

CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS (HSER)



**19 April, 2004
Revision 07**



CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS

CONTRACTOR HSER AND ATTACHMENTS

1.0 GENERAL CONTRACTOR SAFETY REQUIREMENTS

1.1 The Contractor shall:

1. Agree to terms of Attachment 1 - Contractor's Safety Declaration. This agreement will cover a one-year period and must be renewed biennially or at the request of IPSL.
2. Comply with the safety requirements set forth in the Contractor Health, Safety and Environmental Requirements and all applicable legal requirements.
3. Submit to IPSL his Accident Prevention and Safety Programme and identify his Safety Representative at a meeting held at IPSL prior to initiating any on-site work. This Representative shall coordinate all aspects relating to occupational safety, health and environmental issues on site. A dedicated Safety Officer is to be appointed for crews with more than thirty (30) persons.
4. Attend a pre-contract commencement meeting / safety orientation with Contractor/ sub-Contractor and IPSL personnel to review all safety and health aspects of the work including emergency procedures. Contractors will be requested to attend scheduled safety orientations at least once every two years or more often as deemed necessary by IPSL.
5. Provide IPSL with evidence of substance abuse policy/control.

IPSL reserves the right, to request certification of testing of any or all contractor employees. Drug testing certificates over three (3) months will not be accepted.

6. Be responsible for and held accountable for the actions of his employees/ agents.

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7. Ensure that each contractor employee is trained and/or experienced in work practices necessary for safe performance of his/her job. Relevant documentation shall be provided to IPSL for skilled and technical contractor employees. Critical jobs shall require that documentation be presented to IPSL at least three (3) days prior to execution of works.
 8. Provide detailed listing and certification of all lifting equipment, devices, and accessories to be used in IPSL jobs.
 9. Conduct documented daily safety briefings (approximately five (5) minutes) prior to the commencement of work.
 10. Coordinate his work activities with IPSL ' s designated representative.
 11. Report all lost time incidents, near misses, injuries, dangerous occurrences to the IPSL representative responsible for the job as soon as possible and not later than the end of the current shift.
- 1.2 IPSL shall notify the Contractor of any noncompliance with the Contractor Health, Safety & Environment requirements and of the corrective actions required. This notice, when delivered to the Contractor or the Contractor ' s representative at the work site, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action.
- 1.3 Failure or refusal to comply with or enforce the requirements of this document and/or any applicable legal requirements shall result in:
- § removal of all Contractor personnel from IPSL site,
 - § removal of the Contractor ' s name from the approved/qualified IPSL Contractor ' s listing, and
 - § denial of future opportunities for the Contractor to work for IPSL.

The Contractor shall not base any claim or request for equitable adjustments for additional time or money for any work stopped or uncompleted under these circumstances.

2.0 SAFETY REQUIREMENTS

The following are considered MINIMUM safety requirements which all Contractors are encouraged to exceed.

2.1 Contractor Safety Rules

General

1. The Contractor shall observe all IPSL 's safety rules and regulations during execution of the work.
2. The entire Plant is classified as a flammable zone and smoking is not allowed except in approved designated areas. Smoking in any motor vehicle on the Plant parked or moving is also prohibited. Matches are strictly prohibited as the Plants are considered Dematched Areas. Any violation of this tenet will result in terms outlined in section 1.5 of this policy.
3. The Contractor (or designated Contractor Site Supervisor) shall be responsible for compliance with the precautions outlined by the Company 's representative. The Contractor prior to any work starting on site must inform the workmen of these precautions.
4. The Contractor shall maintain a daily listing of the men comprising the work crew. This is necessary to facilitate the Head Count in case of evacuation. **Contractor employees must stay out of operating and shop areas, including office buildings except when performing necessary duties in these areas.**
5. The Contractor 's competent agent or representative is required to be constantly on the job and shall give his whole time to the supervision of the same.
6. Good housekeeping is essential to the proper functioning of the job. The Contractor is expected to maintain the premises in and around the job site in such a fashion that will avoid insecure stacking, tripping and falling hazards, potential fire sources, etc. Stairways, floors, walkways, and working areas shall be kept clear of obstructions and debris at all times. There must be unobstructed egress from all work areas. Upon completion of the works or as deemed necessary by IPSL, the Contractor shall clear the site of all surplus materials and rubbish of every kind and leave the whole of the site clean and in a workmanlike condition to the satisfaction of IPSL.

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7. The use of intoxicants or narcotics on or around the job is absolutely prohibited. No employee will be permitted to come to work under the influence of intoxicants or illegal drugs, and, in doing so shall be immediately and permanently removed from the site by the Contractor. The use of legal pharmaceuticals that may cause drowsiness is also prohibited for plant based personnel. Violation of this requirement shall lead to instant dismissal and permanent delisting of the worker and/or penalties listed in Section 1.5 of this policy.
8. Observe all posted road safety signs including speed limits.
9. The Contractor shall ensure that all trenches, ditches, road crossings and open holes are adequately guarded or barricaded at all times. Warnings, signs, and/or lights must be placed far enough to allow adequate time and stopping distance before reaching the excavation.
10. Compressed air must never be used except in extreme circumstances to be specified by a senior IPSL personnel.
11. Horseplay in any form shall not be tolerated on the work site. Violation of this shall lead to dismissal of the worker and possibly permanent delisting.

Supervision

13. IPSL 's Safety Representatives, i.e., all Supervisors, Safety personnel, play an important part in maintaining and monitoring of the Company 's Safety Rules and Regulations. Violations will lead to the stoppage of the job until the condition, action or omission is rectified.

Protective Gear

14. As a minimum requirement Safety Headgear, Safety Footwear, Fire Retardant Clothing and Eye Protection must be worn on the Plant Area at all times.

The Contractor shall ensure the use of other appropriate protective gear as stipulated by the Safe Work Permit. This would include gloves, ear protection, respiratory protection, fall protection.

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15. Full body harnesses and lanyards or other approved fall protection measures are required any time a worker is two (2) meters or more above ground or where fall exposure exists.

