

STS 3&4 festoon Overhaul

Contractor's Health & Safety Requirements

1. Project Definitions & Data

- Company:** Port of Thessaloniki S.A. - Th.P.A. S.A., hereinafter called: *Company*.
- Project Location:** *Company's* premises inside Thessaloniki Port
- Project:** **STS 3&4 Festoon Overhaul**
- Project Areas:** All areas within the *Project Location* which are used for performing any task related to the project (e.g. working, materials/equipment transportation, personnel accessing etc.)
- Contractor:** Any person or company (hereinafter called: *Contractor*), with a direct contractual agreement with the *Company*, performing any type of work inside the *Company's* premises.
- Sub-contractor:** Any person or company with a contractual agreement with the *Contractor*, performing any type of work on behalf of the *Contractor*, inside the *Company's* premises. This definition includes self-employed persons.
- Law:** All **Hellenic Republic's** laws, codes, rules and regulations (hereinafter called: *Law*), applicable to the *Project's location*.
- Local Language:** Hellenic

2. Introduction

The *Contractor* has the duty to manage and execute his scope of work concerning the *Project*, according to:

- a) The *Law*
- b) The *Company's* policies
- c) All requirement included in this document
- d) The instructions of *Hellenic Republic's enforcing authorities*.
- e) Any recommendations of the *Company* in order to prevent incidents that may result into:
 - Personnel injury (*Company's, Contractor's, Sub-contractor's, any third party*)
 - Damage to the environment
 - Property damage
 - Damage to the *Project*
 - Nuisance to the environment and people in the neighbouring area of the *Project*

It is expressly stated that the *Contractor* bears the full responsibility and all of the associated/resulting costs in order for **all** personnel (*Contractor's* and each of his *Sub-contractor*) to strictly abide to and implement all requirements of the *Project*, as required/stated above (**sections a - e**), as well as in all *Project* documentation.

Unless otherwise stated, all *Contractor's* requirements mentioned throughout this present document, also apply to each of his *Sub-contractors*.

It is expressly stated that the employment of the *Company's* H&S officer, by no way means limits or waives any responsibility of the *Contractor* (including all of his *Sub-contractors*) with regards to H&S of the *Project*, as mentioned in this document and as incurred by all *Project* documentation.

The *Contractor* shall include in his offer all necessary resources (financial cost, time, human resources, labour, equipment, tools, materials, supplies, etc.), in order to successfully meet all of his (and of all of his *Sub-contractors*) obligations towards Health & Safety as specified in the present document and in all *Project's* documentation.

The *Contractor* must ensure that at **any time, any activity undertaken by any personnel** (*Contractor* personnel or *Sub-contractor*) is properly and sufficiently supervised by the appointed personnel as described in all *Project* documents (e.g. **Section 4** in the present document).

No crew / group of personnel (*Contractor* personnel or *Sub-contractor*) should be allowed to perform any activity without a clear instruction of the task to be undertaken, or without a continuous supervision (e.g. by a Supervising engineer or a foreman).

In case that a person(s) is working without clear instructions or close and continuous supervision, the *Company* will ask for an immediate pause of all activities until the respective supervisor reaches the specific location of works.

3. Project Specific H&S Requirements

3.1 H&S Plan - Hazards & Risks Assessment

The *Contractor* shall create, sign, seal and submit to the *Company* a suitable & appropriate:

- *Health & Safety Plan* and
- *Project Hazards & Risks Assessment*

for the complete *Project*, prior to commencement of any activities.

These documents must describe in sufficient detail :

- The method(s) to be used for performing each task / phase of the *Project* (i.e. detailed description of each & every work phase/task and not just a simplified/general description)
- Tasks durations
- Equipment to be used
- Personnel to be used
- Description / analysis of the potential Hazards and Risks associated with each task
- Description of the specific, detailed H&S control measures for the elimination and/or containment of each Hazard & Risk.

