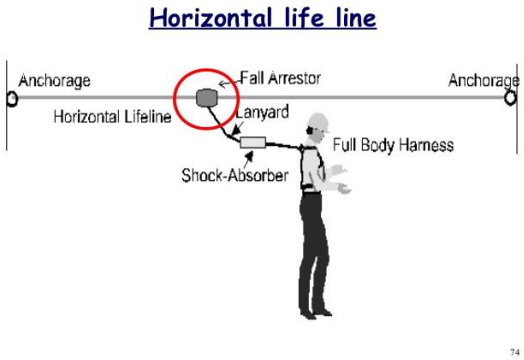
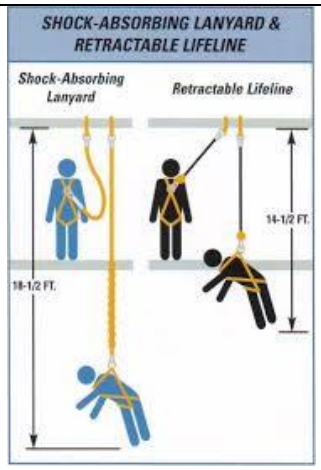
3. **EXPECTED RESULTS:**
   3.1. Manage Work at Height jobs being done under Permit-To-Work safely.
   3.2. Control of incidents related to Work at Height Jobs.
   3.3. Compliance to Regulatory requirements to make work place safety

4. **ACCOUNTABILITY & RESPONSIBILITY:**
   4.1. **ACCOUNTABILITY:** Concerned Division's Heads/Project Heads/Site Heads / Assets Custodian.
   4.2. **RESPONSIBILITY:** Concerned Engineer/s

5. **GLOSSARY/ DEFINITIONS:**

Anchor Point:- A secure point of attachment for lifelines, lanyards, or retractable lifelines. Structural steel or process piping of 2" (5 cm) diameter or greater may be used as an anchor point *after ensuring its strength and absence of mark related to any weakness/corrosion*. Sprinkler piping, instrument tubing, or conduit shall not be used as an anchor point	

Continuous Tie-Off - The requirement that a person be tied off at all times when working in an elevated areas where the potential for falls exists. This is most commonly accomplished by using double lanyards, a vertical lifeline, or a retractable lifeline.	
Double Lanyard - A system utilizing two lanyards connected in a "Y" configuration, which allows one lanyard to be attached to an anchor point while the second lanyard is being moved to a new anchor point, thus providing protection from falls at all times.	
Double Action Locking Snap Hook - A device for securing lanyards that requires two separate locking pins be depressed before the snap will open.	

Full Body Harness - A Class 3 body harness, heavy duty, with leg straps.	
Lanyard - A flexible line to secure the wearer of a safety harness to a lifeline or fixed tie-off point.	
Lifeline - A flexible cable, either horizontal or vertical, which is anchored at both ends and to which other personal fall prevention devices can be attached and which meets the minimum load specifications. OSHA requires lifeline integrity to withstand 5000 lbs. (2300kg) of force per man supported	
Retractable Lifeline - A retracting lifeline which allows free travel without slack rope, but locks instantly when a fall begins. These devices must limit the force of deceleration to no more than 800 lbs. (365 kgs) and are only recommended for vertical descent.	

Rope Grab - These are automatic lifeline devices which act by inertia to grab the vertical lifeline should a fall occur.	
Shock Absorber – A device used in combination with lanyards that is designed to reduce the force when fall is broken. Applicable for vertical height than 6 M or more.	

Attendant—a person at the perimeter of the work area who is assigned the role of monitoring and communicating with the authorized workers, controlling access to the area, maintaining designated conditions as specified on the permit, and initiating the rescue plan.

Certification - A verification process, which documents that a person has the necessary training, skill, or experience and the ability to perform designated roles and tasks.

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Hazard Identification & Risk Assessment: Hazard Identification & Risk Assessment is to identify and evaluate the hazards, Risk and put controls measures for safe execution of activities.

Hazard: Source or situation with potential for harm, something that can cause body injury / occupational illness, damage property.

Job: A piece of physical work defined by time or other limits and that has a clear start and end point

Job Safety Analysis: Job safety analysis (JSA) is a procedure which helps integrate accepted safety and health principles and practices into a particular task or job. In a JSA, for each basic step of the job, it is to identify potential hazards and to recommend the safest way to do the job.