Fire Precautions

16. Petroleum products lighter than diesel (especially gasoline) fuel shall not be used for cleaning purposes.
17. Acetylene and oxygen valves, welding machines, compressors, etc., must be shut off when the men leave the job. Acetylene and oxygen leads must be removed from inside vessels when not in use. When not in use compressed gas cylinders must carry their protective caps and must be secured in an upright position at all times.
18. During refueling of engine-driven equipment, such as welding machines, compressors, cars, trucks, etc. the engine must be shut down. Only approved safety cans shall be used for handling fuel.
19. The ignition and exhaust systems on all automotive equipment shall be fitted with a Spark Arrester and maintained in good condition at all times. Vehicles with Straight pipes are strictly forbidden. Permission to enter the Plant with a vehicle must be obtained from the Operations Supervisor.
20. In case of an emergency, such as line break, fire, explosion, etc. all work must be stopped immediately and Contractor's personnel evacuated from the area in accordance with Emergency Evacuation Procedures. Work will not be resumed without authorization of the Plant's Superintendent or his delegate. The Contractor's Supervisor must report to an IPSL Supervisor with a current listing of employees for a head count, etc.
21. All tarpaulins shall be fire retardant.

Rotating Equipment

22. Guards on equipment removed for maintenance or repairs must be replaced before operation of the equipment. Guards must be replaced when work on equipment is completed.

Electrical Equipment

23. All electrical equipment, portable and otherwise, shall be adequately grounded.
24. Only low voltage (less than 25 volts) safety lamps shall be used in tanks, drums, confined work areas, etc.

All small power circuits to be used in moist areas shall be GFCI protected in accordance with NEC Article 210-8.

25. Only intrinsically safe electrical and electronic equipment, radios, etc. which meet the approval of IPSL ' s E&I Department are permitted on the plants. (NEC Article 500-2)

Scaffolding/Ladder

26. All scaffolding shall be built according to IPSL ' s General Guidelines and Rules for Safe Scaffolding. They must be erected under the supervision of competent personnel. (Please see HSER - Attachment 6).
27. Scaffolding planks shall be used exclusively for that purpose and must be in sound physical condition.
28. Under limited conditions, shop-made ladders with anti-skid feet or latched in position shall be permitted. Except where specifically approved in writing by the Safety Department Personnel, **no aluminum or other portable metal ladders are permitted in areas where handling and usage could cause contact with energized electrical contractors.**

Mobile Equipment

29. All equipment brought onto the site is subject to inspection and approval of the Company ' s Engineering and Maintenance, Operations and Risk Management representatives. No machinery or equipment shall be allowed on IPSL ' s site without documentation on statutory inspections along with details of operator training and experience.
30. Cranes and other Mobile Construction and Lifting Equipment shall be equipped with back up alarms, lights and horns. Furthermore, such equipment shall be well constructed, free from defects, suitable for the purpose, properly maintained, inspected, insured and certified prior to use at IPSL. Thereafter

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such equipment must be inspected at least once a week by a competent person, who will sign the inspection reports. Please refer to IPSL 's Cranes, Mobile Construction and Lifting Equipment (HSER - Attachment 9).

31. The transporting, raising, and lowering of acetylene, oxygen and other compressed gas cylinders shall be done through the use of approved carriers or cradles only.
32. Material hoists will not be permitted to carry passengers.
33. All rigging, ropes, cables and hoisting equipment, etc, must be used with a minimum load safety factor of four. They shall be inspected and certified prior to use at IPSL and thereafter inspected regularly by the Contractor. Hooks, blocks, etc. shall have safety latches affixed or be moused when it is possible for them to lift off.
34. Parking and storage of Contractor equipment must not block marked aisle ways, internal roads and emergency equipment.

Painting

35. Additional requirements for painting contracts are identified in the Attachment 8 IPSL 's Painting Supplement.

3.0 EMERGENCY SERVICES

3.1 First Aid

IPSL 's First Aid facilities and personnel are available for emergencies only.

The Contractor shall be responsible for ensuring that adequate medical attention is given to any injured Contractor employee that includes provision for post-hospitalization recuperative care. In an emergency, transportation may be provided by IPSL to the nearest medical facility, however, it is the Contractor 's full responsibility to ensure that immediate follow-up is effected to address any financial and other implications that may be derived. IPSL is not responsible nor is obligated to procure any of these services.

During a Shutdown or Turnaround mode, the Contractor is responsible for ensuring that basic provisions are made to administer non-prescription drugs to his

employees. All drugs must be approved by IPSL 's Risk Management Department prior to bringing on site. This shall apply for works executed off-site but are under contractual arrangements with IPSL.

3.2 Emergencies

The Contractor shall coordinate with the IPSL 's Supervisor so that the latter shall instruct all on-site personnel on the location of emergency equipment nearest the job site and shall assure that they are familiar with their use prior to the execution of any work. Assembly points and emergency evacuation routes shall be identified as well.

The Contractor shall also instruct on-site personnel of the Fire and Ambulance Station and assure that they know how to summon an Ambulance, First Aid or the Fire Station. See HSER - Attachment - 2

Works done off-site shall require specific emergency response guidelines. The Contractor shall liaise with IPSL 's Risk Management Department to outline the most effective emergency response unique to the work area.

The use of the ambulance for transporting injured Contractor personnel is restricted to the nearest public hospital only.

3.3 Emergency Evacuation

IPSL has an Evacuation Plan for its employees, Contractors and visitors.

Emergency signals are:

§ A loud three (3) minute undulating up and down signal indicates evacuation procedures are in effect. On hearing this warning, stop work immediately and evacuate to the nearest ASSEMBLY POINT. Evacuees are required to report to their Supervisor so as to complete the Head Count.

All Plant sirens on the Estate including IPSL are tested simultaneously every Tuesday at 12:00 noon.

§ If notified by IPSL personnel of an emergency requiring evacuation, the

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Contractor shall be responsible for assuring that all of his personnel arrive at one of the nearest assembly areas. Should the emergency be one of major proportions, all Contractor personnel will be asked to leave the Plant.

All of the Assembly Points are identified with the appropriate signs. (Please see HSER - Attachment 3 for listing of Methanol Complex Assembly Points.)

4.0 ENVIRONMENTAL PROTECTION

- 4.1 Prior approval is required from IPSL before bringing any toxic or hazardous material on site.
- 4.2 A list of chemicals and their Material Safety Data Sheets must be submitted to the company's representative before being brought in or used on the compound.
- 4.3 Hazardous substances must be properly labeled by the Contractor to include as a minimum:
 - Identity of chemicals
 - Hazard warnings including target organs
 - Name and address of manufacturer and distributor
 - PPE required whilst handling the substance
 - First Aid required if personnel come into contact with the chemical
- 4.4 The Contractor shall ensure that the MSDS be available at all times while the chemical is on site.
- 4.5 The Contractor shall report all spills immediately to the Control Room.
- 4.6 Clean up of spills is directed by the Risk Management Department. All costs derived from clean up activities due to Contractor negligence are at the Contractor's expense.
- 4.7 The Contractor shall minimize the generation of waste materials and reduce or eliminate hazardous waste during the execution of works. This shall be done from the planning stage.