Indicatively, the afore mentioned documents should contain the following separate fields appropriately filled in :

- **Task**
- **Hazard**
- **Risk**
- **Personnel involved**
- **Risk level before** (implementation of H&S measures)
- **H&S measures**
- **Risk level after** (implementation of H&S measures)

The *Contractor* is responsible for providing prompt, appropriate and sufficient training to all of his personnel (including all of his *Sub-contractor's* personnel), who is involved in or affected by the H&S Plan, individual Methods of Work etc.

Printed training records signed by each trainee, must be kept by the *Contractor*.

Note: Training might be required to be performed more than once.

3.2 Project working hours

Considering the nature of the *Project* and especially the fact that work at high elevations shall be carried out, the *Contractor* (including all of his *Sub-contractors*) shall not execute any type of work within the *Project* areas **before sun-rise or after sunset** or when adverse weather conditions exist.

In all cases, the *Contractor* shall not claim any cost of any type from the *Company* whatsoever.

3.3 Health & Safety Amenities

The *Contractor* shall take due care to provide all personnel (*Contractor's* and of each *Sub-contractor*) with the following health, hygiene and safety amenities prior to work commencing (as minimum):

- First Aid Facilities and portable first aid kits (available to be brought on site)
- Potable Water
- Resting facilities
- Sanitary conveniences and washing facilities. If required by the nature of the work, or for health reasons, then washing facilities, including showers should also be provided.
- Portable fire-fighting equipment (depending on the type and extent of works carried out)
- Suitable site offices for the project management personnel

Note: All offices and resting facilities must be air conditioned.

3.4 Site Fencing, Signs & Lighting

The *Contractor* is responsible for the provision, transportation, assembly, installation and maintenance of barriers / fencing apparatus at the area underneath each STS installation site(s), where **fall from height (of parts, tools etc.) hazards exist**.

The barriers / fencing apparatus shall be metal or plastic and of the same, or of similar type as those shown in the photographs below,





Throughout the full length of each side of each fenced area, the *Contractor* shall provide, install and maintain appropriate **flashing lights** (battery operated) at every **20 m**, as well as at each corner of the fenced area.

Each flashing light shall be capable of operating continuously throughout the full length of a night before a battery replacement is needed.

[single and/or more successive nights. e.g. in the case of 2 consecutive calendar holidays].

The *Contractor* is responsible for providing, installing and maintaining the following safety signage (in addition to all safety signage that he is responsible for providing and installing according the *Law* and all *Project's* documentation):

- On each side of each fenced area, as well as at each entry/exit of the worksite, a set of metal signs every **20m**, (size: **80cm x 60cm**). Each set to be comprised of a sign in the **Local language** and another one in the **English** language, as follows:

ΕΡΓΟΤΑΞΙΟ
ΑΠΑΓΟΡΕΥΕΤΑΙ Η ΕΙΣΟΔΟΣ
ΣΤΟΥΣ ΜΗ ΕΧΟΝΤΑΣ ΕΡΓΑΣΙΑ

ΥΠΟΧΡΕΩΤΙΚΗ ΧΡΗΣΗ ΟΛΩΝ
ΤΩΝ ΠΡΟΒΛΕΠΟΜΕΝΩΝ
ΜΕΣΩΝ ΑΤΟΜΙΚΗΣ ΠΡΟΣΤΑΣΙΑΣ

CONSTRUCTION SITE

NO ENTRY

MANDATORY USE OF PERSONAL
PROTECTIVE EQUIPMENT

- On each side of each fenced area, as well as at each entry/exit of the worksite, the following metal sign, with a reflective surface, every **20 m** (size: **90cm x 30cm**)



- All signs indicated below and at the following 2 pages, must also be provided and installed by the Contractor



This indicated sign, shall be installed:

- At each site entrance
- Every **20m** along the fenced area (metallic, with reflective surface, **Ø40cm**)



Εύφλεκτες ύλες ή/ και υψηλή θερμοκρασία [Ελλείψει ειδικής πινακίδας για υψηλή θερμοκρασία]