Non Routine Job / Task: Where an SOP / SMP is not available or the conditions of the SOP / SMP have changed

Permit-To-Work—the written or printed document that is issued to control working at heights.

Risk: Effect of uncertainty, Risk is a combination of the consequences of an event and the associated "likelihood" of occurrence

Risk Assessment: A systematic and structured process whereby hazards present in a workplace, or arising from workplace activity, are identified, risks assessed / evaluated, and decisions prioritized in order to reduce risks to acceptable levels.

Severity: The level of consequence / harm of an event that could occur due to exposure to the hazard present

Shall: Mandatory requirement

Should: Optional requirement

Task / Activity: A sequence of steps taken to conduct a job. A task is a sub element of a Job.

Working at Heights — Any work at height of 1.8 meter or more from the ground level or floor. Elevated working positions where the hazard of a fall exists and where there is no physical protection such as handrails. Types of work covered include working from all types of ladders, scaffolds, mechanical lifts, working on transmission towers and conductors, inside confined spaces, sloped roofs, areas where there are no overhead tie-off points, when working within 6 feet (1.8mt) of the edge of a flat roof, erecting steel or installing/replacing roofing and in pipe racks. This does not include normal work on low stepladders, loading platforms, or similar locations.

Work supervisor—a person who is authorized to verify that all conditions for working at heights have been met, to define ongoing precautions to maintain safe working conditions during the work, to authorize the work to occur, and to cancel the permit allowing the work; also known as proprietor, work group supervisor, or authorizing person.

Qualified Installer – Any professional, experienced fall protection system person who has been specially trained in the installation of lifelines and fall protection systems. (SBU/Site Management and Project Management to provide qualified resources.)

Attendant- Person at the perimeter of thw work area who is assigned the following roles, monitor and communicate with the authorized workers, control access to the area, maintain designated condition as mentioned in the permit, initiate the rescue plan.

Qualified Inspector- A person who has been specially trained to inspect and evaluate condition of harnesses and lanyards etc, completion of site training course for fall protection certificates an employee as qualified inspector. (SBU/Site Management and Project Management to provide qualified resources.)

6. PROCEDURES

6.1. General Requirements:

6.1.1. Proper scaffolds and/or temporary work platforms shall be provided for working at height at elevations 1.8 meters or more where no permanent work platform is available to work safely. The elevated work platforms shall have guardrails and provided with ladders for access/egress.

6.1.2. Where it is not feasible to erect scaffolds, suitable hydraulically elevated work platforms, man lifter or portable platform with wheel locks / chokes and guardrails shall be used.

6.1.3. It is not recommended to use Ladders as work platforms except unavoidable cases. In case ladder is being used for work while standing on it, due care shall be taken in terms of securing/fastening it at top portion and holding it at bottom by another person.

6.1.4. Employees or contractors working on unguarded surfaces, steep slopes and similar locations; temporary platform, during scaffold construction; or when otherwise exposed to the possibility of falls hazardous to life or limb, shall be secured by full body harness with double lanyard. Anchor point shall be selected suitably or it shall be made if not available. Water pipes or drainage /rainwater pipes shall not be used as anchor points.

6.1.5. Full body harness with double lanyard shall be worn when work requires persons closer than 1.8 meters from roof edge without parapets, or floor opening. Life line shall be provided to hook the lanyard.

6.1.6. Full body harness with double lanyard shall be used by persons where work requires persons to move or walk from one place to another for changing work locations at height and where it is not feasible to provide guarded platforms and scaffolds (e.g., pipe racks) so as to ensure one lifeline is always tied with a fixed support.

6.1.7. Persons shall always keep one lanyard anchored/tied with the fixed support while walking/moving on unguarded surface/edges or structures.

6.1.8. Where ever appropriate fixed support is not available to anchor lanyard of full body harness, lifelines certified by qualified inspector shall be used to anchor lanyard.

6.1.9. The intended load shall not exceed the maximum working load of portable work platforms.

6.1.10. Full body harness, lanyard and snap hook, which conform IS standard, **(IS 3521: 1999)** shall be used. **Safety belts are prohibited.**

6.1.11. Lanyard shall be attached to the D-ring on the back of the Full body harness between the shoulder straps.

6.1.12. Snap hooks shall be of double locking type.

6.1.13. Fall arresting devices may be used depending on the requirement of situation, i.e. Chimney painting, wall painting, working on the transmission towers, tree trimming, work on electric poles etc.