4.8 All waste disposal procedures must be approved by IPSL.

5.0 **WORK PERMITS**

5.1 All work must be done in accordance with IPSL 's Work Permit System

5.2 A signed Permit to Work must be obtained from the Shift Supervisor or the Company ' s representative of the area before commencing any work.

5.3 The Permit to Work System covers:

- Safe Work
- Hot Work
- Confined Space Entry
- Excavation
- Vehicle Entry
- Permit Extensions

5.4 Procedures have been developed for each of the above permits.

5.5 **Only the work specified in the permit is to be done.**

5.6 For work within the plant site, the contractor must report to the Shift Supervisor prior to starting the work.

5.7 The Shift Supervisor will ensure that the work to be performed follows safe work practices. If the work is deemed safe, the Shift Supervisor will complete a Safe Work Permit for which he will approve clearance or a Hot Work Permit or Confined Space Entry Permit, which will require the approval of higher levels in the organization.

5.8 WORK PERMITS will include any applicable instruction or safety precaution to be observed, as well as the period of time the permit is to be in effect.

5.9 The Shift Supervisor will ensure that the job site conditions comply with the Work Permit before allowing the work to start.

5.10 Where required, the necessary explosimeter tests will be taken by the issuer of the Permit, i.e., Operations Department.

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- 5.11 The Shift Supervisor is required to sign off the Permit on acceptance of the work.

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As a visitor to IPSL, welcome to the Safety Team, you are now an integral part of our safety performance programme. We trust that you will join us in a personal commitment to making safety a way of life at IPSL.

attach:

TABLE OF ATTACHMENTS

- ATTACHMENT 1 - CONTRACTOR 'S SAFETY DECLARATION
- ATTACHMENT 2 - METHANOL COMPLEX EMERGENCY TELEPHONE LISTING
- ATTACHMENT 3 - METHANOL COMPLEX ASSEMBLY POINTS
- ATTACHMENT 4 - FALL PROTECTION SUPPLEMENT
- ATTACHMENT 5 - EXCAVATIONS AND TRENCHING SUPPLEMENT
- ATTACHMENT 6 - GENERAL GUIDELINES AND RULES FOR SAFE SCAFFOLDING
- ATTACHMENT 7 - ELECTRICAL LOCKOUT SUPPLEMENT
- ATTACHMENT 8 - PAINTING SUPPLEMENT
- ATTACHMENT 9 - MOBILE AND MATERIAL HANDLING EQUIPMENT REQUIREMENT



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CONTRACTOR 'S SAFETY DECLARATION

EFFECTIVE from _____ to (1 year hence)
_____ as the duly authorized and
designated representative of _____ hereinafter
called the Contractor, I hereby certify that:

1. The Contractor has received, read, understood and agreed to be subject to IPSL 's Contractor Health, Safety and Environmental Requirements including all noted Attachments and Supplements and shall take all such provisions into consideration when developing contract quotes;
2. The Contractor shall be responsible and accountable for the action of his/her employees;
3. The Contractor accepts that the contract can be terminated for failure to comply with IPSL 's Contractor Health, Safety and Environmental Requirements;
4. The Contractor accepts that the Contractor Safety Programme and Performance shall be evaluated and considered in deciding the award of future contracts.

Date

**Signature of Contractor 's Representative for
him/herself on behalf of the Contractor**



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METHANOL COMPLEX EMERGENCY TELEPHONE LISTING

INTERNAL	M I	M II	M III	M IV
Control Room	1212	2212	3212	4212
Fire/Ambulance	CONTACT IPSL SUPERVISOR OR CONTROL ROOM			
First Aid Station	CONTACT IPSL SUPERVISOR OR CONTROL ROOM			
Security	1510	2510	3510	4510
Risk Management Technician	1990	2229	4995	4995
Risk Mgmt. Professional	3242	3242	3243	3243



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METHANOL COMPLEX ASSEMBLY POINTS

M I	1 - Fire Station
	2 - External Car Park

M II	1 - South of Technical Building
	2 - External Car Park

M III	1 - Internal Car Park Area
	2 - Area west of M3 Control Building

M IV	1 - Employee Internal Car Park
	2 - Area west of M3 Control Building



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FALL PREVENTION AND PROTECTION

All work activities at 2 meters (six feet) or more high require:

- Walking/working surfaces approved to support workers safely
- Employees trained to recognize fall hazards and use protective systems
- Fall protection systems for workers
- Procedures to prevent objects from falling.

For personal fall protection, where there is a danger of falling in excess of 2 meters, employees shall wear safety belts and harnesses, when working in such elevated positions.

- All personal fall protection must be inspected prior to and after use.
- The equipment must be used in accordance with manufacturers' instructions.
- The belt or harness must be adjusted to a good fit.
- The belt must be protected from damage on sharp edges, or tools, or by contamination with acids or other chemicals
- The lifeline must be properly secured and kept as short as possible so that a fall is limited to 0.6m (2ft).
- Only 100% "Tie Off" to an immovable object is acceptable.

TYPES OF FALL PROTECTION

Guard Rails

- .. At least 42 inches high
- .. Mid-rails and screens where there's no wall at least 21 inches high
- .. Able to withstand force of at least 200 pounds
- .. Construction materials that can't puncture skin or snag clothes
- .. No steel or plastic bands for top or middle rails.

Personal Fall Protection

Class I, Body Belts (sometimes called workbelts) – used to restrain persons working in hazardous positions and to reduce the probability of falls.

Class II, Chest harnesses – for use in situations of limited fall hazards; that is, no chance of vertical free falls, and for removal (retrieval) of a person from a tank, bin,

etc.

Class III, Body Harnesses – used to arrest the most severe free falls.

Class IV, Suspension Belts – these are any independent work supports used to suspend or support the worker.

RESPONSIBILITY OF THE USER

Responsibility for the inspection, cleaning, maintenance and storage of harnesses and lanyards rests with the individual user and the Department to which the equipment is assigned. Any defective units should be tagged and the Risk Management Department should be notified.

GENERAL

1. Safety harnesses are to be worn with tied off lanyards when working at a height in excess of 2 meters above ground or continuous floor level and when other safe guards such as complete guardrails, nets or scaffolding are not practical.
2. Parachute-type Class III body harnesses are required for protection against the most severe falls. This type of harness includes:
 - Y-type dual 2-meter lanyard with shock absorber device
 - Locking snap hooks on the lanyard
 - Sliding back D-ring
 - Two side D-rings for positioning only
3. Wire rope alone should not be used for lifelines; a shock absorbing device should be attached. The rigidity of a wire rope greatly increases the stopping shock on the individual wearing the fall prevention system. Wire ropes should never be used around electricity.
4. When judging the length of the lifeline needed, keep in mind obstacles in the anticipated free fall area. Serious injury or death can occur if the total free fall (plus the length of stretch in the shock-absorbing systems) is excessive.
5. The use of a safety harness and 100 % tied-off lanyard are required on roofs and surfaces that slope more than 15 degrees, on slippery surfaces at lesser angles, and in strong winds. A safety harness should always be used when working on elevated structures such as towers, stacks, platforms and tanks.