Εκρηκτικές ύλες



Τοξικές ύλες



Διαβρωτικές ύλες



Ραδιενεργά υλικά



Ακωρούμενα φορτία



Οχήματα διακίνησης φορτίων



Κίνδυνος ηλεκτροπληξίας



Γενικός κίνδυνος



Ακτινοβολία λέιζερ



Αναφλέξιμες ύλες



Μη ιονίζουσες ακτινοβολίες



Ισχυρό μαγνητικό πεδίο



Κίνδυνος παραπατήματος



Κίνδυνος πτώσης



Βιολογικός κίνδυνος

All **Four (4)** indicated signs, shall be installed next to each site entrance

(each sign to be metallic, with reflective surface, **45cm** side length)



All **Five (5)** indicated signs, shall be installed next to each site entrance
(each sign to be metallic, with reflective surface, **Ø40cm**)

This indicated sign, shall be installed:

- Wherever a safety harness needs to be worn
- At each MEWP

(metallic, with reflective surface, **Ø40cm**)

4. Contractor's Health & Safety Organisation - Personnel Roles and Responsibilities

As a general rule, each one person individually is responsible for his safety and the safety of others, should his work affect and/or can cause damage to others, the operation processes, materials or products or to the environment.

Each one person individually is prompted to actively **seek for / identify hazards and risks** in all *Project areas* and act as necessary, as described by the Law or within the *Project's* documents and most importantly to ensure that all identified hazards & risks are communicated to the chain of command, in order for all affected/involved parties/persons/third parties to be informed.

The *Contractor* shall appoint the following personnel for the supervision and implementation of his responsibilities :

- **Site Manager**
- **Site Supervisor** [Engineer(s) / Foreman (-men)]
- **Site Health & Safety Officer**

All this personnel must have direct contractual agreements with the *Contractor* and must have clearly defined roles & responsibilities with regards to health and safety, the minimum of which are identified in the following sections (4.1 - 4.3).

All *Contractor's* personnel (including all personnel of all of his *Sub-contractors*), have the duty to co-operate with their supervisors and the *Company* in order to ensure health & safety in their work environment.

With regards to the continuous physical presence required for several of the *Contractor's* personnel mentioned throughout this document, it is meant to include:

Continuous, on-site, physical presence during the Project implementation for as long as any type of activity/work is performed by the Contractor or any of his Sub-contractors.

Notes:

- Depending on the complexity of the *Project*, the number of different *Contractor's* crews working simultaneously and/or the total number of *Contractor's* personnel, it might be feasible for the *Site Manager* and *Site Supervisor* to be the same person.
However, this must be clearly stated in the submitted offer and also be agreed with the *Company*.
- In any case however, the *Contractor's H&S Officer* shall be a different person whatsoever.

4.1 Site Manager Role

The *Contractor's Site Manager* as a minimum shall:

- Have direct contractual agreement with the *Contractor* and be ultimately responsible for all activities performed at the *Project areas*, either by the *Contractor* or by any of his *Sub-contractors*.
- **Be physically present at all times on site during the Project implementation for as long as any type of activity/work is performed by the Contractor or any of his Sub-contractors.**
- Be fluent in the English language (spoken and written).
- Be & act as the *Contractor's on-site representative* (i.e. a single person for all official communication between the *Company* and the *Contractor* regarding all Project aspects/issues).
- Be responsible to ensure that the *Contractor* (including all of his *Sub-contractors*) complies with the *Law* and that all necessary resources are available.
- Ensure that the **daily** on-site meetings (toolbox meetings - before commencing of any activity for the day) for all *Contractor's* personnel are performed.
- Perform **regular and frequent** on-site inspections/walks/audits and promptly act as necessary, as described by the *Law* or within all *Project's* documents. His actions include (but are not limited to) the following:
 - Record his findings,
 - Create all pertinent reports,
 - Alter/pause/stop works,
 - Identify hazards and risks
 - Stop any high risk activities (risk for serious injury),
 - Inform the *Company*,
 - Ensure that all hazards & risks are communicated to all affected/involved parties/persons of all contractors and sub-contractors
- Participate in all meetings, trainings, inspections, audits etc. if so requested by the *Company*.