6.1.14. Anchor points for fall arresting systems must be capable of withstanding a 2300 kgf l per person attached.

6.1.15. Personal Fall Arrest System components shall be visually inspected before each use.

6.1.16. Proper area barricading to prevent people walking across below the working area shall be done before commencing any work at height. If such barricading is not possible, safety net shall be provided and “Work in Progress” boards shall be displayed.

6.1.17. A process shall be in place to ensures employees are medically fit to perform their duties and that their health is not adversely affected by occupational hazards. Worker working at height shall have passed height fobia test of TPSDI or similar approved institutes.

6.1.18. No working at height shall be carried out without supervision.

6.1.19. Job Safety Analysis (JSA) shall be conducted for Working at Height which includes access & egress from one anchorage point to another anchorage point.

6.1.20. Tata Power Permit-To-Work Procedure shall be followed for all Work at Height.

6.1.21. Working at Height after daylight hours shall be authorized by HOD / Project Head with appropriate control in place.

6.1.22. When performing man lift operations, all personnel in the personnel basket (platform) shall wear a full body double harness (class 3) with the lanyard attached to the man lift or permanent structure. Do not anchor a lanyard with personnel platforms (work baskets)

6.1.23. Temporary platforms and scaffolds should be provided with solid grating (free of openings) and standard guardrails with toe boards attached. Employees working from such completed temporary platforms and scaffolds are not required to wear fall arrest equipment as long as they stay inside the confines of the guardrail system. Scaffolding shall be erected as per Tata Power Scaffolding Procedure

6.1.24. In case of hazard of Honeybees, help from pest control, water spray, steam jet and PVC apron with hood shall be used. Hazard of bird hit and monkey attack is to be considered at high rise tower and prone areas Suitable net/arrangement shall be provided to avoid fall of coconut.

6.1.25. Installation of a Guardrail System around the work area is required for fall protection. Guardrail Systems shall meet the following minimum requirements:

6.1.25.1. Top rail (handrail) shall be 1200 mm from the working surface. Top rails must be capable of withstanding an expected force which may arise while working.

6.1.25.2. Mid rails shall be located midway 600 mm between the top rail and the working surface. The mid rail must be capable of withstanding a force of 70kg outward force

6.1.25.3. Toe boards should be provided to prevent persons falling off the working surface. Toe boards must be a minimum of 150 mm / 6 inches in vertical height and capable of withstanding 23.00 kg / 50 lbs. of outward force.

6.1.25.4. Screens or panelling from the toe board to the mid or top rail should be required when equipment or material is piled higher than the toe board and is capable of being ejected from the working surface to the level below.

6.1.26. Where gates or openings are required in the guardrail system to facilitate material movement, personal fall arrest or restraint systems shall be used.

6.1.27. All platform / walkway above 1.8 M from floor shall be provided with guardrail system.

6.1.28. Every floor opening into which any person can fall shall be guarded by a standard guardrail system or by a metallic grating duly fixed in position.

6.1.29. Any floor opening, for temporary maintenance work, shall be fixed with proper size cover having sufficient strength.

6.1.30. Fall arrest systems mitigate the consequences of a fall. The system consists of a proven anchor point, connectors, full body harness, and lanyard and deceleration device. The entire system shall be capable of withstanding impact forces involved in stopping or arresting the fall. Consideration must be given to what is below the area of work and what the person may strike during the fall.

6.1.31. Fall Protection system is full body harness with double line lanyard of 1.8 meters length out of which, one has to go to the fixed anchorage and another one for movement. Shock absorbers are preferred to ascertain adequacy of harness in case of sudden fall. Safety nets shall be provided for protecting from human fall and material fall. Hand tools used while working at height should be securely tied to avoid free fall in case of accidental slippage.

6.1.32. Personal Fall Arrest System components shall be visually inspected before each use.

6.1.33. Whenever it is required to carry out work at height where scaffolding cannot be provided, use of safety net is must.

6.1.34. All safety net systems shall meet the requirements of Indian Standard **(IS: 5175).**

6.1.35. Safety net mesh openings shall have a maximum size of **6 inches x 6 inches** and be secured at each crossing to prevent elongation of the opening.

6.1.36. Safety nets shall be installed as close as possible to the working level but in no case more than **25 feet** below the working level.

