

ERL MAINTENANCE SUPPORT SDN BHD

Co. Reg. No. 199901023674 (498574-T)



**SAFETY & SECURITY  
DEPARTMENT**

**SCAFFOLDING PROCEDURE**

G00.OMZ.M11450.DS.0040.B

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**Release**

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Amendments or additions to this procedure must be indicated with a vertical black line in the adjacent left margin.



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## **1 Purpose**

Scaffolding is a temporary or movable platform for workers to stand or sit on when working at height above the floor or ground.

Work which requires the use of scaffolding is highly dangerous and a major source of injuries and fatalities. Most of these accidents can be prevented if proper safety precautions are initiated.

The objective of this procedure is to describe the process to ensure that legal requirements from the Factory and Machinery (Building Operations and Works of Engineering Construction) (Safety) Regulations 1986 for erection and maintenance of scaffolding are complied.

## **2 Scope, Distribution & Access**

This procedure applies to all scaffolding users in ERL premises and is applicable to all INF and MTN employees, contractors, sub-contractors and third-parties. This procedure is accessible to all INF and MTN employees under Electronic Document Management System (EDMS) and E-MAS portal.

## **3 Legal Requirement**

Legal requirement related to scaffolding are stated in **Factories and Machinery Act (Building Operations and Works of Engineering Construction)(Safety) Regulations 1986**.

**Competent Person** is a person who has attended scaffolding courses and has necessary qualification accredited by Department of Occupational Safety and Health.

### **3.1 Construction**

The scaffolding and every part shall be: -

- a) Good construction;
- b) Sufficient, suitable and sound material;
- c) Adequate strength for the purpose for which it is used;
- d) Free from corrosion or other patent defects likely to affect their strength materially;
- e) Capable of supporting the load they are designed to carry with a safety factor.

### **3.2 Maintenance**

Every scaffolding shall be:

- a) Properly maintained and every part shall be kept so fixed, secured and placed in position as to prevent accidental misplacement;
- b) No scaffolding or part thereof shall be partly dismantled and allowed to remain in such a condition that is capable of being used.

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### 3.3 Supervision of Work and Inspection of Material

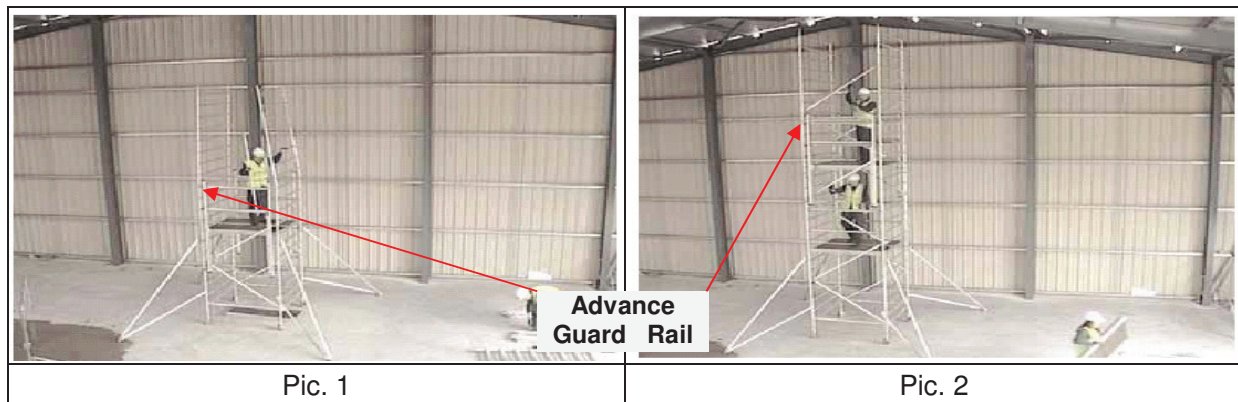
It is a responsibility of the competent person to: -

- a) Supervise during the erection, alteration and dismantling of the scaffolding;
- b) Inspect all the materials used for the construction of scaffolding before being used.