The skills and qualifications of this person must be suitable & appropriate to the nature of the works awarded to the *Contractor*.

4.2 Site Supervisor(s) Role

The *Contractor's Site Supervisor(s)* (e.g. Engineer, Foreman etc.), as a minimum shall:

- Have direct contractual agreement with the *Contractor*
- Be responsible to continuously supervise the works performed by the crew he is appointed to supervise and ensure that these works are carried out with due respect to the required health & safety measures.
- Be physically present at all times on site during the Project implementation for as long as any type of activity/work is performed by the crew he is supervising.
- Perform **daily** on-site meetings (toolbox meetings – before commencing of any activity for the day) with his crew.
- Perform **daily** on-site inspections/walks/audits and promptly act as necessary, as described by the *Law* or within all *Project's* documents. His actions include (but are not limited to) the following:
 - Record his findings,
 - Create all pertinent reports,
 - Alter/pause/stop works,
 - Identify hazards and risks
 - Stop any high risk activities (risk for serious injury),
 - Inform the *Company*,
 - Ensure that all hazards & risks are communicated to all affected/involved parties/persons of all contractors and sub-contractors
- In general and on a **daily basis** and as required, each *Supervisor* has the duty to make sure that his part of the works is performed in accordance with the directions and all available task-specific procedures that have been provided as far as health & safety is concerned.

4.3 Site Health & Safety Officer (HSO) Role

The *Contractor* shall appoint a Health & Safety Officer (**HSO**) for the *Project*, at the specific *Project's* location and for all personnel directly employed by the *Contractor* or any of his *Sub-contractors*.

In any case however, all of this person's duties, responsibilities and authority will also extend to all personnel of each Sub-contractor of the *Contractor*, regardless if a *Sub-contractor* has appointed his own HSO.

The *Contractor's HSO* as a minimum shall:

- Have direct contractual agreement with the *Contractor* (either he himself, or through an external H&S Consultant Company)
- **Be physically present** at the site during the Project implementation for as long as any type of activity/work is performed by the *Contractor* or any of his *Sub-contractors*.
- Be a competent Health & Safety professional with at least **Five (5) years** experience, be familiar with the *Law* and hold all licenses & degrees required by the *Law* with regards to the provision of health & safety services.
- Be fluent in both the *Local* and English language (spoken and written)
- Be authorised by the *Contractor* to discuss Health & Safety matters with the *Company* or *Hellenic Republic's Enforcing Authorities*, agree on actions to be taken, take decisions on Health & Safety Matters on site and sign all pertinent documents on behalf of the *Contractor*.
- On a **daily basis** the *Contractor's HSO* shall:
 - Monitor & ensure that all *Contractor's Personnel* (including all of his *Sub-contractors*), comply to all instructions, recommendations etc. issued by the *Contractor* (or by any of his *Sub-contractor*), the *Company*, or Hellenic Republic's enforcing authorities as applicable.
 - Ensure that each *Contractor's* personnel has received the appropriate H&S training to perform his daily activities, e.g. for working at heights, safe use of hand tools, lifting & moving of loads etc.
 - Ensure that each *Contractor's* personnel participates in the daily toolbox meeting.
 - Take all necessary corrective actions to ensure all of the above.
- Perform all applicable on-site training of all personnel (*Contractor's* and *Sub-contractor's*) as required by the *Law* and according to the *Project's* needs.
- Participate in all meetings, trainings, inspections, audits etc. if so requested by the *Company*.
- Be responsible to ensure that a health & safety archive is properly maintained regarding, trainings, inspection reports, correspondence, Specific Risk Assessment, emergencies, incidents reporting, incidents investigation, log book, etc.
- Create well in advance H&S Risk assessments, Method Statements, Lift plans etc. for all works/tasks to be performed by the *Contractor* or any of his *Sub-contractors* and also monitor their implementation.

