



Welcome to the world of safe **SCAFFOLDING MANAGEMENT SOLUTIONS**





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Overview

Scaffolding has been used ever since man began making buildings more than one storey high and needed to find a practical way of working at height. Although the materials and designs have changed over the centuries, the purpose of scaffolding remains the same – to provide a safe, temporary access and platform from which all types of construction, repair and maintenance work can be carried out.

There are different types of scaffolding, but usually they are all made up of the same basic components: tubes and boards. What actually varies much is the way of connecting the tubes together. In so-called tube-and-clamp system tubes are attached to each other by special couplers. Fabricated frame system provides the ready-made frames, which only need to be braced to ensure the rigidity of the whole system. The most up-to-date modular systems feature special joints that simplify the assembly process. They also provide the rigidity of the joints in addition to high versatility of the whole system. Modular scaffolding can reach great heights, retracing the complex shape of structure.

Scaffolding has a variety of applications. It is used in construction, alteration, routine maintenance and renovation activities. Scaffolding offers a safer and more comfortable work arrangement compared to leaning over edges, stretching overhead and working from ladders. Suitable and sufficient scaffolding must be supplied for work at elevations that cannot be accomplished safely by other means. Properly erected and maintained, scaffolding provides workers safe access to work locations, level and stable working platforms, and temporary storage for tools and materials for performing immediate tasks.

"Every step of progress the world has made has been from scaffold to scaffold, and from stake to stake, but always imbuing SAFETY as the central theme."

Strength to be one of the safest Scaffolding Management Contractor

With its modest inception in 2007, ASK-EHS Engineering & Consultants Pvt. Ltd., SURAT, India has progressed to a position of very high prominence and competence within the Scaffolding Industry at the national level catering to Construction, Operation, and Building & Services Sectors. Specializing in training & competence building, erection / upkeep / inspection; hire & Sale of System Scaffolding, the company has constantly strived to set and maintain the very highest of standards in safety & quality of Scaffold Components and Assembly.

Having already raised a skilled and competent technician force of over 500 Scaffolders / Scaffold inspectors, we continue to strive and contribute further in this highly demanded skill trade, maintaining safety and health as its core-value.

With a labor force of well over 100 highly skilled scaffolders supervised by competent scaffold managers, ASK-EHS Engineering & Consultants Pvt. Ltd. continues to supply, erect, hire and sale high-profile scaffold in TATA Steel and Siemens (India), to name a few. Due to vulnerable nature of the construction industry, health, safety and quality emerge as the most important factors, and it goes to our credit that we have maintained an impeccable Safety & Health record of accident-free working. We can assist in ensuring that you are fully compliant with all Health & Safety requirements on Scaffolding from the initial project enquiry to project completion.

All our scaffolding staff is well-trained and skilled. We carry out continuous assessment and improvements on our safety systems with both our clients and scaffolders, since we stand committed to uncompromised safety.

Our services extended as

Scaffolding Management Services:

- ➡ ASK-EHS comprises highly trained scaffolding team right from execution to management hierarchy.
- ➡ Building teams of highly trained and competent scaffolders through intensive trainings, demonstrations and field practices.
- ➡ Sellers and Renters of custom-designed scaffolding materials, complying with best safety standards in the industry. (Cup lock system/ Tubes & Fittings / Ring lock system).
- ➡ Specialize in undertaking turnkey scaffolding contracts both on long term and short term basis.
- ➡ Specially designed packages to suit your requirement, consisting of Scaffoldings Management, Provision of Trained and Competent Manpower, Custom designed Scaffolding materials, all together or in combination as per requirement.
- ➡ Ensure speedy mobilization of men and materials to cater to operational plants requiring short term scaffolding during shut-down and maintenance.
- ➡ Offer trained and competent human resources under different categories , such as 3 levels of Scaffolders (Trainee/Basic/Advance), Inspectors, Supervisors, Managers & Engineers.
- ➡ Specialize and offer effective scaffolding trainings, consisting of In-house and On-field trainings accompanied with pre-assessment and post-assessment of attendees.
- ➡ Offer a wide range of Training packages to choose from, like Scaffolders Training (trainee, basic/advanced), Scaffolding inspector, Scaffolding supervisors, Scaffolding engineers & managers.
- ➡ Capable of developing customized Scaffold Management System to reduce the risk of Scaffolding incidents, save time and maintain a high standard.
- ➡ Consultancy for development of Scaffolding design from simplest to most complex in nature, both on-shore and off-shore.
- ➡ Scaffolding Management Software and e-learning.