ADDITIONAL FALL PROTECTION MEASURES – STAIRWAYS

1. Never run on stairs. Take enough time to be safe, and use the handrails provided.
2. Keep stairs free from grease and other wet or slippery substances or conditions capable of causing a fall.
3. Inspect stairways frequently to ensure that they are free of splinters or loosened nails and that they have not become loose from their moorings.
4. Do not store tools, supplies or other materials on stairways.
5. Desist from congregating in the aisles and passageways.
6. In using stairs employees should:

- (i) Always watch the steps just ahead; never carry anything in such a way that vision is obstructed;
- (ii) Take only one step at a time;
- (iii) Look carefully in the direction of movement. If attention is distracted, stop until vision can be refocused to the passage; and
- (iv) Report all loose treads, risers and handrails for immediate repairs.

ADDITIONAL FALL PROTECTION MEASURES – FLOOR OR ROAD OPENINGS

- 1. Floor openings shall be guarded by barriers and or railings or covered to withstand more than twice the load of a pedestrian or vehicular traffic.
- 2. Where the danger of falling exists for personnel, toe boards should also be provided along with guardrails.
- 3. All floor openings on decks, floors or earth excavations must be covered or controlled by the following means;
 - (i) mount a guard or standby at the opening;
 - (ii) rope or tape off the area; and
 - (iii) Cover the opening with boards or steel.



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EXCAVATIONS AND TRENCHING

All excavations and trenching operations shall conform with IPSL Permit to Work System, established industry codes and practices and all applicable national legislation. In all cases an approved Excavation Work Permit is required prior to any excavation.

GENERAL

1. Prior to any excavation, the existence of underground pipes, electrical conductors, etc. must be determined. All services must be located and marked before excavation commences.
2. All trenches 1.5 meters (5 feet) or deeper shall be shored or sloped back to a safe angle. Any excavation in unstable soil shall be protected by shoring or additional sloping.
3. Materials shall not be placed within .6 meters (2 feet) of the excavation. Precautions must be adopted to prevent materials from falling into the excavation.
4. Each excavation shall be inspected daily by a competent person. If evidence of cave-ins or slides is apparent, all work in the excavation must cease until necessary precautions have been taken to protect employees.
5. Where vehicles or equipment operate near excavations or trenches, the sides of the excavation must be shored or braced as necessary to withstand the force exerted by the superimposed load. Also stop logs or other substantial barricades must be installed at the edges of such excavations.
6. Materials used for sheeting, shoring, or bracing shall be in good condition. Timbers must be sound, free of loose knots, and of adequate size.
7. A substantial casing that extends the full depth of the shaft shall protect employees working in bell- bottom pier. Working in such conditions shall be subject to the Confined Space Entry Procedure. Communications between employee and tenor must be clear above surrounding noise levels.
8. Safe access shall be provided and maintained to all excavations by means of ladders, stairs or ramps.

9. Trenches 6meters or more must have ladders spaced so that employees' lateral travel does not exceed 8.5 meters. Such ladders shall extend at least 4.5 meters above grade level.
10. Walkways, bridges or ramps with standard guardrails shall be provided where employees or items of equipment are required to cross over excavations or trenches
11. In locations with the potential for oxygen deficiency or concentrations of hazardous gases, vapors or dusts, a designated person must test the atmosphere before entry. A Confined Space Entry Permit is required prior to entry.
12. Excavations and trenches must be adequately barricaded and identified
13. Warning lights must be placed by excavations and trenches to provide sufficient warning of potential danger.
14. When working with high impact tools, such as jackhammers, use appropriate personal protective equipment.
15. Never turn your back on excavating machinery and always stay clear of all equipment used in the excavation process.



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GENERAL GUIDELINES AND RULES FOR SAFE SCAFFOLDING

1.0 INTRODUCTION

1. A scaffold is a temporary elevated work platform used to support workers, materials and equipment.
2. Hazards associated with Scaffolds
 - i. Hazardous Characteristics of scaffolds.
 - a. Scaffolds are usually temporary structures, meeting specific needs.
 - b. Scaffolds are often used at great heights.
 - ii. Because of these characteristic, scaffolds are dangerous if:
 - a. Improperly constructed
 - b. Misused
 - c. Poorly maintained
 - iii. The most common accident involving scaffolds is a fall to a lower level.
3. All scaffolding will be built according to the manufacturers specifications and/or OSHA 1926.451 standard. Prior approval is needed from IPSL before adopting any other code or standard for the erection of scaffolding. Scaffolding must be erected under the supervision of a competent person.

2.0 ERECTION / DISMANTLING OF SCAFFOLDING

1. The erection and dismantling of scaffolds must be carried out under the supervision of personnel knowledgeable and experienced in such operations.
2. Workers erecting or dismantling a scaffold more than 2.5 m (8') high must be tied off with a lanyard and safety belt or harness.
3. Scaffolds must be erected with all braces, pins, screwjacks, baseplates, and other fittings installed, as required by the manufacturer.
4. Scaffolds must be adequately braced horizontally and vertically.
 - a. Most tubular frame scaffolds should have braces on both sides on each section in the vertical plane.
 - b. Horizontal bracing is provided to some extent by the scaffold platform and the

baseplates on scaffold legs. However, where scaffolds are several sections high or where they are on casters, most manufacturers recommend that horizontal bracing be used.

