



ROPE ACCESS BEST PRACTICE - CCAD



BRIEF INTRODUCTION

This Document has been developed by **Tetra Gulf** HSE Department in collaboration with Operation Department, with the intension of giving readers a succinct summary / understanding of the established step by step procedure, mythology of rope access operation in **CCAD**

Tetra gulf's best practice have been tested, and adopted over the years for safe working at height using **Rope Access Technique**

The following Sample Photos illustrate work sequence, brief description of task performs at each stage.

The primary objective is to carry out the work at height with the goal of NO Accident Incident or Dangerous Occurrences and ensure a safe system of work is maintain at all times.





STEP: 01 TOOL BOX TALK BRIEFING

Tool Box Briefing is often conducted on regular basis by Lead Supervisor and Rope Access Level 3 Supervisor prior to the kick start of each shift /task. this enhances effective communication among the team ,promote safety culture, and facilitate reporting.

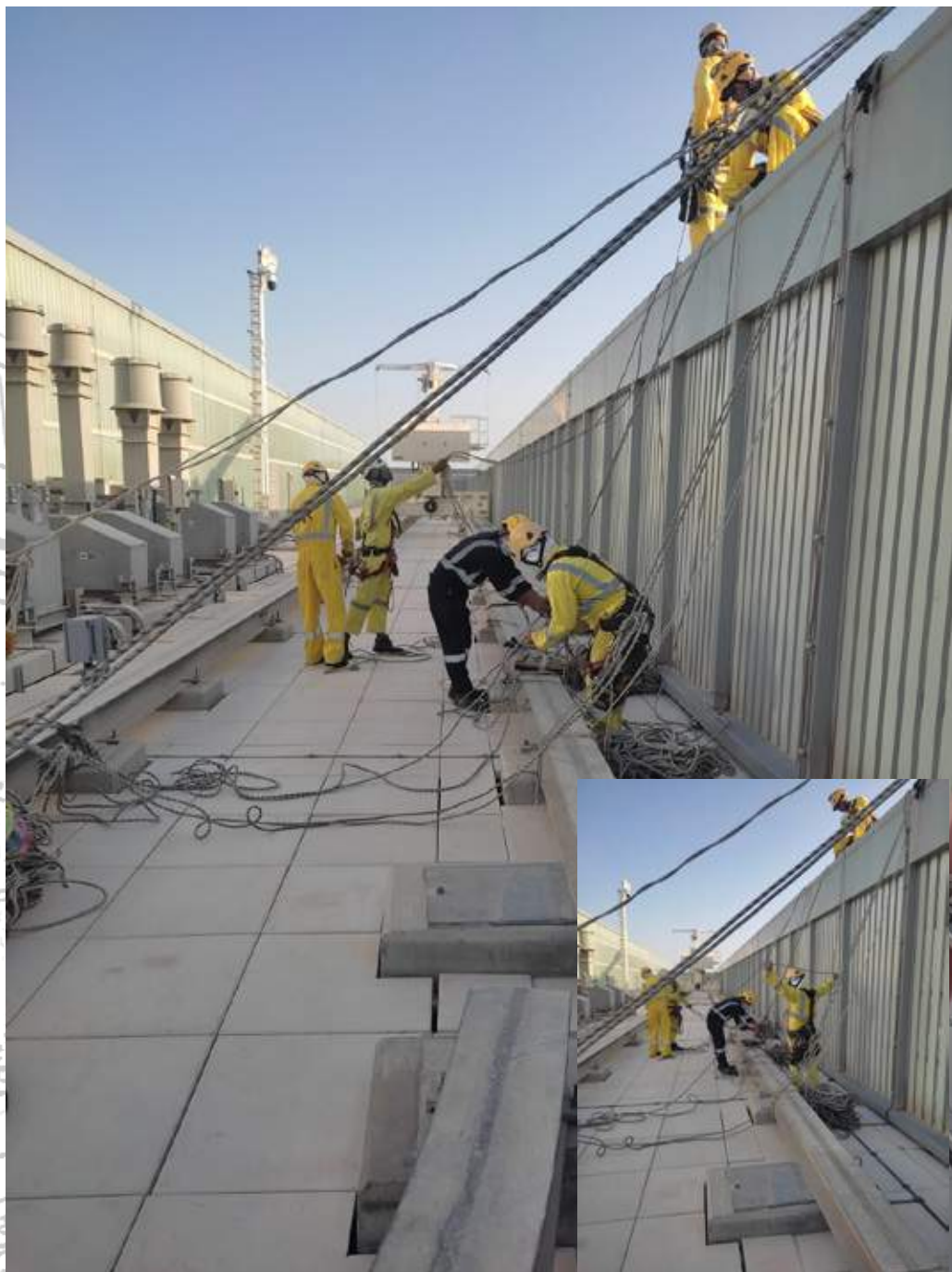


STEP: 02 SELF AND GROUP PPE INSPECTION AND BUDDY CHECKING

Rope Access Level 3 Supervisor and Team will then proceed by conducting pre-used inspection of safety gears, Tools, Equipment and thereafter, Individual and group buddy checking is also conducted prior to the start of each shift and wind speed is then checked using an approved calibrated anemometer (work at height will be immediately suspended if the wind speed exceed 25km/h)

RECAPITULATE:

- A. Inspection of personal protective equipment
- B. Conducting individual buddy checking
- C. Followed by joint full buddy safety harness checking