6.1.37. The safety nets shall extend out at least **8 ft.** from the side of the open edge.

6.1.38. Material, equipment and other items that fall into the net shall be promptly removed.

6.1.39. Safety nets shall be inspected before use and then daily for wear or damage caused by falling materials.

6.1.40. Safety net installation shall be inspected by the concerned maintenance / construction supervisor.

6.1.41. Lifelines, if used, shall be of sufficient strength to withstand the large forces involved in falls. Lifelines shall be installed or modified only by Qualified Installers.

6.1.42. When more than one person will be utilizing a lifeline simultaneously, the load allowance of the lifeline shall be increased so as to provide the same level of support as it did while one person was using it. This use has to be approved by qualified person. Requirement for capacity lifeline shall be 2300 kgf per person.

6.1.43. Warning lines should be constructed with rope, chain or wire and installed 30 inches above the working surface. The supporting stanchions (post, pillar, upright support etc.) must be capable of withstanding 7.3 kg of force applied horizontally.

6.1.44. The warning line should be flagged every 1.8 meters with highly visible material.

6.1.45. The warning line should be at a distance of a minimum of 1.8 meters from the roof's edge or fall hazard. Personnel working in the 1.8 meters area between the warning line and the edge shall use a personal fall protection system.

6.1.46. If working from a step ladder, with your feet less than 1.8 meters above the floor, use of fall protection equipment is not required, unless working backwards, then fall protection is required.

6.1.47. If working on a stepladder with your feet 1.8 meters or higher above the floor, fall protection equipment shall be used. If no tie-off point is available, the ladder shall be held by a second person to provide added stability.

6.1.48. Retractable fall arrester shall be used for climbing as well as coming down the ladder where ever it is required. First the retractable fall arrestor shall be fitted and attached while climbing.

6.1.49. Electrical hazard: Portable metal ladders, and wood ladders with metal reinforcements shall not be used for any electrical work or work in substations, switch yards, power plants, or in any area where contact can be made with energized circuits.

6.1.50. Maintenance: Provision shall be made for routine inspection and maintenance of all ladders. Broken or damaged ladders shall be promptly repaired or removed and destroyed. Ladders not found in good working condition shall be promptly removed from service until repaired and restored.

6.1.51. Securing ladders: All ladders shall be placed on firm ground, secured at top and intermediate positions to maintain them rigidly in place and to support the loads imposed upon them.

6.1.52. Restrictions: Ladders will not be used as work platforms or scaffolding or as structured members of scaffolds or walkways. Ladders shall not be used in horizontal position.

6.1.53. Usage of Aerial work platform for height jobs wherever there are limitations for safe access and arrangement for fall protection systems

6.1.54. Ensure proper isolation and confirm no voltage on electrical lines before before climbing the ladder. Ensure availability of scaffolding platform where ever no permanent work platforms are available for working at height

6.1.55. Hazards and related controls for non-availability of suitable working platform, anchoring points such as life line etc, supervision to be addressed in JSA

6.2. **Straight Ladders, Extension Ladders:**

6.2.1. Rung spacing shall not be more than 30 cm.

6.2.2. All metal parts or fittings of Ladders shall be made of steel, wrought iron, malleable cast iron or other equivalent material.

6.2.3. Landing platforms shall be provided every 9 m.

6.2.4. Monkey ladder to cage strip clear distance shall be more than 70 cm.

6.2.5. If monkey ladder length is more than 8' to 10', cage guard shall be provided.

6.2.6. Ladder shall rise 1 m above stepping point.

6.2.7. Snap chains shall be provided at the end of landing platform and the ladder.

6.2.8. If working with your feet 6 feet (1.8 meters) or more above the floor, harnesses shall be used whenever a suitable anchor point is available.

6.2.9. Straight Ladders and extension ladders will be tied off at the top. A co-worker shall always hold straight ladders and extension ladders while the ladder is being tied off. The person on the ladder shall attach their lanyard to the anchor point first before tying off the ladder itself.

6.2.10. If a straight ladder or extension ladder is being used for access to a work area (as opposed to working from the ladder) where frequent trips up the ladder will be made, consideration shall be given to providing fall protection such as a retractable lifeline or rope grab for those climbing the ladder.

6.2.11. Face the ladder when working from it. When it is not possible to work facing a ladder or when performing some task requiring both hands, fall protection should be worn and properly anchored.