5. Scaffolds must be equipped with guardrails consisting of a top rail, mid-rail and toeboard. The top rail must be a minimum of 120 cm (42") high with mid rail 60 cm (21") high.
6. Scaffold platforms must be at least 46 cm (18") wide and if they are over 2.5 m (8') high they must be planked across their full width.
7. Scaffolds must be tied in to a building or structure, at vertical intervals not exceeding three times the least lateral dimension, including the dimension of any outrigger stabilizing devices.
8. Where scaffolds cannot be tied in to a building or structure, guy lines adequately secured should be used to provide stability.
9. Scaffold frames must be properly pinned together where scaffolds are two frames or more in height or where they are used as rolling scaffold towers.
10. Scaffold planks must be securely fastened to prevent them from sliding.
11. Scaffold planks must be of good quality, free of defects such as loose knots, splits or rot, rough sawn, measuring 51 mm x 25.4 cm (2" x 10") in cross section, and No. 1 spruce or better when new.
12. Scaffolds must be erected, used and maintained in a reasonably plumb condition.
13. Scaffold planks must be installed so that they overhang by a least 15 cm (6") but no more than 30 cm (12").
14. Scaffolds must be equipped with a proper ladder for access. Vertical ladders but be equipped with 15 cm (6") stand-off brackets and a ladder climbing fall protection device or safety cage when they are more than 5 m (16') high.
15. Scaffolds over 15 m (50') in height must be designed by a professional engineer and constructed in accordance with the design.
16. Oil, grease and other slippery material must be removed from the platform and sand placed on surface.
17. Wheels or caster on rolling scaffolds must be equipped with braking devices and securely pinned to the scaffold frame.
18. Suspended scaffolding such as swing gates, boatswain chairs, floats, etc. require special approval from IPSL.
19. Never alter scaffold members by welding, burning, cutting, drilling or bending.

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20. A tag out system is in use for marking scaffolding. Green tags signed off by the designated competent person or foreman of the scaffold crew will be hung on all approved scaffold prior to use. Red tags indicate the scaffold is unsafe for use.

3.0 GENERAL SAFETY PROVISIONS

1. Before starting work on a scaffold, inspect visually to determine that:
 - a. Handrails, midrails, toeboards, and decking are in place.
 - b. All wheels are locked on movable scaffolds.
 - c. Locking pins are in place at each joint.
 - d. Never use equipment that is damaged.
2. Personnel must be properly tied off and wearing a safety belt and lanyard while on any scaffold platform.
3. Do not change or remove scaffold members unless authorized.
4. No one is allowed to ride on a rolling scaffold when it is being moved. Remove or secure all tools and materials on the deck before moving.
5. Do not climb on, or work from, any scaffold handrail, or midrail, or brace member. Use the ladder to get on the scaffold.
6. The erection of a scaffold exceeding 50' above the base plates must be approved by the Planning Engineer/Safety.
7. All scaffolds must be tied off or stabilized with outriggers when the height is more than three times the smaller base dimension.
8. Scaffolds must also be tied off horizontally every 30'.
9. Adjusting or leveling screws shall not be used on scaffolds equipped with wheels. Adjusting screws shall not be extended more than 12" or thread.
10. Check with your supervisor for safe working loads on all scaffolds.
11. Rolling scaffolds shall be used only on level, smooth surfaces, or the wheels must be contained in wooden channel iron runners. Watch for overhead clearance when moving.
12. Use a tag line when hoisting materials, tools, etc. onto a scaffold.
13. Do not stack material higher than 30 cm (24") on the scaffold deck. All surplus material must be removed.
14. Do not rig from scaffold handrails, midrails or braces.

CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
GENERAL GUIDELINES AND RULES FOR SAFE SCAFFOLDING

15. Patented Metal Scaffolding
 - a. Generally, parts and sections of scaffolding made by one manufacturer are not to be used with those from another manufacturer.

16. Suspended Scaffolding
 - a. Swing stages, toothpicks, boatswain chairs, floats, and needle beams require special approval by Senior Engineer/Safety.
 - b. Attach and secure safety belt before stepping on scaffolds and do not remove until clear of the scaffold. Tie off to independent lifeline or building structure. Use one life line per man.

17. All working platforms above 6' (2 m) must consist of at least 2" (5 cm) planks that must be at least 12" (30 cm) wide and in good condition with banded ends and secured together.

18. Climbing on braces is prohibited. A ladder or stairway for entry and exit must be provided and used. Ladders should conform to safety requirements for ladders. Ladders must be certified for use and inspected every six months.

19. Inspect erected scaffolds regularly to ensure that they are maintained in a safe condition.

20. Consult the scaffolding supplier when in doubt. **Never take chances!**



CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS

ELECTRICAL LOCKOUT SUPPLEMENT

Where there is a risk of injury from electrical shock, burns, or from contact with moving machinery parts, the electrical source must be disconnected and locked out, except, when the task at hand requires that equipment be energized and the work is performed under special precautions by authorized personnel. Lockout shall be accomplished as follows (IPSL personnel will provide lockout protection on all existing equipment or IPSL power sources).

- Step 1 Switch the control button or move the control handle of the equipment to the OFF position.
- Step 2 Open the main power disconnect switch for the piece of equipment involved by standing to the right of the switch, pulling the handle with the left hand, and at the same time turning head and eyes to right, away from the switch.
- Step 3 Place locks(s) and applicable tags(s) on mechanism to secure the switch in a disengaged (OFF) position.
- Step 4
 - (a) Verify that the equipment electrical power source is disengaged by activating the control button or handle to a start position. **Return the control to a stop position.**
 - (b) Voltage shall be checked by a voltmeter prior to starting work if the job requires personnel to be in direct contact with electrical conductors.
- Step 5 Contact supervision in charge of equipment and/or maintenance supervision if there is any doubt about electrical service being fully disconnected.

NOTE: Lockout for Switch Gears controlling voltages in excess of 500 volts must be done by an IPSL Maintenance Supervisor (electrical) or designated IPSL Maintenance employee.

**CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
ELECTRICAL LOCKOUT SUPPLEMENT**

PRODUCTION WORK

A. Switch Gears Accessible Outside a Control Room (500 volts or less)

1. Each operation routinely requiring electrical lockout for employee safety shall have a lock and key assigned to the job. The lead employee, operator or designated individual shall affix a lock and properly signed and dated Danger Tag in each situation requiring lockout protection.

Locks and tags installed to provide protection when working on or around operable equipment must be removed when work is completed or at the end of the shift. In the event equipment is not in operating condition at the end of assigned work task or shift, the employee affixing the lock must contact his relief on the job or the production Supervisor as applicable. The relief person, if utilized, would be provided an explanation of the status of work being performed and would then accept the job key and sign the Danger Tag thereby assuming lockout responsibility.

The Supervisor may secure the job key and pass it to the Supervisor on the next shift or have the employee remove the job lock and tag and replace them with a production Supervisor's lock and Danger Tag. In either case, the Supervisor assumes responsibility for lockout protection.

NOTE: A lock and tag installed by a production employee cannot be removed by another person as long as the installing employee is still in the department. (A lock and tag installed by one hourly employee shall not be removed by another hourly employee.) A lock and tag inadvertently left on a Switch Gear beyond an employee's scheduled time in the Plant may be removed by the responsible production Supervisor after sufficient checks are made to insure that equipment is in operating condition and that all personnel are in the clear. A substitute foreman responsible for the equipment involved would have the same jurisdiction in lockout control as a regular production Supervisor.