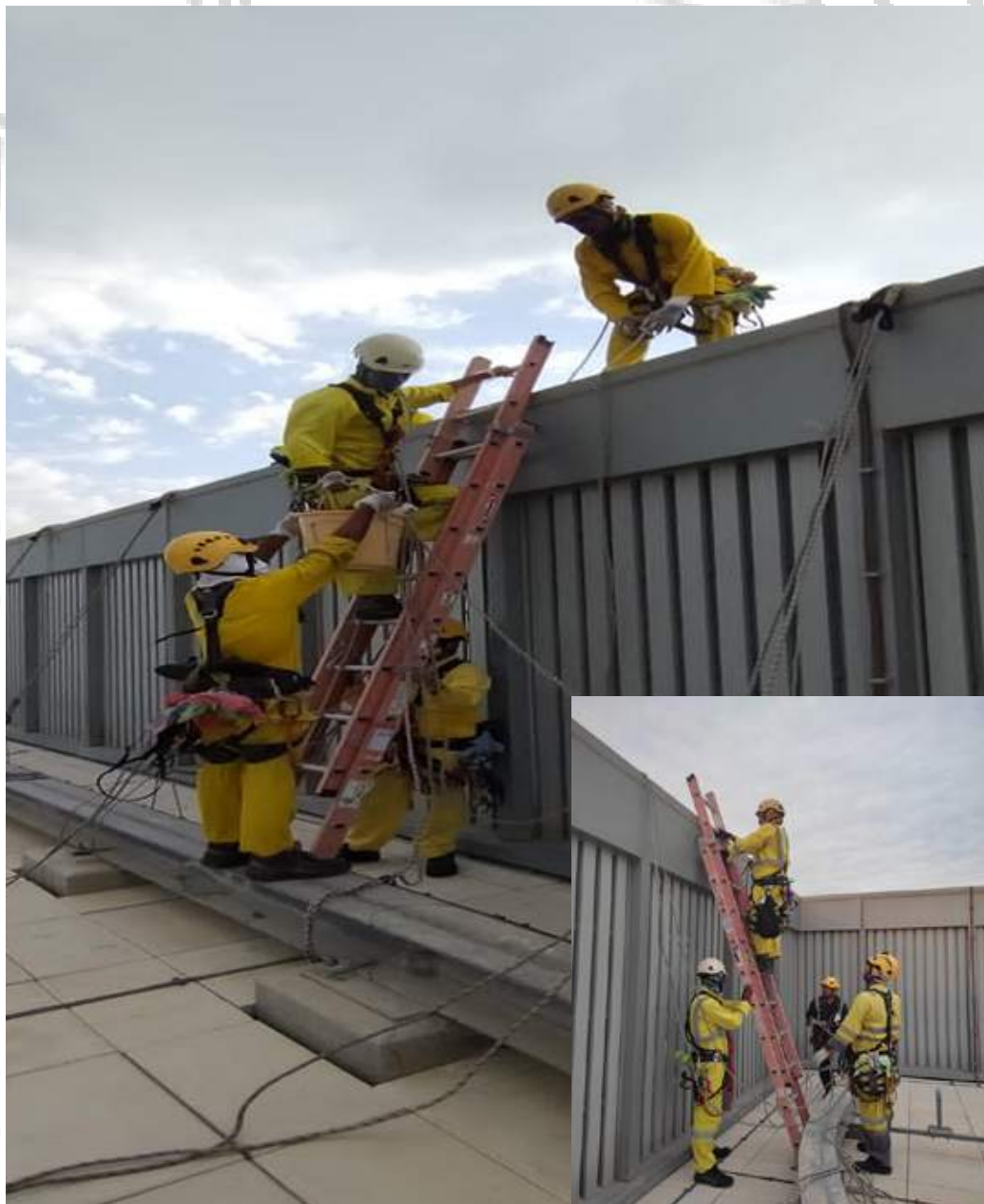
STEP: 03 RAT LEVEL-3 RIGGING ROPE WITH THE SUPPORT OF LEVEL-1 & 2

After completion of equipment inspection and buddy checking, the very next step is rigging of ropes. RAT Level 3 Technician Determine and Conduct Rigging Operation In The Presence And Assistance Of RAT Level 1 And 2.

Of primary importance during rigging operation is the principle of double protection. It is essential to include the provision of at least one additional means of protection to prevent a rope access technician falling, for example, a safety line in conjunction with the working line. This means that, should any one item fail within the suspension system, there is an adequate safety back-up to protect the user. Therefore, when a rope access technician is to be in tension or suspension, there should be at least two independently anchored lines, one primarily as a means of access, egress and support (the working line) and the other as additional back-up security (the safety line)

RECAPITULATE:

- A. Rigging conducted by RAT Level 3 supervisor with the assistant of RAT 1&2
- B. Determining the availability and suitability of approved anchor points
- C. Ensuring independent anchor point for working line and backup lines
- D. Ensuring that the rigging knots are appropriate.



STEP: 04 APPROACH ROOF PANEL WITH LADDER

With the assistance and support of other rope access technicians, the team will then access roof top panel with the used of a straight ladder, staffs will ascend through a step ladder after protecting himself with a rope to anchor point, to hold and keep the ropes to work positioning of each drop of cleaning.

RECAPITULATE:

- A. Team ensures that the ladder has inspection tag before used
- B. Ensuring ladder is secure and supported at the base during use
- C. Maintaining 3-point contact when claiming