6.2.12. Ladder shall be placed in such a way that it bottom should be away from wall equal to ¼ th of the working height. (At least 75 deg. to the floor).

6.2.13. Ladder shall extend 3 feet to 4 feet above the point of Landing and topmost 3 rungs shall not be used.

6.2.14. Ladders shall be provided on the firm ground

6.2.15. Site specific hazards and constraints in working should be checked before starting work. In case of site constraint Tower wagon to be used

6.2.16. Adequacy of existing ladder stability should be reviewed

6.3. **Rope Ladders:**

6.3.1. The diameter of manila rope shall not be less than 25 mm.

6.3.2. Wooden planks forming steps shall not be less than 38 mm thick.

6.3.3. Rope ladder made of 12 mm nylon rope with 25 mm dia. fluted aluminum pipes and with the provision of stop hook at the free end are also available.

6.4. **Scaffolds:**

6.4.1. Fall protection is required whenever working from scaffolds 6 ft (1.8 meters) or higher above the ground or floor level that have incomplete standard handrails (42" high) or standard mid-rails (21" high) or is not completely decked.

6.4.2. Fall protection is required whenever working outside the plane of the handrails or if working against the handrails with awkward body position. Personnel shall not climb on, or work from, any scaffold handrail, mid-rail, or bracing member and shall use ladders to get into the scaffold.

6.4.3. On scaffolds of 12 feet (3.6Mt) or higher, fall protection shall be considered for those climbing the scaffold ladder (based on number of people on scaffold, number of climbs per day, etc). Consideration should be given to the amount of risk associated with installing the equipment versus the risk involved in climbing the ladder without fall protection.

6.4.4. Fall protection may be required when climbing scaffolds of less than 12 feet if there is an unusual hazard, such as a scaffold next to the edge of an elevated work area.

6.4.5. Fall protection shall be used while building scaffolds. Where practical, a retractable lifeline should be used to protect those building scaffolds but is not permitted to be attached to the scaffolding due to the side force thrust hazard. Double lanyards should be used in this case so that the person may maintain continuous tie-off.

6.4.6. If tying off to scaffolds, the stability of the scaffold must be considered. If the scaffold does not have stability for anchorage, it should be tied off to a permanent structure or fitted with outriggers to increase stability.

6.4.7. Persons shall not be allowed to work on scaffolds during storms or high winds.

6.5. **Self-retractable Lifelines:**

6.5.1. Self-Retractable lifelines can be used as a method of providing vertical lifelines for ladders, scaffolds, etc. Self-retracting lifelines and lanyards that automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 1360kg applied to the device with the lifeline or lanyard in the fully extended position.

6.6. **Flat roofs, slopping roofs, fragile roof:**

6.6.1. Flat roofs: All roofs in horizontal plane, not fragile in nature. For any job within six feet from the edge of the roof, use of lifeline on any fixed structure for anchoring the lanyard is must. Warning signboards shall be displayed all around. Access to the flat roof shall be provided if not existing in the absence of staircase

6.6.2. Fragile roofs: Crawling ladders must be used while working on the fragile roofs. Proper fall arrest system must be ensured

6.6.3. Slopping roofs: Before working on a slopping roof ensure anchor points are available for fixing of lifeline, if not provided at design stage.

6.7. **Structure Erection/ Special Structure:**

6.7.1. Fall protection is required whenever working in an elevated work area 6 ft or higher above the floor, where handrails do not exist.

6.7.2. Double lanyards should be used to provide continuous tie-off while moving along pipe racks, cable trays, etc.

6.7.3. Lanyard length should be kept as short as practical to limit the potential all distance. This is accomplished by utilizing a tie-off point overhead and not below the waistline

6.7.4. While working in pipe racks, etc., if no overhead tie-off point is available, the lanyard should be tied off at foot level and all movement must be done by crawling. "Walking the pipes" is not permitted if no overhead tie-off point exists. If "Walking the pipes" is utilized, the material of construction, diameter, wall thickness and integrity best be evaluated to assure pipes will support the load.