Detailed briefing about services

“ Learn with Substance, Speed & Perfection – erection, inspection, upkeep & dismantling of various types of SCAFFOLDS (Common & Special both) – to give you the best possible support as per your need. ”

1 Building Scaffolding Teams of Trained & Competent Personals through Rigorous and Intensive Trainings:

- ➡ Training teams under different categories like Trainee/Basic/Advanced/Specialist Scaffolders; Scaffolding Supervisors/Inspectors/Engineers/Managers).
- ➡ Providing multiple level of Scaffolding Training for Tubes & Fittings, Cup-lock System & Ring Lock system Scaffoldings.
- ➡ Assessment and Certification of Scaffolding Competent persons at all levels.
- ➡ Having Scaffolding Education and Training Center at Surat.
- ➡ Organizing and conducting in-house and on-field training at client's premises.
- ➡ On call and refresher Scaffolding Training programs for those, who are already involved in scaffolding works.
- ➡ Conducting courses for fresh candidates, who want to pursue their career as Scaffolders, Scaffolding Supervisor, Scaffolding Inspector, and Scaffolding Engineer & Manager.

➡ Competent and Trained Scaffolding manpower :

- Placement of competent and experienced personnel at all levels such as;
 - Trainee Scaffolder
 - Basic Scaffolder
 - Advanced Scaffolder
 - Scaffolding Supervisor
 - Scaffolding Inspector
 - Scaffolding Engineer
 - Scaffolding Coordinator
 - Scaffolding Manager
 - Project Manager-Scaffolding
- Providing Manpower on call, short duration, up to project duration, long term and permanent.
- Providing Manpower on ASK-EHS roll and company roll both.



➡ Providing Scaffolding Trainings :

- Conducting in-class & on-field training for advanced/basic/trainee Scaffolders, Scaffolding inspectors, Scaffolding supervisors & Scaffolding engineers & managers:
- On-call training at client's premises.
- Customization and designing specific training capsules as per client's requirements.
- Organizing and conducting hands-on scaffolding training and assessments.

*“Your
success
is
our
aim.”*

2

Scaffolding management contractors/consultants:

- ➡ Working as “Scaffolding Management Contractor” with or without materials.
- ➡ This includes erection and dismantle work and supply of scaffolding materials on rent in infrastructure projects, operating industrial works, as needed during maintenance and shutdown etc.
- ➡ Undertake the scaffolding work on turnkey during shutdown & maintenance phase.
- ➡ Expert in supply and work with multiple scaffolding system such as “Tubes & Fittings”, “Cuplock System”, “Ring Lock System” etc.
- ➡ Supply Scaffolding materials on rent.



3

Customized/Project-specific Scaffold Management System to reduce the risk of Scaffolding incidents and save time and maintain a high standard:

- ➡ Consultancy for development and implementation of “Scaffolding Management system” as per National legislations (IS Code, NBC, BOCW Act & Factories Act), International Standards (BS, CITB & OSHA).
- ➡ A complete system audit and risk assessment of scaffolding management system.
- ➡ Provide services as trouble-shooter at various levels.
- ➡ Provide consultancy to maintain high standards of Safety.

4

Consultancy for development & execution of Scaffolding design.

5

Scaffolding Management Software and e-learning modules.

6

Supply, Sale & Trading of Scaffolding materials (Cup lock system/ Tubes & Fittings / Ring lock system) with an option to take on rent as well.



SCAFFOLDING SYSTEM

Scaffolding is a temporary structure used to support people and materials in the construction or repair of buildings and other large installations. Commonly being highly-raised means for work, safety becomes the main factor to care about.

Building of the scaffolding systems presents challenge of creation, which are versatile, safe, long-lasting and fast to assemble. One has to find the balance between the price and the quality.