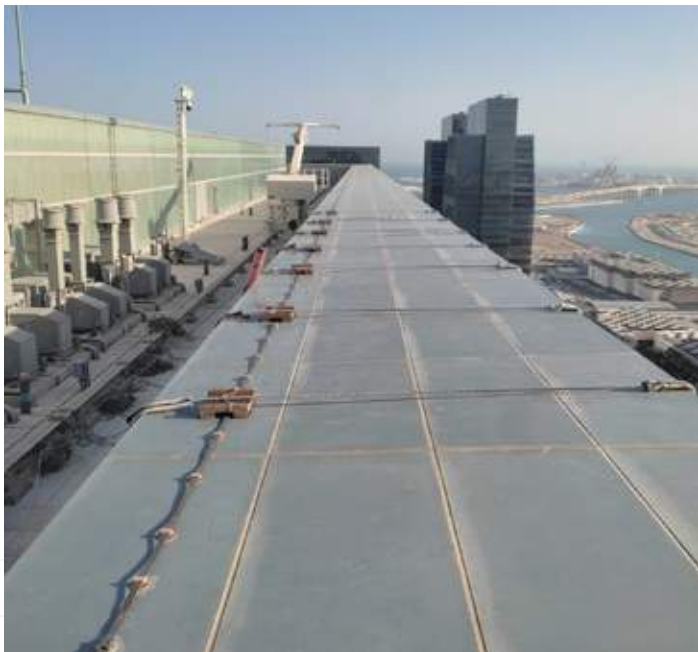
STEP: 05 PROTECTING LIGHTING STRIPES WITH WOODEN FRAMES

Still connected to the anchor line, the team takes Special Precaution to Ensure That the Building Lighting Stripes (Earth Device) Are Appropriately Protected Using Locally Fabricated Wooden Frame.

This process also helps double as rope and edge protection.

RECAPITULATE:

- A. Use of wooden frame to protect the lighting stripes (earthing device)
- B. Use of rope protector to protect anchor line from sharp edge
- C. Wooden frame connected to the anchor point