6.7.5. When working on roofs, fall protection equipment shall be used when working less than 6 feet (1.8Mt) from roof edges, unless roof edges are protected by a Protective Barricade. Additionally, any work on a sloped roof requires fall protection on Pipe racks and cable trays, tank roofs, lighting towers,Tank Roofs:

6.7.6. Standing, walking or working on the tops of tanks/vessels with standard handrails and toe boards are only allowed when the following conditions are met:

a. The tank/vessel inspection, inspection documentation is reviewed and is current.
b. The tank/vessel must be capable of supporting the intended load (personnel, tools, etc.) particularly Acid and Caustic storage tanks and corrosive tanks & vessels.
c. If it is necessary to stand, walk, or work on the top of a vessel or tank in order to build scaffolding or a working platform, all of the provisions in this section must be met before building it.

6.8. **Insulation and painting jobs at height:**

6.8.1. For work involving painting jobs on equipment, pipelines, structures, buildings, walls/ surfaces, roofs and insulation jobs on equipment / pipelines requiring

persons to work from elevations 1.8 meters or more from ground having risk of injuries due to fall, proper scaffolds or portable hydraulically elevated work platforms shall be provided and used, if there is no permanent provision is available to work safely.

6.8.2. Nobody shall take any supports on small bore piping (less than 2 inch NB) and on Non-metallic piping/fixtures. Ladders and other make shift devices shall not be used for painting and insulation jobs.

6.9. **Confined space at height:**

6.9.1. While working in confined space at height use of rescue harness and self-retractable full body harness is must.

6.9.2. Painting outside the building more than 15 meters Addition communication system shall be established before start of work. Work and rescue plan shall be prepared before start of work.

6.10. **Loading and unloading of road tankers:**

6.10.1. Jacket with fall protection shall be used while working on tankers and trucks, Bucket trucks and lifts

6.10.2. When working from man lifts, scissor lifts, bucket trucks, or other similar equipment, tie-off is required. Most such devices have internal tie-off points and these should be used

6.10.3. A team (comprising line manager and operators) shall carry out structured risk assessment i.e. Job Safety Analysis (JSA) for all the specific and / or one-time jobs.

6.11 Mandatory requirements of working at height:

- Person should be familiar with the Tata Power work and height procedure.
- He shall complete work at height safety training program
- Possess medical fitness certificate to work at height
- Receipt valid permit to work procedure
- Get clarity on work before start of the work
- Report lack of safety measures to supervisor.

6.12 Safety Nets

- Safety net is a device to arrest fall of material
- Safety net shall have opening size 6 inch x 6 inch
- Secure at each crossing
- Meet IS standard 5157

Use safety nets for protecting of material fall from height and safe guard the people working below. Use particularly when scaffolding is not used. Inspect

safety net before first use and daily for wear and tear or damage. Concern construction supervisor shall inspect the safety net installation.

Install the net as close to the work area as possible and not below 7.6 meter from work platform. Extend it 2.4 meter from the side of open area. Promptly remove fallen material from the safety net.

7. RECORDS :

7.1. Safety Harness And Lanyard Inspection Check List (TPSMS/CSP/WAH/004/FORM/001)- Retention period three years

7.2. Ladder Inspection checklist (TPSMS/CSP/WAH/004/FORM/002) – Retention period three years

8. TRAINING & COMMUNICATION

8.1. It is mandatory that all the The employee required to carry out any activities which includes, working, supervision, inspection, audit etc. shall go through the Working at Height training prior to commencement of activity.

8.2. Initial Communication to be done through Corporate Communication, Email and subsequently shall be made available at safety portal at Sangam.

9. VERIFICATION

9.1. Verification of implementation shall be done during Work at Height audit, field safety visit and site inspections.

10. EXCEPTIONS: Any Exception to this procedure shall only be done as per Document Control .Procedure (TPSMS/GSP/DC/014)**.**

11. REFERENCES

- Tata Power Permit-To-Work (PTW) procedure
- IS: 3521 –1999- Industrial Safety Belts and Harnesses
- IS: 3696 (Part II) –1987 Safety Codes for Scaffold and Ladders
- IS: 5175 - Safety Net Systems.

12. REVIEW:

12.1. Review of this procedure shall be done as and when but not later than once in every three (03) years. Typical Factors like Changes in legislation, Review of Incident Reports, Inspection & Audit findings, Feedback from users, Recommendations in Incident investigation reports may be inputs for the review and revision of the procedure.

12.2. In case release of revised procedure gets delay due to obtaining feedback or any other reasons, safety advisory may be issued immediately to take precautions

for the proposed changes in the procedure and revised procedure should be released subsequently.