The most popular method/system of building scaffolds in INDIA AND OVERSEAS ARE:

Methods of building the **SCAFFOLDING**

Tubes & Fittings

H-Frame

Cuplock System

Ring lock

Tubes & Fittings SCAFFOLDING

*Inconvenient to use,
low bearing capacity,
low stability, difficult for storage.*

Scaffold couplers are essentially the fundamental component that is used to assemble tube-and-coupler scaffolding in which individual circular tubes serving as standards, braces or ties are joined together by means of purpose designed couplers'.

All Scaffold Couplers' compliance to BS EN Standards.



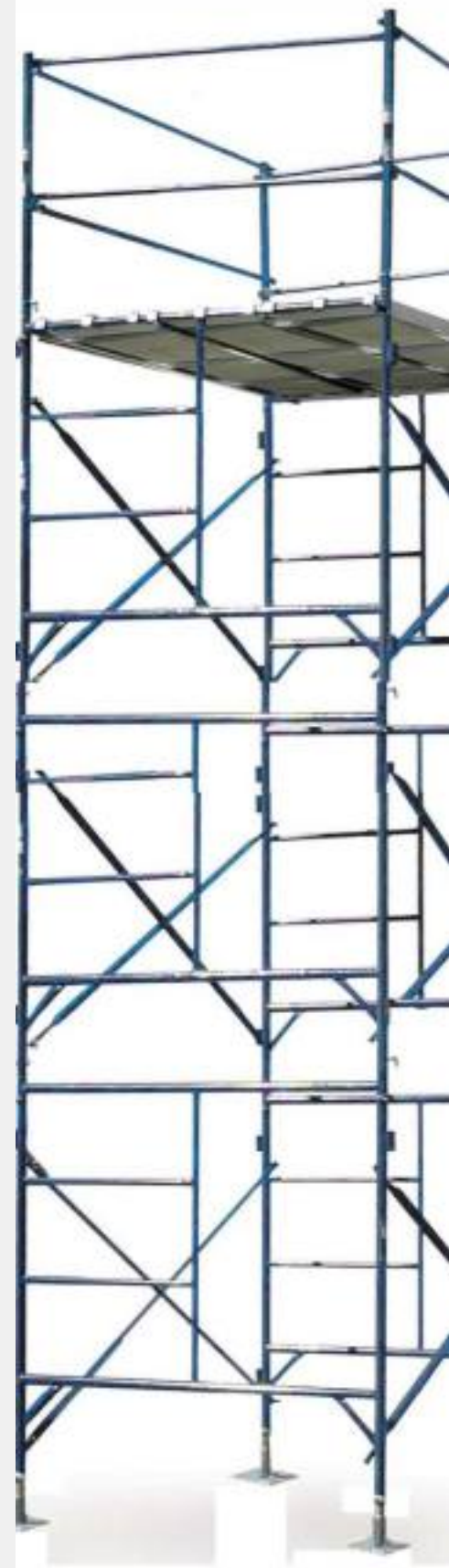
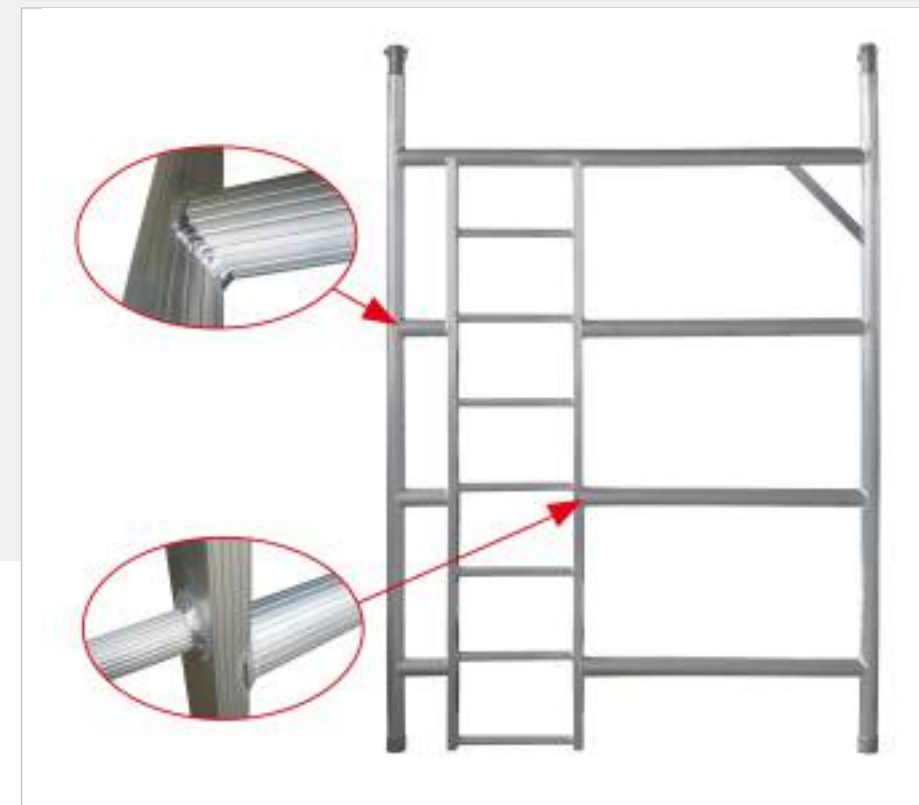
This basic fitting that is designed to join two scaffold tubes can be used to create a diverse range of scaffolding structures or used as an accessory to prefabricated scaffolding systems.