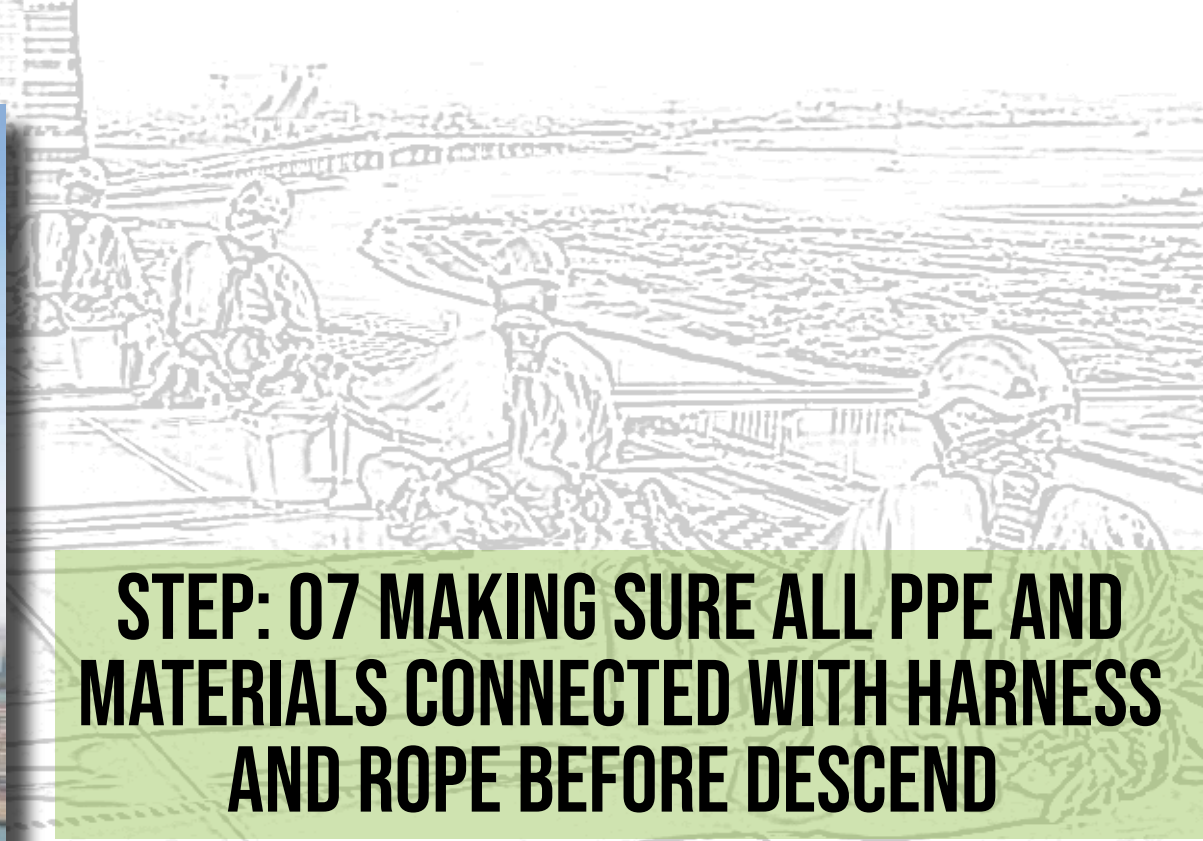