13. ATTACHMENTS/APPENDIX :

13.1. Annexure - 1 : Sample format for full body Harness and Lanyard Inspection Check List (TPSMS/CSP/WAH/004/FORM/001)

13.2. Annexure- 2 : Sample Format Ladder Inspection Check List (TPSMS/CSP/WAH/004/FORM/002)

Annexure- 1

TPSMS/CSP/WAH/004/FORM/001

Inspection checklist – Full body Harness

Make/Model :		Manuf. Date/Year :		
Contractor name :		Date of Insp:		
Sr No	Description	OK	Not OK	NA
1	**VISUAL INSPECTION**			
	Harness belts and seams			
1.1	Manufacturer identification well readable			
1.2	Full body harness complete in all respect			
1.3	Harness having ISI or CE mark			
1.4	No fissures, wear or twisted straps, seams open			
1.5	Harness not soiled/damaged by chemical, paints etc			
1.6	No change in harness strap due to heat(eg welding heat)			
	Metal Fittings			
1.7	Waist buckle: No deformation corrosion.			
1.8	Both leg strap buckle: No deformation corrosion.			
1.9	Metal D ring at Back for lanyard , no damage , corrosion			
1.10	Check any other metal fitting provided			
1.11	Any other obs.:			
2	**FUNCTIONAL TEST**			
2.1	Check all buckle by inserting and pulling			
2.2	Harness shelf life not expired or manufacturing date within three years			
3	**INSPECTION RESULTS**			
3.1	Harness safe for use			
3.2	Harness rejected and destroyed beyond use			

Remarks :

	Inspection By (Name & Signature)
	General Instructions:
1	Inspection checklist to be filled for each Harness by Authorized person
2	Checking to be done every three month, Records shall be maintained for last 1 year
3	Tick in appropriate column, mark NA for checks not applicable
4	Provide appropriate inspection tag / Stickers

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Annexure- 1 Contd..

TPSMS/CSP/WAH/004/FORM/001

Inspection Checklist – Full body Harness

Make/Model :		Manuf. Date/Year :		
Contractor name :		Date of Insp:		
Sr No	Description	OK	Not OK	NA
1	**VISUAL INSPECTION**			
	Lanyard Rope			
1.1	Manufacturer identification well readable			
1.2	Lanyard complete in all respect with two hooks			
1.3	Lanyard having ISI or CE mark			
1.4	No fissures wear or twisted straps.			
1.5	Lanyard not soiled/damaged by chemical, paints etc			
1.6	No change in rope strap due to heat(eg welding heat)			
1.7	End of ropes secured. Splices in place if provided.			
	Shock / Energy Absorber packet			
1.8	No fissures in the protective sleeve or in lanyard.			
1.9	Seams between shock absorber, lanyard and hooks intact. No sign of opening of stitches			
1.10	Shock absorber has not yet released			
	Snap hooks (all)			
1.11	No fissures, deformation or corrosion			
1.12	Scaffold hook mouth opening of 50 mm			
2	**FUNCTIONAL TEST**			
2.1	Snap hook can be only opened by pushing the safety lever. It automatically snaps when lever is released.			
2.2	Lanyard shelf life not expired or manufacturing date within three years.			
3	**INSPECTION RESULTS**			
3.1	Lanyard safe for use			
3.2	Lanyard rejected and destroyed beyond use			
Remarks :				
	Inspection By (Name & Signature)			
	General Instructions:			
1 2 3 4	Inspection checklist to be filled for each Harness by Authorized person Checking to be done every three month, Records shall be maintained for last 1 year Tick in appropriate column, mark NA for checks not applicable Provide appropriate inspection tag / Stickers			

Inspection Checklist for Ladder

Plant/ Location: _____

Ladder Tag No ……

Sr. No.	Checks	Remarks
1	Rail/strings Damaged (cracks, deformation etc.)	
2	Rung broken	
3	Rung missing	
4	Rungs clean	
5	Rung distance uneven	
6	Bottom non-skid pad damaged/missing	
7	Top hook damaged/missing	
8	Rungs loose	
9	Non-slip bases	
10	Any other, (specify).	

Inspected By:

Name: _____ **Designation:**_____ **Sign:**_____ **Date:** _____

Reviewed By:

Name : _____**Designation:** _____**Sign:** _____**Date:** _____