The competent person who supervises the erection of scaffolding shall observe: -

- A safe work method. There are two methods recommended for the prefabricated scaffolding, which has been developed in-cooperation with legal safety requirements.
  - The first method: **Advance Guard Rail system**, makes use of specially designed temporary guardrail units, which are locked in place from the level below and moved up to the platform level.
  - The temporary guardrail units provide collective fall prevention and are in place before the operator accesses the platform to fit the permanent guardrails.
  - The progressive erection of guardrails from a protected area at a lower level ensures from an unguarded platform.

Refer to pictures 1 and 2 for an example of the **Advance Guard Rail** method:



- The second method: **Through-The-Trap (3T)**. This allows the person erecting the scaffolding to position them self at minimum risk during the installation of guard rails to the next level.
- It involves the operator taking up a working position in the trap door of the platform, from where they can add or remove the components, which act as guardrails on the level above the platform.
- It is designed to ensure that the operator does not stand on an unguarded platform, but install the components to a particular level while positioned within the trap door of that same level.
- The 3T method makes use of standard scaffolding components.



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- All guard rails in place.
- Outrigger of scaffolding fully extended and its base tightly stands on the ground.
- Condition of the erected scaffolding and inspection status should specify on scaffolding tags and affix it on the scaffolding to ensure its safe to use.
- Standing and condition of the erected scaffolding; 7 days interval, if it remains for the required task.

### **3.5 Design and Drawings of Scaffoldings to be approved**

Every metal tube scaffolding exceeding 40 metres in height and every other scaffolding exceeding 15 metres in height shall be constructed in accordance with the design and drawings of a Professional Engineer. All other metal tube scaffoldings shall have their designs and drawings approved by the Chief Inspector.

A copy of the design and drawings of the structure shall be submitted to the Chief Inspector for his record prior to the erection of the structure.

A copy of the design drawings certified by the Professional Engineer shall be made available at the worksite for inspection by an Inspector.

## **4 Standard Operating Procedure - Scaffolding**

### **4.1 Erection of Scaffolding**

The method of scaffolding erection is mentioned in bullet 3.3 and 3.4.

### **4.2 Dismantling of Scaffolding**

To dismantle a scaffolding using the advance guard rail method, the dismantling operator starts from the top and reinstates the advance guardrail unit before removing the permanent guardrail and toe boards and descending to the lower level. The advance guard rail units are then relocated; with collective fall prevention measures being maintained through.

To dismantle a scaffolding using the 3T method, after removing the toe boards, the operator disengages the guardrail hooks furthest from the trap. Guardrail component are then removed with the operator positioned through the trap before descending to the lower level, from where the upper platform and end frames are removed.



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### 4.3 Other Safety Consideration

When moving a scaffolding, the following elements shall be checked and complied: -

- Reduce the height to a maximum of 3 meters.
- Distance of 25KV power lines to the scaffolding and safe distance of 4 meters away shall maintained or other obstruction overhead.
- The ground is firm, level and free from potholes.
- Push or pull using manual effort from the base only – never use powered vehicle.
- Never move it while there are people or materials on the scaffolding.
- Protecting the public and staff.

When scaffoldings are used in the areas where other people are moving, extra precautions are required as defined below: -

- Cordon the ground level to prevent people from walking into the scaffolding or work area.
- Minimize the storage of materials and equipment on the working platform.
- Remove or board over access ladders to prevent unauthorized access, if it is to remain in position unattended.

## 5 Specification of Scaffolding

Refer to **Appendix 2**.

## 6 Appendices

List of acts, regulations, guideline and procedure documents referral to in this procedure.

<b>Procedure / Form</b>	<b>Reference Numbers</b>
Safety Procedure	G00.OMZ.M11451.NP.0006.*
Factories and Machinery Act 1967 (revised-1974)	Nil
Building Operations and Works of Engineering Construction (Safety) Regulations 1986	Nil
Guidelines For Approval of Design Scaffolding 2016	Nil

Appendix 1 : Scaffolding Tag

Appendix 2 : Part X, Factories and Machinery (Building Operations and Works of Engineering Construction) (Safety) Regulations 1986