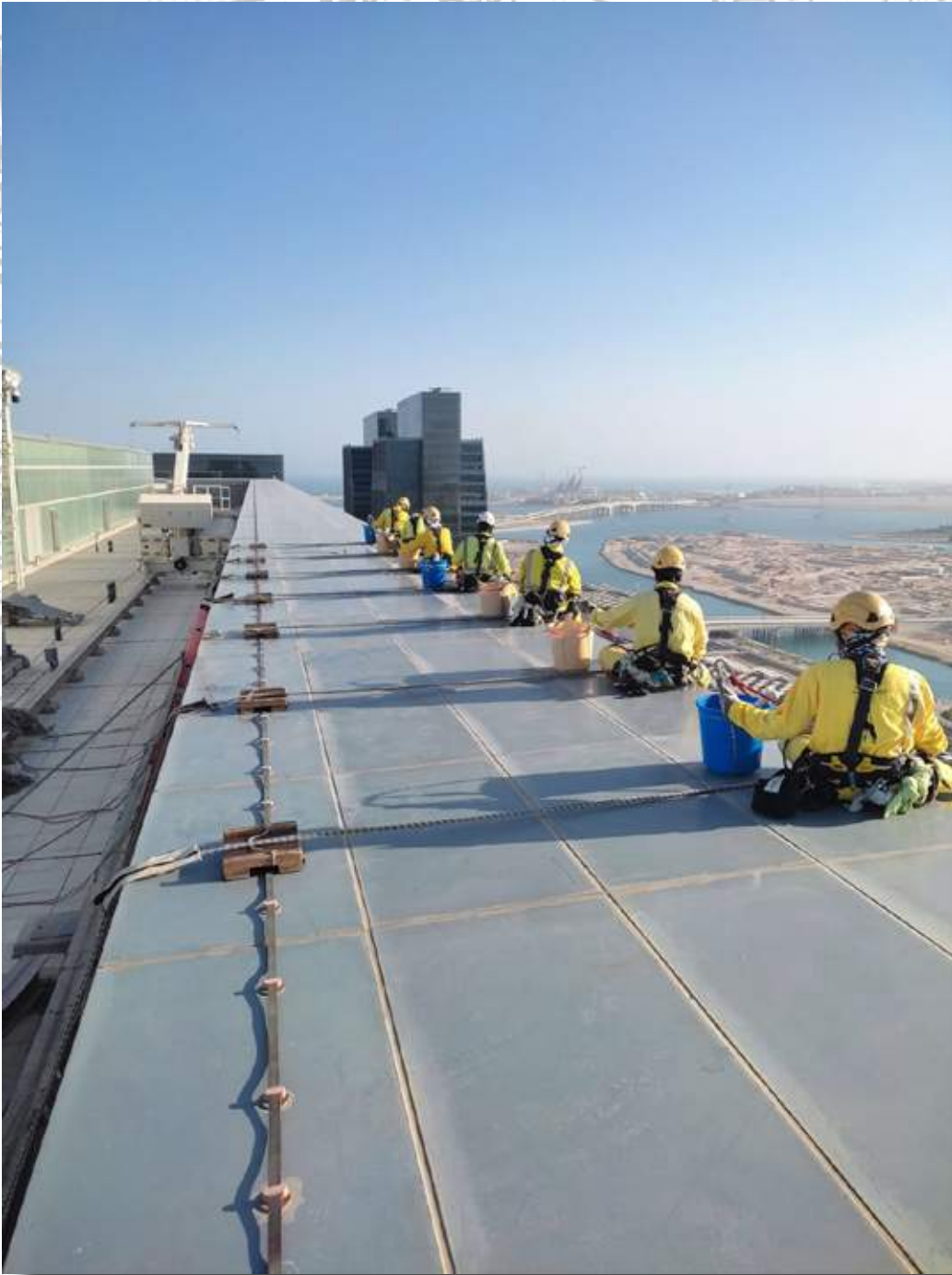