- Perform **daily** on-site inspections/walks/audits and promptly act as necessary. His actions include (but are not limited to) the following:
- Record his findings
 - Create all pertinent reports
 - Alter/pause/stop works
 - Identify hazards and risks
 - Stop any high risk activities (risk for serious injury)
 - Inform the *Company*
 - Ensure that all hazards & risks are communicated to all affected/involved parties/persons of all contractors and sub-contractors

5. Project works Supervision

The *Contractor* must ensure that at **any time, any activity undertaken by any personnel** (*Contractor* personnel or *Sub-contractor*) is properly and sufficiently supervised by the appointed personnel as described in all *Project* documents (e.g. in the present document, **Section 4**).

No crew / group of personnel (*Contractor* personnel or *Sub-contractor*) shall be allowed to perform any activity without a clear instruction of the task to be undertaken, or without a continuous supervision.

In case that a person(s) is working without clear instructions, or close and continuous supervision, the *Company* will ask for an immediate pause of all activities until the respective supervisor reaches the specific location of works.

6. Health & Safety Archive

The *Contractor* shall maintain a Health & Safety Archive with the following subjects as applicable. This archive shall be accessible to the *Company* at any time, except for the parts that contain personal data or sensitive information.

- Training records & materials
- Equipment log book, license, certificates and operators' licenses
- Incidents and incidents investigation
- Enforcing authorities reports
- Inspection and audit reports
- H&S Plan, Method Statements, Risk Assessments
- PPE give out reports
- Material Safety Data Sheets (MSDS) as required by the *Law*
- Written appointments of Health & Safety personnel and Supervisors

7. Incident Management

In case of an incident of any type (dangerous/unsafe occurrence, near miss, accident with or without injuries) taking place on any *Project area*, or in a case that *Contractor's* personnel (including personnel of any of his *Sub-contractors*) is involved in the incident, then:

- The employee (s) (*Contractor's* or any of his *Sub-contractor*) involved in the incident, shall inform his/their immediate supervisor for whatever has happened, or has come to his/their attention. He/they should act in a manner that limits consequences to that of the incident alone.
- The *Contractor's Site Manager* shall inform the *Company* and make sure that the Contractor's Health & Safety Officer visits the site of the incident in due course.

The *Contractor* shall co-operate with the *Company* in any incident that the *Contractor* is involved. In addition, the *Contractor* shall:

- Ensure that the *Company* as well as any other person/company/entity as required by the *Law* (e.g. Local Work Inspectorate) are promptly informed for all accidents involving his personnel, or arising from his activities on site.
- Record all accidents in the Accidents Log Book, Investigate the causes of all accidents and take mitigations measures to avoid incidents in the future.

8. Personal Protective Equipment - PPE

The *Contractor* (including all of his *Sub-contractors*) is responsible for providing all of their employees well in advance and before their mobilisation, sufficient quantities and appropriate types of Personal Protective Equipment (PPE) for each & every activity to be performed during the *Project* implementation.

This is particularly true for the following PPEs:

- PPEs for working at heights and especially for fall prevention equipment such as the self-retractable type lanyards (i.e. when required to work at a height where it is not effective/safe to use fall arrest equipment due to the small height, which is nevertheless capable of causing serious injuries).
- PPEs for electric arc welding and/or cutting processes. Only welding helmets with pivoting mechanism for the electromagnetic radiation protection filter should be used (preferably with electronically activated filter). The welding helmet shall only be used with a safety helmet as well (providing the user's head with impact protection).

Under special circumstances only and if otherwise impossible, will it be allowed for the user to wear a welding helmet without a safety helmet. Even in that case however, the *Contractor* shall be responsible to construct a suitable and appropriate structure for the welder to safely work underneath.

Also :

- The *Contractor* is reminded that Personal Protective Equipment is the last resort of protection.
- Safety helmet is mandatory in this site in all places.