This manual includes basic types of scaffold couplers which join two tubes together as well as special couplers used to connect scaffold tube to other components, equipment or structures.

H-frame SCAFFOLDING

*Convenient to use,
better bearing, low stability,
difficult for storage.*

H-frames are suitable for all light duty applications such as painting, cleaning, and maintenance work. The scaffolding frames are 1m wide x 2m High, with main members manufactured from 48mm dia steel tubes. The frames feature fixed spigot and flip to ensure quick, simple and safe connections between frames, cross braces and horizontal ledgers. There are no loose parts. The frame consists of welded frame of two verticals and two horizontals. The frames are interconnected by scissor cross-brace-through pins welded on frames and locked in position by spring clips. Bracing in alternate bays/lifts may be skipped depending on height and loading on scaffolding.



Cuplock SYSTEM

*Convenient to use,
good bearing capacity,
good stability,
less chances of error.*

At the heart of the CUPLOCK system is its unique node-point locking device. This enables up to four horizontals to be loosely but safely connected to the standard then locked into position with a single hammer blow. The system uses no loose clips, bolts or wedges.

The locking device is formed by fixed lower cups, welded to the standards at 0.5m intervals, and sliding upper cups which drop over the blade ends of the horizontals and rotate to lock them firmly into place giving a positive, rigid connection.

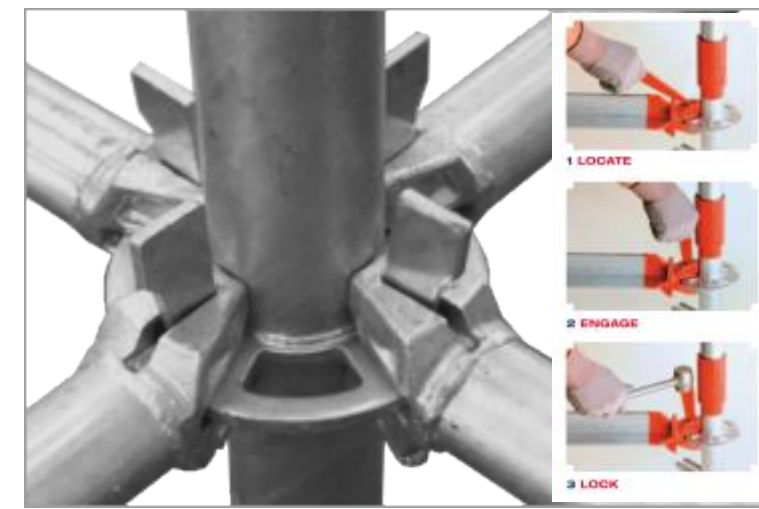
It is this revolutionary node point which makes CUPLOCK faster and simpler to erect than any other system scaffold. Once a CUPLOCK structure is 'based out' and levelled, subsequent lifts are automatically erected square and horizontal. The lack of loose components makes the system easy to use and exceptionally robust - it's painted/galvanised finish making it virtually immune to corrosion and damage.