STEP: 06 HANDING OVER MATERIALS TO THE ROOF TOP AND KEEPING READY FOR WORK

With the support of other team members, the team transfers work equipment such as bucket to the roof, staffs will climb up through a step ladder after protecting himself with a rope to anchor point, to hold and keep the ropes to work positioning of each drop of cleaning.

RECAPITULATE

- A. Making sure that all the rigging lines are ready and in place
- B. Transferring work equipment to the rooftop
- C. Ensure that the principle of double protection applied on all the tools & equipment



STEP: 07 MAKING SURE ALL PPE AND MATERIALS CONNECTED WITH HARNESS AND ROPE BEFORE DESCEND

Prior to the descend, a final inspection and cross examination is conducted by RAT level 3 supervisor in ensuring that all necessary safety steps have taken before giving his final confirmation for a descend

The primary objective is to make certain that both the working line and safety line is securely attached via the safety harness prior to the synchronize vertical descend.

RECAPITULATE:

- A. Conduct final checking/inspection prior to descend
- B. Ensuring the lifeline and backup safety are protected from sharp edges
- C. All equipment are properly tagger with harness to prevent fall from height



STEP: 08 DESCENDING FOR WINDOW FAÇADE CLEANING OPERATION

As WFC team commence descending, special safety precaution is initiated to protect the ropes from damage using flexible rope protection device.

It is the method of safe guarding /protecting both the property or building and PPE such anchor or life lines Ropes, Layard and sling from been harm or damage from rough & sharp edge, hot surfaces and contaminated during façade glass cleaning operation.

RECAPITULATE

- A. Proper use of rope protector to prevent the lifeline from damage
- B. All tools and equipment attach to lanyard to prevent fall/drop object
- C. Maintain active site supervision and monitoring by RAT level 3 supervisor



STEP: 09 WINDOW FAÇADE CLEANING IN PROGRESS

As cleaning progress from top to bottom, the entire process is repeated after every drop until the task is completed, ropes are then disconnected and kept in an approved area where there is no risk to equipment or person(s)

RECAPITULATE

- A. Window façade glass cleaning on progress
- B. Rope access team descend simultaneously thus maintaining Safe system of work