- **Safety glasses are mandatory in this site at all places. If a person uses a frame with prescription lenses, then the appropriate type of safety glasses shall be used to offer sufficient protection. Otherwise, this person cannot work on-site whatsoever.**
- Safety shoes are mandatory in this site in all places.
- High visibility vest is mandatory in this site in all places.
- *Contractor* shall replace any PPE when damaged or worn out.
- All PPE must be of good quality materials and CE marked or of equivalent status as the *Law* or international good practice provides for.
- PPE must be used at all times by the employees as required.

Wherever hazards exist due to fall from height of tools, the *Contractor's* priority must be for him to provide & install all safety measures in order to barricade the areas at lower elevations and restrict personnel access to them.

If these measures are not feasible and/or adequate, then the *Contractor* must provide to all of his personnel (including *Sub-contractor's* personnel), appropriate types of tool fall protection equipment, same or similar to the ones shows in the photographs below



9. H&S - General Site Rules

The site rules below are of general application for all *Contractor's* personnel (including all personnel of his *Sub-contractors*):

- No person shall be assigned to a job unless physically and mentally fit to the job
- Every person on site shall wear a safety helmet of appropriate type. Exception to the rule is when in the offices, sanitary facilities, resting rooms and inside the operator cabin of a truck, crane, loader etc. **Forklift cabins are not excluded from the rule, therefore the operator shall wear all PPEs as described in section 8 above.**
- Every person on site shall wear a High Visibility Vest of appropriate type. Exception to the rule is when in the offices, sanitary facilities, resting rooms and inside the operator cabin of a truck, crane, loader etc. **Forklift cabins are not excluded from the rule, therefore the operator shall wear all PPEs as described in section 8 above.**
- Every person on site shall wear safety footwear of appropriate type. As a minimum requirement they shall all featured with toe and sole protection
- A safe access and egress shall be secured to all working areas, equipment, plant etc.
- All drivers and vehicular equipment shall obey to the traffic signs on site
- All persons shall comply with site signing instructions as appropriate
- Fires for heating purposes are not allowed on site
- Alcohol, narcotics or drugs are strictly not allowed on site. Drugs (pharmaceutical) only under doctor's prescription
- Smoking is strictly forbidden on enclosed public areas on site. There will be designated areas for smoking
- No person shall work unless dressed with suitable clothes. Loose clothes, shorts or naked upper body is not allowed
- No entry into confined space is allowed other than according to a valid permit to work
- No works in confined places unless a valid permit to work in place
- No person is allowed to relocate, remove, modify, damage or destroy any safety sign or safety equipment
- All personnel are obliged to report any unsafe condition and seek assistance if they cannot put in right themselves
- Site shall remain clean. Any waste shall be littered at bins provided
- No works shall be undertaken unless suitable lighting is provided
- Only authorized personnel shall operate site equipment
- Only qualified personnel and licensed as appropriate according to the *Law* shall undertake works such as welding, cutting, power tools, refueling, maintenance, scaffold erection, work at heights, work in confined spaces or works of high risk if not specific skills, experience or licensed is obtained
- Only electrical apparatus and equipment in good condition and of approved standards (CE marked, EN standards) are allowed on site
- Damaged tools, equipment, cabling etc. shall be removed from site
- Floors and grounds remain clean and clear of equipment, cables, materials etc. unless in use.

10. Mobile Plant and Equipment - Operators

- All on-site mobile plant (e.g. generators, air compressors etc.) and mobile equipment (e.g. cranes, forklifts, etc.) used by the *Contractor* or by any of his *Sub-contractor*, shall be legally licensed and insured (and where is legally required to have appropriate registration plates), in good working order and have a valid and updated maintenance log book.
- The *Contractor* shall to submit all relevant documentation (license, certification, maintenance book, insurance, operator license) in advance, before entering the site areas for checking. In case of non-conformance, site access will be prohibited. The *Company* may ask to perform also a visual check.
- **It is expressly stated that regardless of the above checks, it is ultimately the *Contractor's* obligation to ensure all mobile plant and equipment are appropriate and in good order for the task(s) to be performed according to the Law, the manufacturer and the *Project's* specific needs.**
- Every operator should have the appropriate license or should be recorded as trainee in which case he/she should be supervised at all times by a licensed operator
- In case that the *Contractor* uses lifting equipment, these should have a valid certificate by a notified/licensed Third Party in accordance with the *Law*. This should be presented, along with the rest of the documents specified above, to the *Company* before entering the site.