Ring Lock SCAFFOLDING

*Convenient to use, high bearing capacity,
high stability, very good for tank &
spherical structure easy storage.*

Direct Scaffold Supply Ring Lock Scaffolding Systems are built to be the most reliable and efficient scaffolding available. Safe and convenient, our Ring Lock Scaffolding line includes multiple ledgers, clamps, guardrails, connectors, stair stringers and steps and adapters.

Ringlock System Scaffolding consists of galvanized high-strength steel modular components that are assembled together using integral wedge connectors. It consists of vertical members with integral rosette connections welded to them at 500 mm) spacing. The horizontal ledgers and diagonal braces are secured to the rosettes on the vertical tubes by means of end connectors that incorporate captive wedges. The system has a complete range of accessories, including: steel planks, side brackets, system toe boards, stairs, ladders and reinforced ledgers.



Selection of APPROPRIATE SCAFFOLDING SYSTEM

The safe and efficient use of scaffolding depends first on choosing the right system for the job. If the scaffold's basic characteristics are un-matching to the task, or if all the necessary components are not available, personnel are forced to adopt make-shift arrangements and improvise. These unsafe conditions lead to accidents.

Proper selection of scaffolding and related components requires basic knowledge about site conditions and the work to be done.



Comparative analysis of SCAFFOLDING SYSTEM

Scaffolding items	Effectiveness comparison	Loading capacity comparison	Market share	One-time investment	Performance comparison
Tubes & Fittings scaffolding	100%	100%	50%	100%	Inconvenient to use, low bearing capacity, low stability, chances of error high, difficult for storage.
H-frame scaffolding	200%	120%	10%	130%	Convenient to use, better bearing, low stability, difficult for transportation and storage.
Cuplock scaffolding	300%	200%	15%	150%	Convenient to use, good bearing capacity, good stability, less chances of error.
Ring lock scaffolding	400%	240%	New product of 21 st century	140%	Convenient to use, high bearing capacity, high stability, very good for tank & spherical structure, easy transportation and storage.



Types of SCAFFOLDING

Scaffolding is a type of temporary structure that supports workers and or materials while other larger structures are being built, repaired or maintained. Scaffolding is made up of different frames and planks that are held in place by bolts or couplers. Depending on the purpose of the scaffolding, it can be made in different sizes and shapes. There are many types of scaffolding, but the most commonly used in industries are;

- ➡ Single Pole Scaffold
- ➡ Independent Scaffolds
- ➡ Tower Scaffold
- ➡ Mobile Scaffold
- ➡ Hung Scaffold
- ➡ Birdcage Scaffold
- ➡ Suspended Scaffold
- ➡ Spur Scaffold
- ➡ Cantilever Scaffold



Scaffolds with

Quality

It is our goal to achieve quality standards in our scaffolds matching to international level. All of our scaffold components are made to specification and are tested for quality prior to use. All types of scaffolds are cast to a specific design, with design integration of safety components like toe boards and bracings, being the integral part of each scaffold structure.

All the components are made of the best available materials, cast to specific design and passed through enhanced quality checks to ensure the best in quality.

Safety

One of the key reasons for us to venture into Scaffolding was to make Safety aspects of scaffolding an integral part of the whole process, right from planning to design and from erection to dismantling. We bring years of experience and expertise of Safety Management along with Scaffolding, resulting in a capable Scaffolding Management Procedure, a strong and stringent Safety management system, a strict Inspection process executed through a competent and trained team of experts.

Statutory compliance for **SCAFFOLDING/ WORK AT HEIGHT**

- ➡ Indian Standard Code
- ➡ BOCW Act & Rules
- ➡ Factories Act & Rules
- ➡ Some others relevant international standards
- ➡ British Standard
- ➡ American Standard