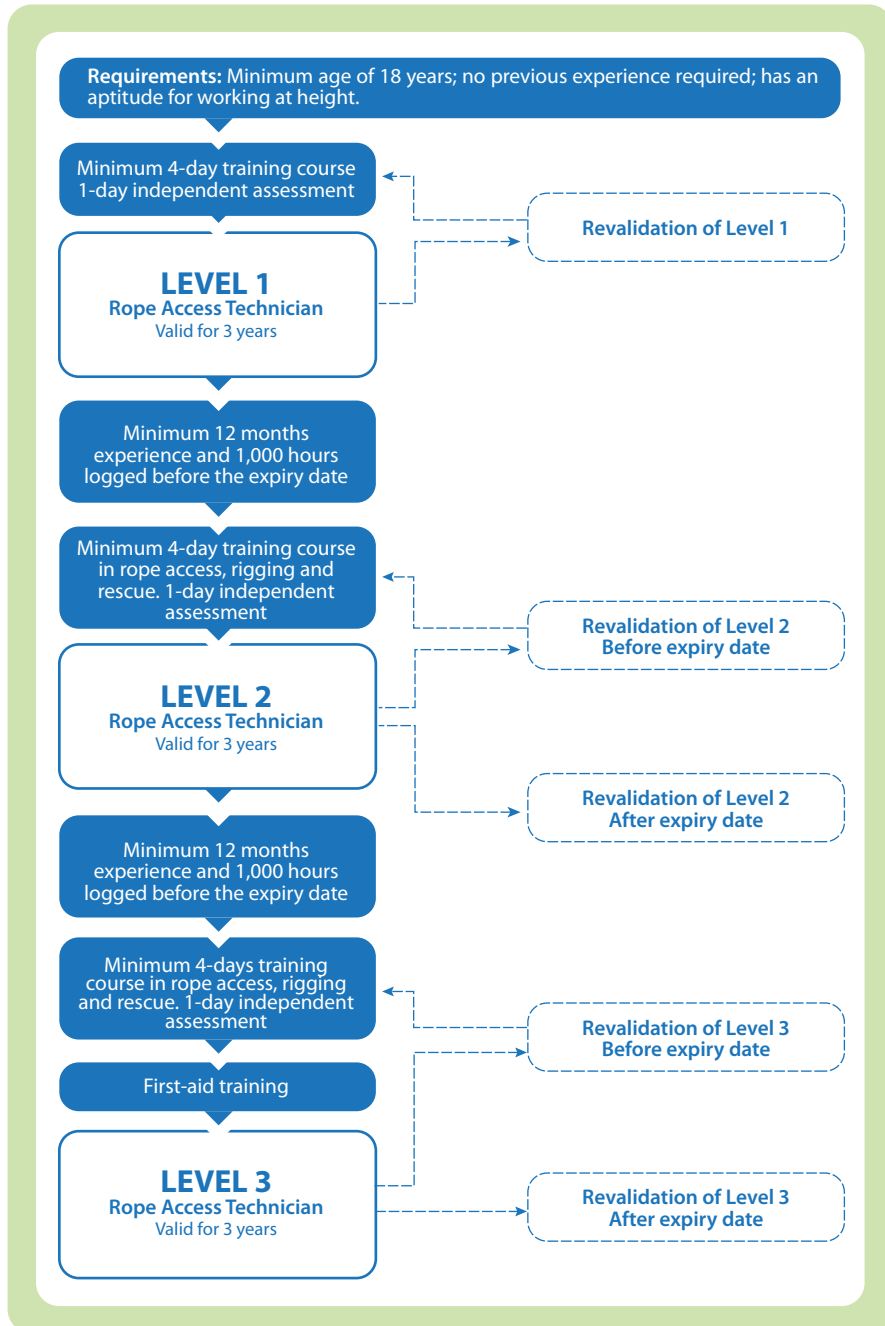
IMPORTANT NOTES

Training and certification of rope access technicians

Rope access training and certification kicks start with pre-medical and physical screening. Candidates must be suitable for rope access work, which requires a good level of fitness, a head for heights, and an aptitude for ropes and related systems. Medical contraindications include, but are not limited to: heart disease, high blood pressure, epilepsy, blackouts, fear of heights, vertigo, impaired limb function, alcohol or drug abuse, psychiatric illness, and diabetes. A medical evaluation by a doctor is undertaken prior to the start of the course. Due to the systems and equipment,

Pre-Training requirement: to become a rope access technician after validating the physical and medical screening, you will need to attend and complete a 4 days intensive training course and one day assessment given by IRATA approved member trainer.

Level of qualification Rope access technicians are grouped into three technical grades depending on their experience and level of Assessment (L1,L2 and L3)