This covers all lifting equipment including trucks with an integrated lift kit. Especially in this case and under certain conditions (small loads, supervision, etc.), the *Company* can grant permission for the driver to operate the lifting equipment for loading and unloading the truck.

- All *Contractor's* mobile plant and equipment and personnel vehicles should follow the routes indicated by the *Company*.
- All mobile equipment shall have an audio-visual reverse alarm. If it is not working, equipment should be parked until it is fixed.

11. Lifting Equipment (e.g. chain hoists etc.) & Rigging Gear (e.g. shackles, slings etc.)

It is the Contractor's responsibilities to ensure all of the following :

- Lifting equipment must have adequate lifting capacity.
- Lifting equipment must have been checked before use.
- Lifting equipment and rigging gear must be accompanied by all certificates required by the *Law*.
- The rigging gear must be according to specifications and in good condition.
- Slings must be checked regularly.
- The users must have appropriate experience.
- The wire ropes must be carefully connected to the load.
- A Lifting Plan must exist before any operation.
- The area around the lifting operations must be fenced and/or signed properly.
- Employees working nearby must be notified about the lifting operations.
- A clear and continuous visual contact of the load is ensured or assistance must be provided by an experienced signaller.
- Swinging of loads during a lift must be avoided.
- Overloading of lifting equipment is prohibited.
- Moving of loads above working personnel is not allowed.
- Special precautions are required when more than one cranes are operating at the same area.
- Provisions for lightning protection must be made.
- All lifting activities should cease in case of high / unsafe speeds.

12. Scaffolds & Ladders

- Scaffolds shall be accompanied by all quality certificates, load bearing ability study, assembly/disassembly manuals, supplier/manufacture safety instructions etc.
- Only experienced personnel are involved in scaffold assembly/disassembly operation. During these operations safety harnesses are used by all employees.
- The use of Personal Protective Equipment such as safety helmet and safety boots is compulsory for workers on scaffolds.
- The scaffolds have guardrails and toe boards to prevent objects and people from falling below.
- The work floors have the appropriate width without any voids.
- Safe access and egress is secured.
- The scaffold is secured against overturning.
- All components of the scaffold are thoroughly checked before use by the *Contractor*.
- Regular inspections of the scaffold are carried out by the *Contractor*.
- **Ladders shall only be used for providing access to higher/lower elevations and not for performing any type of work.**
- The 3 points of contact rule shall always be followed when climbing a ladder (2 hands & 1 foot, 2 feet and 1 hand).
- Only metal ladders shall be used (CE marked and electrically insulated when necessary). No wooden type ladders or any self-made ladders shall be used whatsoever.
- Ladders must be regularly inspected by the *Contractor*.
- Employees must be trained on the correct methods of putting up, fixing and accessing a ladder.

- Ladders are resting on stable and even ground, following the 4-1 slope rule.
- Ladders must not create additional hazards to the workplaces.