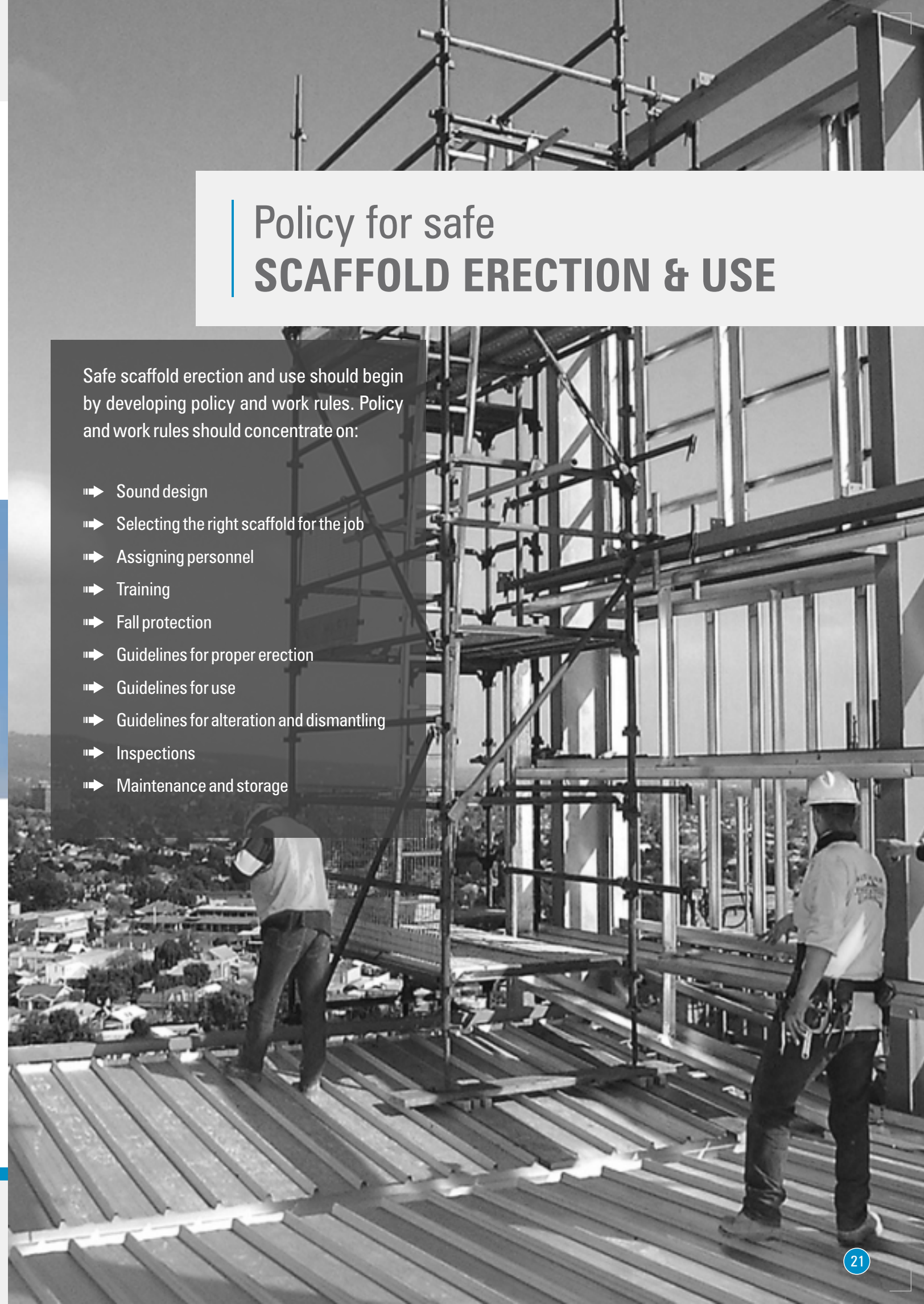
Ensure The Safety & Quality **IN SCAFFOLDING WORK**

- | | |
|--|---|
| ➡ Competent, Certified & Experienced Manpower | ➡ Working under Permit to Work System |
| ➡ Pre-assessment of all Scaffolding team members | ➡ Always work under system |
| ➡ Trained as per Method Statements | ➡ Job Hazards Assessment |
| ➡ Tested and Certified Scaffold Materials | ➡ A TMB conducted before each work |
| ➡ Inspected all materials, Before & After Use | ➡ Follow the "Scaffolding Management Procedure" |
| | ➡ Maintain Zero level of accidents/incidents |

Policy for safe **SCAFFOLD ERECTION & USE**

Safe scaffold erection and use should begin by developing policy and work rules. Policy and work rules should concentrate on:

- ➡ Sound design
- ➡ Selecting the right scaffold for the job
- ➡ Assigning personnel
- ➡ Training
- ➡ Fall protection
- ➡ Guidelines for proper erection
- ➡ Guidelines for use
- ➡ Guidelines for alteration and dismantling
- ➡ Inspections
- ➡ Maintenance and storage