IRATA CERTIFICATE SAMPLE

 This is to certify that Mohammad Nasir Uddin IRATA No.: 1/98593 was successfully assessed as a Level 1 Rope Access Technician of IRATA International and has satisfied the requirements as stipulated in the IRATA Training, Assessment and Certification Scheme. The validity of this certificate should be verified at www.irata.org <i>Dr S Kondaveeti</i> Dr S Kondaveeti Head of Quality, Audit and Certification Date Originally Assessed at this Level: 23 Jan 2018 Assessment Date: 26 Jan 2022 Certification Expiry: 27 Jan 2026 	 is to certify that PRAMESH KUMAR CHAUDHARY IRATA No.: 2/102142 was successfully assessed as a Level 2 Rope Access Technician of IRATA International and has satisfied the requirements as stipulated in the IRATA Training, Assessment and Certification Scheme. The validity of this certificate should be verified at www.irata.org <i>Dr S Kondaveeti</i> Dr S Kondaveeti Head of Quality, Audit and Certification Date Originally Assessed at this Level: 21 May 2022 Assessment Date: 21 May 2022 Certification Expiry: 20 May 2026 	 is to certify that Shreeram Sunar IRATA No.: 3/58005 was successfully assessed as a Level 3 Rope Access Technician of IRATA International and has satisfied the requirements as stipulated in the IRATA Training, Assessment and Certification Scheme. The validity of this certificate should be verified at www.irata.org <i>Rodney Marage</i> Rodney Marage Co. Secretary Date Originally Assessed at this Level: 12 Jan 2018 Assessment Date: 22 Jan 2022 Certification Expiry: 21 Jan 2026 
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IRATA LEVEL 1 ROPE ACCESS TECHNICIAN

IRATA LEVEL 2 ROPE ACCESS TECHNICIAN

IRATA LEVEL 3 ROPE ACCESS TECHNICIAN



INSPECTION OF ROPE ACCESS EQUIPMENT GENERALLY OCCUR IN 3 PHRASES I.E.

Inhouse inspection / pre-used inspection: pre-used inspection is a regular schedule activity that is usually conducted or carryout by a competent person (rat level 3 technicians prior to the start of every shift or rope access operation strictly in accordance to manufactural recommendation , where all rope access equipment are thoroughly inspected and checklist updated prior to start of every shift or work commencement if any significant defect or deformity is identify, the piece(s) of equipment is immediately remove from service.



3RD PARTY INSPECTION AND CERTIFICATION

Inspection and certification of rope access equipment, The inspection and certification of all rope access safety gears, equipment and tools take place semiannually (every 6 month).

During the inspection, all equipment are systematically checked one after another by a competent 3rd party approved inspector

All the damage, faulty equipment that are deep unfit or disqualified during inspection are immediately removed /withdrawn from service and destroy or mark (OUT OF SERVICE) and put far from the reached, meanwhile materials that have been inspected and approved are further mark with an inspection tag for ease of traceability and identification.



ROUTINE JOINT WFC-OSH WALKTHROUGH & INSPECTION

WFC-OSH inspection is a plan mandatory safety walkthrough that is often conducted every month by the client (CCAD) and contractor (TETRA GULF) by visiting live working location during work on progress and observing the equipment used and compliance to applicable safety standards.



SEAT HARNESS FOR FALL-ARREST
AND WORK POSITIONING



CHEST HARNESS DISTRIBUTE
THE LOAD OVER THE SHOULDERS



PODIUM CHAIR GREATER
COMFORT DURING SUSPENSION



I D SELF-BREAKING DESCENDER
WITH ANTI PANIC FUNCTION



HAND ASENDER HANDLED
ROPE CLAMP FOR ROPE ASCENTS



ASAP LOCK MOBILE FALL ARRESTER
WITH LOCKING FUNCTION

ROPE ACCESS TECHNICIAN FULL PPE KIT AND FUNCTION

Complete personal protective equipment used by Rope access technician to work at height for widow façade cleaning operation.



ENERGY ABSORBER FOR ASAP LOCK



HELMET PROTECTION FROM FALLING
OBJECT ANDPERSON HIM SELF FALLS



FOOTLOOP USED FOR ASCENSION
OR BASIC ROPE CLAMP



STEEL CARIBINA SETTING UP ANCHORS
OR FOR CONNECTING



CARRINAINAAUTO LOCKING SYSTEM
USED SEPCIALY FOR MOBILE FALL ARRES



STITCHED OPEN LOOP SLING
FOR SETTING UP ANCHORS



STATIC ROPE USED TO HANGING



FLEXIBLE PROTECTION
FOR A FIXED ROPE



USED FOR BACKUP SAFETY





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