13. Work at height

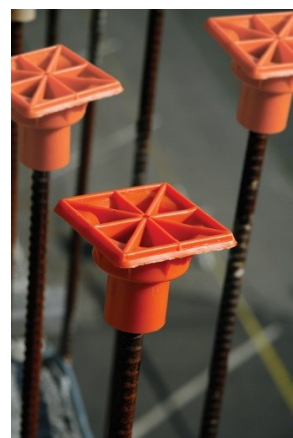
The *Contractor* shall ensure that:

- All activities / works are carefully planned.
- Availability of all materials and equipment needed before commencing.
- Suitable weather conditions apply for works at height to be performed.
- Safe access and egress is provided for workplaces at height.
- During works at height, the physical, psychological and mental condition of the personnel must be closely monitored.
- Employees working at heights are experienced and familiar with the working conditions of such tasks.
- Materials and equipment are secured against falling.
- There is strict and continuous supervision is required during the execution of works at heights.
- Materials and equipment at heights are transferred with appropriate lifting equipment and not manually.
- The span of safety nets and range of the rope of the safety harness does not allow impact with stationary parts of a structure or equipment.
- In case of emergency evacuation, the safe egress equipment must remain on place or be replaced by equally safe equipment.
- Special attention is given to employees who rarely work at heights and for a short period of time.

14. Protection against exposed reinforcing bars (Re-bars)

Whenever there is a risk of personal injury (e.g. causing abrasions, piercing) from exposed **reinforcing bars (re-bars)**, then the *Contractor* shall provide, install and maintain all necessary safety measures in order to eliminate all such risks.

The photographs below show indicative use of protective devices from exposed re-bars. It must also be noted that any protective equipment used (like the re-bar protection caps shown at the photographs below), they must be certified for providing protection against impact and not only against abrasion.



15. Welding & Oxy-Acetylene cutting Operations

The *Contractor* shall ensure:

- Tools and equipment are in perfect working conditions.
- Safety valves are placed in all cylinders; minimum two
- Adequate and regular inspection are carried out; minimum inspect before start shift.
- Checks for leaks with soap water are done.
- Eye protection against radiation is provided, use of protective glasses.
- Hand and body protection against skin burns is provided.
- Adequate workplace ventilation is provided.
- Work is carried out in dry environment, water is drained/ pumped as required.
- That welding operations in the vicinity of flammable or ignitable materials is prohibited.
- Gas cylinders are kept in upright position.
- The cylinders (fuel and oxygen) must have a pressure regulator. Attached to the pressure regulator must be a triple action safety valve.
- The flexible hoses will have a dual action safety valve, **2m** before the torch.
- Appropriate types of fire extinguishers are present on site.
- Empty cylinders are kept apart from the others.
- Cylinders are not stored in a van.
- Flame is not used to cut closed/tapped containers, barrels of highly flammable liquids and petroleum based adhesives, chemicals, lubricants etc.
- Fire extinguishers (dry powder) are readily available.
- Any welded or cut item is secured from relocation, movement, fall etc.
- Gas cylinders, hoses etc. are checked before use.
- Gas cylinders are not place inside a confined space.
- Gas cylinders always transported upright in a trolley.
- All the equipment (cylinders, flexible hoses, flash back arrestors torch etc.) must follow the European standards

16. Electrical Works

The *Contractor* shall ensure that:

- Any modification of electrical equipment and systems is not allowed unless authorized to do so. Only qualified personnel can be authorized.
- Log Out-Tag Out-Try Out (**LOTOTO**) procedures apply to all electrically live systems prior to any type of work performed.
- Only ladders with all supporting points of the ladder insulated are used.
- The appropriate Personal Protective Equipment must be used by the employees (antistatic/electrically insulated safety boots, insulating gloves and helmet).
- Sharp metallic objects are not carried around when working with live lines.
- No standing over wet surfaces while using electrical equipment takes place.
- All electrical panels are protected with relay.
- Worn out or torn parts or cables are immediately removed and not used.
- Damaged electrical equipment and cables are removed from site.
- Household type/standard equipment is not allowed on site.
- Use of spliced / temporarily repaired power cables is not allowed.
- Cables are not left permanently hanging naked at their ends.

17. Cable & Pipe Protection

Wherever an exposed electrical power cable and/or pipe is subject to damage due to site traffic, the *Contractor* is responsible to provide and install all appropriate H&S measures, indicatively the same or similar to the ones shown in the photographs below :