Risk with improper SCAFFOLDING & WITHOUT SCAFFOLDING

- ➡ Inadequate working position
- ➡ Fall from Height
- ➡ Collapse of scaffolding structure
- ➡ Falling materials from height
- ➡ Poor working environment/culture
- ➡ Chances of high rate of accidents/incidents
- ➡ High risk in work
- ➡ Loss of company reputation
- ➡ High direct & indirect cost

The hazards

The objective of the Work at Height is to reduce working at height but if that is not practicable, then to prevent falls. There are a number of reasons why falls from height can occur and the table below identifies a number of these.

It will be clear from the details below that the individual is the most important element of work at height planning.

Operative-related

- ➔ Over-reaching
- ➔ Components removed
- ➔ Excessive gaps
- ➔ Unprotected edges
- ➔ Poor assembly
- ➔ Lack of training
- ➔ Slipping from platform or ladder
- ➔ Inadequate ties and anchors
- ➔ Missing guardrails
- ➔ cluttered platform
- ➔ Harness not secured
- ➔ Overloading
- ➔ Choosing wrong equipment
- ➔ Lack of inspection

Site-related

- ➔ High winds
- ➔ Very uneven ground
- ➔ Ground subsidence
- ➔ Poor brickwork for tying
- ➔ Overhead power lines
- ➔ Buried services

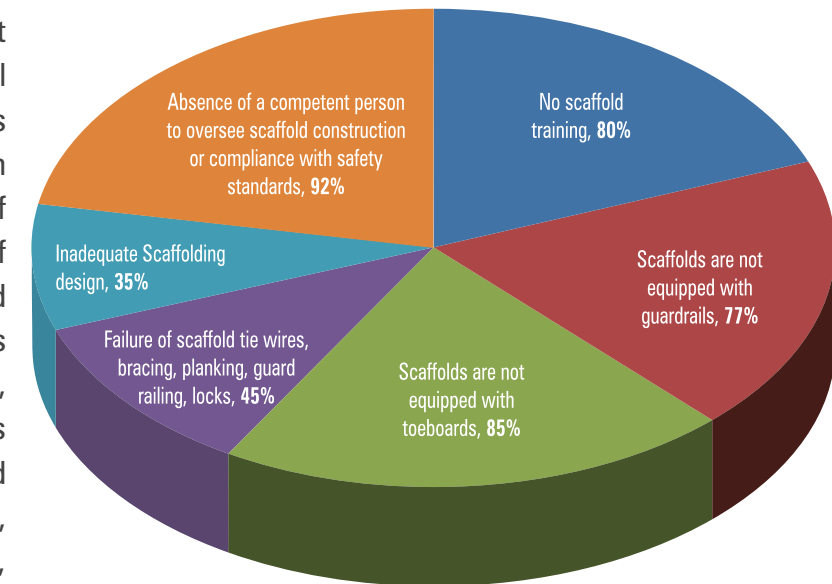
Equipment-related

- ➔ Defective platform boards/decking
- ➔ faulty equipment
- ➔ Unsuitable equipment
- ➔ Missing parts
- ➔ Damaged components
- ➔ Lack of secure harness anchor points