2. Operations requiring production related cleaning and other work performed on other than a routine basis shall be locked out and a danger tag affixed by a production Supervisor. A designated employee performing work on or around equipment will notify the applicable production Supervisor when work activity is complete and lockout is no longer required.

B. Switch Gear in not Accessible and/or Exceeds 500 Volts

Locking and tagging shall be done by an IPSL Maintenance Supervisor (electrical) or designated Maintenance employee. The lead employee, operator or designated employee shall additionally affix a Danger Tag near the operating controls. When production work is complete, the responsible production employee will remove the Danger Tag and give it to his production Supervisor. The Production Supervisor will then arrange for the Maintenance Supervisor (electrical) or designated Maintenance employee, as applicable, to have locking devices removed. The Maintenance Supervisor (electrical) or designated Maintenance person will return the Lockout Danger Tag to the production Supervisor to indicate that the equipment has been returned to an operable mode.

MAINTENANCE WORK

**CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
ELECTRICAL LOCKOUT SUPPLEMENT**

A. Switch Gear Accessible Outside of Control Room and Power Supply 500 Volts or less

Lockout and proper signing of the Lockout Danger Tag shall be accomplished by the first tradesman working on the job. Each separate Maintenance employee arriving to work on the job should attach his lock.

When work is terminated prior to completion, the shift ends and equipment is still not in operable condition, the applicable trades supervisor must have installed a Maintenance Supervisor's lock on equipment before the last Maintenance individual removes their individual lock. The Danger Tag shall remain on the switch with the Supervisor's lock.

When a shift ends, or as each Maintenance employee or trades group is removed from the job prior to completion, or as work is completed, each individual shall remove their individual lock. The last person to finish on the job shall remove his lock and the Danger Tag. (The last Maintenance employee to complete work should attempt to advise the responsible production Supervisor that work is complete.) The Danger Tag will then be given to the Maintenance Supervisor to indicate that the job is complete and the machine is operable. When the Maintenance Supervisor receives the Danger Tag, he will notify the Shift Supervisor of job completely or verifies that Operations has already been notified.

B. Switch Gear Located in Control Rooms and/or Power Supply Exceeds 500 Volts

Locking and tagging shall be accomplished by a Maintenance Supervisor (electrical) or designated Maintenance employee. The Maintenance Supervisor or designated Maintenance employee shall affix a lock and a signed and dated Danger Tag to each position requiring lockout. Each additional individual on the job must attach his lock to each position requiring lockout.

When a shift ends, or as each Maintenance individual or trades group is removed from the job prior to completion, or as work is completed, each individual shall remove their lock.

The last Maintenance employee finishing on a job must sign and date the applicable portion of the danger tag and give the tag to his Supervisor. The Maintenance Supervisor (electrical) will then supervise or authorize removal of the last lock from the switch gear, and shall notify the applicable production Supervisor of job completion.

NOTE: In the event that the Switch Gear was originally locked out by a Maintenance employee and work is terminated prior to completion or is not completed by the end of the shift, a Maintenance Supervisor (electrical) must place a Supervisor's lock and tag on the Switch Gear and assume lockout responsibility. The Maintenance employee's lock could then be removed.

In either A or B above, a lock installed by a Maintenance Services employee shall not be removed by another person as long as the installing employee is still on the Plant.

CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
ELECTRICAL LOCKOUT SUPPLEMENT

A lock and tag inadvertently left on the Switch Gear beyond an employee ' s schedule time in the Plant may be removed by the responsible Maintenance Supervisor (electrical) after sufficient checks are made to assure that equipment is in operating condition and all personnel are in the clear.

SPECIAL LOCKOUT

Locking out may be necessary in situations other than normal maintenance and production work. In this event, a Maintenance Supervisor (electrical) shall be contacted to arrange for lockout protection.



CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS

PAINTING SUPPLEMENT

1. All work to be done in a safe manner as outlined per Occupational Safety Health Bill and Regulations 1997.
2. No coatings containing lead, zinc or other metals to be used unless specified or with IPSL's permission.
3. At least one week prior to beginning work, the Contractor is to supply the IPSL Hazard Communication Co-ordinator with Material Safety Data Sheets for all hazardous materials brought onto the premises.
4. All debris to be removed from premises by Contractor; no dumping of liquids onto the ground or into the sewer system. All hazardous wastes are to be disposed of in a manner which meets applicable legal requirements.
5. Any change from coatings specified or questions as to what coatings are to be used must be directed to the Engineer-In-Charge.
6. Any ambiguity or omission in these specifications is to be made clear by the IPSL Engineer-In-Charge.
7. Access to the Plant during normal day shift only unless other arrangements have been made.
8. No over-spray or application of coatings by any means other than specified. Spills, etc. to be promptly cleaned up.
9. All necessary equipment to be furnished by Contractor (compressors, scaffolding, ladders, spray pots, hoses, sandblasters, etc.).
10. All work to be performed in a good work-man-like manner; work site to be left in a neat and clean condition.
11. Contractor to comply with IPSL's Security Inspection Policy.



CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS

MOBILE AND MATERIAL HANDLING EQUIPMENT REQUIREMENTS

1.0 GENERAL SAFETY REQUIREMENT FOR DRIVING ON PLANT SITE

- 1.1 Drivers of motor vehicles on the site must wear seat belts as required by law.
- 1.2 All drivers must comply with traffic signs, parking rules and speed limits, on the compound.
- 1.3 All drivers of Company and Contractor vehicles must be authorized and must have valid licenses.
- 1.4 Pedestrians have right of way on IPSL 's compounds.
- 1.5 Employees shall only be allowed to use company vehicles on successful completion of an approved Defensive Driving Course.
- 1.6 Drivers should observe all Traffic and Motor Vehicle Regulations.
- 1.7 An annual medical examination is required for all drivers of company vehicles.
- 1.8 No employee shall drive a company vehicle under the influence of alcohol, illicit drugs or depressants such as Valium, or other such drugs.
- 1.9 Company and Contractor vehicles must be subject to quarterly inspection. All vehicles shall be maintained in a good repair.
- 1.10 Upon return of a vehicle at the end of the day, shift or trip, drivers should report on any unusual condition of the vehicle to the respective Supervisor.
- 1.11 A Vehicle Entry Permit (Attachment 9) is required before taking mobile equipment into the Plant.
- 1.12 Riding on the fender, running board, tray, cab of vehicles between the cab and body etc. is prohibited.
- 1.13 Chock the wheels to prevent the vehicle from falling off the jack during tyre changes.
- 1.14 Switch off the engine before and during refueling.
- 1.15 No riders except the operator are allowed on mobile equipment such as cranes,

forklift trucks, front-end loaders.