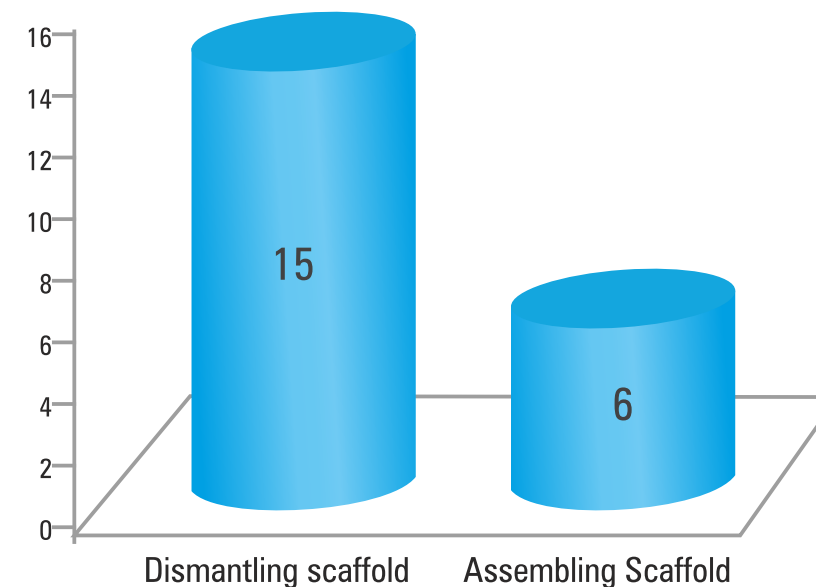
Major causes of SCAFFOLDING ACCIDENTS

Scaffolding accidents mainly involve people falling, incorrect operating procedures, environmental conditions and falling materials due to equipment failure. The causes of scaffolding accidents include failures at attachment points, parts failure, inadequate fall protection, improper construction or work rules and changing environmental conditions (high winds, temperature extremes or the presence of toxic gases). Additionally, overloading of scaffolding is a frequent cause of major scaffold failure. Individuals exposed to scaffolding hazards include scaffold erectors and dismantlers, personnel working on scaffolds and employees and the general public near scaffolding. Scaffold erectors and dismantlers are at particular risk, since they work on scaffolds before ladders, guardrails, platforms and planks are completely installed.

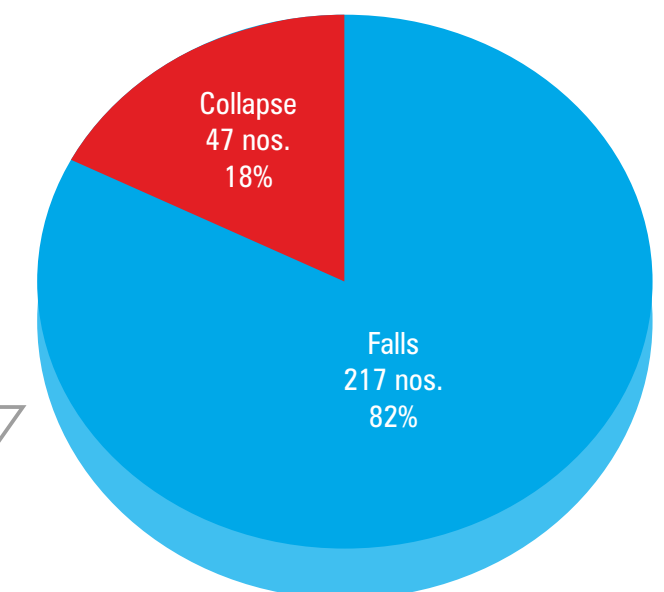
Causes of Scaffolding Accidents



Fatality as per activities



Fatality in Scaffolding Work



Clientele

- ▶ DGEN Project, Gujarat
- ▶ Ultratech Cements Limited
- ▶ Indian Additives Limited – Chennai
- ▶ Afcons Ltd – Dahej, OPAL Project, Gujarat
- ▶ Mx Systems International Pvt. Ltd – Dahej
- ▶ TATA Steel Limited – Jamshedpur, Jharkhand
- ▶ Simplex Infrastructure Limited – Metro Rail, Bangalore
- ▶ JSW Sever field Structures Limited - DGEN Project
- ▶ TATA Motors Limited – Ahemdabad , Gujarat
- ▶ Petron Civil Engineering Pvt. Ltd. - rajasthan
- ▶ Rio Tinto Exploration India Pvt. Ltd. – MP
- ▶ Lanco Infratech Milited – Paradip, Odisha
- ▶ Neo Structo Construction Limited
- ▶ Siemens Ltd.



Group Companies

ASK-EHS Engineering & Consultants

ASK-EHS Engineering & Consultants Pvt. Ltd.

ASK Institute of Environment, Health & Safety Pvt. Ltd.

ASK EHS Engineering & Infrastructure Pvt. Ltd

ASK E-Square Business Solutions Pvt. Ltd.

Our Range of Services

- EHS Management Consultancy & Ownership
- Outsourcing EHS Professionals
- EHS Trainings
- Animated Safety Videos & Movies
- EHS Plans & Procedures
- EHS Audit & Assessment
- EHS Software Solutions
- Scaffolding Management System
- Oil & Gas Operational Safety

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