1.16 Ensure that all loads are properly secured.

2.0 **VEHICLE ACCIDENT CHECK LIST**

2.1 Drive defensively and you may never need to use this Vehicle Accident Check List.

2.1 - Stop immediately

- Keep calm
- Secure the accident scene to ensure safety of the area
- Offer assistance. Render first aid and assist in getting the injured to the hospital if necessary
- Get names and addresses of witnesses
- Get names and license numbers
- Get names of injured
- Get the details
- Draw a sketch
- Report the accident to the Police
- Make no admissions or take any blame for the accident.
- Report the accident to the respective supervisor
- Do not remove the vehicle from the scene until told to do so by authorized IPSL personnel or by the Police. In some cases it may be necessary to mark the position of the wheels before moving the vehicle.

3.0 **CRANES**

3.1 Only trained, licensed and authorized personnel shall be allowed to operate cranes.

3.2 Crane operators shall satisfy the following criteria with a medical statement on an annual basis:

- No known physical deficiencies
- Good eye sight
- Good hearing

In addition they must be of stable character and physically fit.

3.3 No operator shall operate a crane unless its safety has been assured. The crane should be routinely inspected, tested and certified.

3.4 The operator should remain alert to any possible malfunctioning of the crane during operations. In the event of malfunction the crane should be shut down until the problem is found and corrected. In this event, all precautions must be taken to secure boom with or without load.

3.5 Standard signals should be thoroughly understood by the operator and signalman.

3.6 Only one signalman should be assigned to each crane and the operator should only obey that person's instruction.

3.7 The crane operator shall not begin any movement until the signalman is within sight.

3.8 People working with or near a crane shall keep out from under the load, be alert at

**CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
MOBILE AND MATERIAL HANDLING EQUIPMENT REQUIREMENTS**

all times, and watch warning signals closely. Same shall move to a safe location immediately when a warning signal is given.

- 3.9 No crane shall be loaded beyond its rated capacity!**
- 3.10 Rating charts with clearly legible letters and figures should be fixed to the crane cab in a location clearly visible to the operator while seated at the control station.
- 3.11 Hoist chain or hoist rope must be free of kinks and twists and must not be wrapped around the load.
- 3.12 Loads must be attached to the load block hook by a sling or other approved devices. The sling must clear all obstacles.
- 3.13 The load must be well secured and properly balanced in the sling or lifting device before it is lifted more than a few inches.
- 3.14 Before starting to hoist, ensure that multiple port-lines are not twisted around each other.
- 3.15 Hooks shall be brought over the load slowly to prevent swinging.
- 3.16 During hoisting ensure no sudden acceleration or deceleration of the moving load. Also ensure that the load does not collide with any obstruction.
- 3.17 Cranes must not be used for side pulls, unless specifically authorized by a responsible person, who can determine the stability of the crane is not at risk and that various parts of the crane will not be overstressed.
- 3.18 A crane should not travel while any worker is suspended from the hook and the operator must never carry loads over personnel; the operator should sound the horn when necessary.
- 3.19 On fixed overhead cranes e.g. Compressor House, a warning signal must be given when starting the bridge and when the load or hook comes close to, or over, any person's head. Overhead cranes must be tested and certified in accordance with the manufacturer's recommendation.
- 3.20 Brakes must be tested each time a load approaching the maximum rated load is handled.
- 3.21 Always keep no less than three full turns of cable around a cable drum.
- 3.22 When two or more cranes are used to lift a load, a qualified, responsible person or rigger must be in charge of the lift operation.
- 3.23 The operator must not leave the controls while the load is suspended.
- 3.24 Tools, oil cans, waste, extra fuses and other necessary items must be stored in a tool box and not left carelessly in or around the cab.

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MOBILE AND MATERIAL HANDLING EQUIPMENT REQUIREMENTS**

- 3.25 An appropriate fire extinguisher must be kept in the cab.
- 3.26 Access to the cab must be via fixed ladder, stands or platform, but no distance must exceed 30 cm (12 inches).
- 3.27 Compressed gas cylinders should only be lifted in a cradle or similar device.
- 3.28 The hoist limit switch that controls the upper limit of travel of the load block must never be used as an operating control.
- 3.29 Frequent inspections at daily to monthly intervals or specifically recommended by the manufacturer must be conducted in the following areas:
- All control mechanisms for excessive wear or contamination by lubricants or other foreign matter.
 - All safety devices for malfunction.
 - Crane hooks for deformation, cracks, or more than 15% in excess of normal throat opening or more than 10-degree twist from the plans of the unbent hook.
 - Rope reeving not in compliance with manufacturer 's recommendations.
 - Electrical apparatus for malfunctioning and excessive deterioration, dirt, and moisture accumulation.
- 3.30 Periodic inspections from one to twelve month intervals or in accordance with manufacturer 's recommendations, to cover the complete crane. These inspections include the items listed under frequent inspections and items such as:
- Deformed, cracked or corroded members of the crane structure and hood.
 - Loose bolts or rivets.
 - Cracked or worn sheaves and drums.
 - Worn, cracked or distorted parts, such as pins, bearings, shafts, gears, rollers and locking devices.
 - Excessive wear on brakes and clutch system parts linings, pawls and ratchets.
 - Load, boom, angle and other indicators over their full range to detect significant inaccuracies.
 - Gasoline, diesel, electric or other power plants for improper performance or non-compliance with safety requirements, excess wear of chain-drive sprockets, and excessive chain stretch.
 - Travel steering, braking and locking devices for malfunction and excessively worn or damaged tires.

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- Correct any hazards.

- 3.31 No one should ride loads, buckets or hooks suspended from the crane boom, nor should the boom be used as a ladder or walkway.
- 3.32 Use guide ropes to steady the load if necessary.
- 3.33 Slings are to be placed around the load.
- 3.34 Slings must have a Safe Working Load equal to or above the weight of the load. All slings should be maintained in good repair, with the load capacity stamped on and should be within the six month interval check period.
- 3.35 Ensure that the crane is on firm ground before lifting. Use mats at all times for lifting.
- 3.36 Crane booms should be lowered to the ground when there is danger of high wind or hurricanes.
- 3.37 Exercise caution when working near high voltage electrical wires or equipment. Maintain the absolute approach which varies according to the following rule:

Line Voltage	Absolute Limit of Approach
Up to 125,000 Volts	10 feet
125,001 to 250,000 Volts	15 feet
Over 250,001 Volts	25 feet

The crane must have a signal man whose sole duty it to warn the operator whenever the boom, the load or any of the load lines is approaching the Limit of Approach.

- 3.38 If the crane should contact a high voltage line and cannot be disengaged by crane movement, either remain in the cab until the power is switched off or jump clear from the crane to the ground. At no time should simultaneous contacts be made with the ground and the crane.
- 3.39 Outriggers may be used to give additional stability to the crane. However, where there is doubt about the stability of the soil on which the crane is operating, the outriggers should be placed on heavy timber mats or steel plates.

**CONTRACTOR HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
MOBILE AND MATERIAL HANDLING EQUIPMENT REQUIREMENTS****4.0 RIGGING**

- 4.1 All hoisting equipment, slings and spreader bars are to be certified, and records are to be maintained on a scheduled basis. Always check to know the actual weight, and utilize the appropriate slings for the lift.
- 4.2 Know the proper hand signals and designate one signalman to eliminate confusion.
 - 1. Know proper use of chain falls, come-a-longs, chokers, shackles and clamps.
 - 2. Never raise a load over people
 - 3. TAG LINES are required to control load.
 - a. Tag lines are to control loads and keep people away from lifts made by mechanical equipment.
 - b. Do not wrap tag line around your hands or body.

5.0 HOOKS, SHACKLES, BEAM CLAMPS AND CHOKERS

- 5.1 Only ONE sling eye is permitted in a hook. Use a shackle to hold two (2) or more sling eyes.
- 5.2 All hooks must have a safety latch or be moused (steel erection and shake out hooks are exceptions).
- 5.3 Always place a load in the center of a hook - never on the point.
- 5.4 Get approval from your supervisor before rigging from any structural member to assure that it will support the load being raised.
- 5.5 Never use plate grips, tongs, pipe clamps, etc., as substitutes for beam clamps.
- 5.6 Hooks, shackles, and beam clamps should be inspected visually before use. Make sure that the capacity is marked on the equipment.
- 5.7 Certified slings are used and inspected monthly.

6.0 CHAIN FALLS AND HOISTS

- 6.1 A chain fall and hoist must be used within its rated capacity. Chain hoists are designed so that one person can operate the hand chain to lift the maximum load for the chain hoist.
- 6.2 Do not leave an unsecured or unattended load hanging on a hoist or a chain fall.
- 6.3 Do not stand or have any part of the body below a load suspended on a chain or fall hoist.
- 6.4 Do not wrap the load chain around the load to be lifted.

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6.5 Every chain fall and hoist should be inspected visually before making a lift. Your visual check should include (1) hooks - for any irregularities, (2) chain - for wear or damage, and (3) housing and sheaves - for any signs of damage from abusive treatment.

6.6 Use softeners, where possible, to obtain a '>bite' on material being rigged.

7.0 ROPE

7.1 Wire Rope - visually inspect for broken wires, frays, kinks, bird caging, corroded or pitted spots, mechanical abuse (flattening or distortion). Wire rope is inspected by checking the worst section and high wear points. Inspection to be performed quarterly.

7.2 Fiber rope - visually inspect for excessive broken fibers, wear and deteriorated inner and outer strands prior to use. Inspection to be performed quarterly.

8.0 FORKLIFT TRUCKS

8.1 Only trained and authorized personnel shall operate Forklifts.

8.2 All forklift operators should satisfy the following criteria:

- No known physical deficiencies
- Good eyesight
- Good hearing

8.3 Drive at a safe speed which will permit controlled braking and the making of turns without the potential for overturn. Wet or slippery floor surfaces require a slower than ordinary speed.

8.4 Know the capacity of the truck and do not overload. All Forklift Trucks carry an identification plate that shows the rated load capacity of the Truck.

8.5 Raise the load only sufficiently high to clear road obstruction while travelling.

8.6 Look in the direction of travel and keep a clean view of it. Avoid striking overhead structures and nearby objects.

8.7 Keep to the left if aisle width permits when travelling.

8.8 Drive slowly to avoid excessive bounding or movement of the load.

8.9 The operator should come to a stop at blind corners and before passing, through doorways, going ahead only when he is sure that the way is clear.

8.10 Avoid making quick starts, jerky stops, or quick turns at excessive speed.

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- 8.11 Use extreme caution on turns, ramps, grades or inclines to keep the truck under control at all times.
- 8.12 The reverse control should not be used for braking.
- 8.13 Make sure that loads are properly stacked, balanced and secured.
- 8.14 No forklift truck shall be used for any purpose other than the one for which it was designed.

Common dangerous misuse of trucks include:

- bumping skids
 - pushing piles of material out of the way
 - moving heavy objects by means of make shift connections
 - pushing other trucks
- 8.15 Keep hands, arms, feet and legs within the guard or operating station of the truck.
 - 8.16 The truck shall be left unattended only after the controls have been put in neutral, power shut off, brakes set, the key removed and the load engaging means have been lowered and placed in an inoperative position.
 - 8.17 Avoid leaving the truck on an incline, if however, it is necessary to do so, the wheels must be chocked as an added precaution.
 - 8.18 Lock out for pedestrian and vehicular traffic, sounding the horn as necessary.
 - 8.19 Passengers shall not be permitted to ride on a truck, fork, coupling or trailer.
 - 8.20 The operator shall never park the truck in an aisle, doorway, nor obstruct material or equipment to which another worker may require access.
 - 8.21 Because a forklift truck is generally steered by the rear wheels the swing of the rear of the truck must always be carefully watched.

Remember that a lift truck:

- is generally steered by the rear wheels
- steers more easily loaded than empty
- is often driven in reverse direction as much as in forward
- is often steered with one hand - the other hand being used to operate the controls.

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MOBILE AND MATERIAL HANDLING EQUIPMENT REQUIREMENTS**

- 8.22 Loads should not be lowered or raised en route.
- 8.23 When standard forks are used to pick up round objects e.g. rolls and drums, ensure that the forks do not damage the load or push it against a worker.
- 8.24 The forks should be placed flat on the floor when a lift truck is parked. No one should be allowed to stand or walk under elevated forks.
- 8.25 Use a check list to inspect a Forklift Truck thoroughly before operating it. Inspect the brakes, tyres, controls, lights, horn and other components. Safeguards such as the overhead guard should be in place.

If a lift truck is not working safely, remove it from service immediately and report it to the supervisor.

Repairs should be done only by trained and authorized personnel.

General inspection and certification of the forklift shall be performed annually.