

# BMB & A JSC.

Together We Build The Better Future

# Safety Handbook

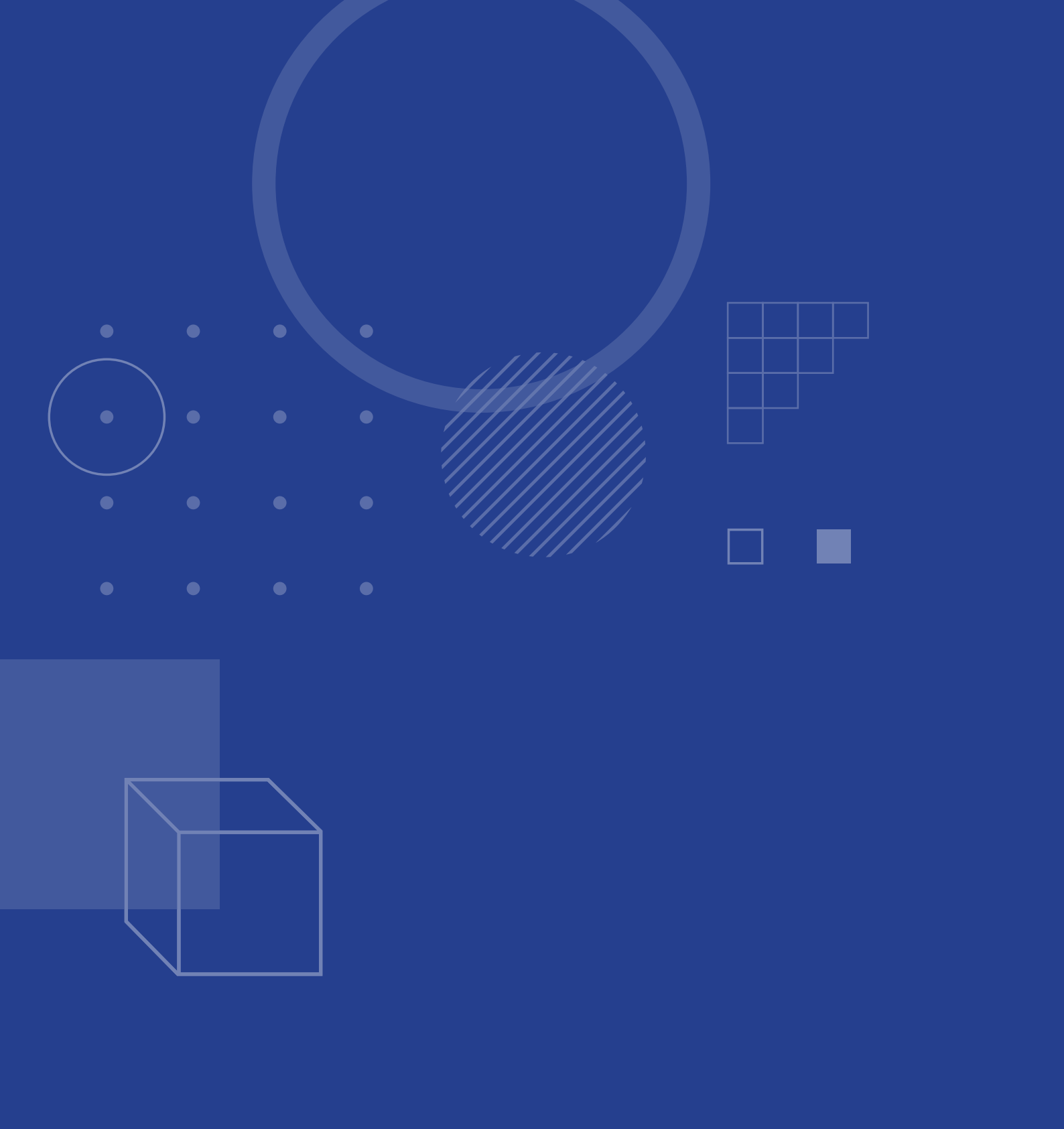


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**WORK SAFELY - ARR**

“The health and life of workers are the invaluable possession of themselves, their families, and society. Therefore, occupational safety is a top concern of BMB&A”



**IVING HOME SAFELY**

# BMB'S SAFETY POLICY

1.1. Ensure and maintain all resources to prevent serious accidents at all works performed by BMB&A.

1.2. Comply with legal requirements as regards occupational safety in the locality and country where BMB&A performs works.

1.3. Establish and maintain a safe working environment, striving to eliminate or reduce potential hazards. Provide adequate resources for establishing, applying, maintaining, and improving the management system as required by ISO 9001:2015 and ISO 45001:2018.

1.4. Ensure the participation of and consultation with workers in decisions related to occupational safety and hygiene. BMB&A always keeps mindful and commits all employees to “Work Safely, Arriving Home Safely” every day.

Best Metal Building and Accessory JSC

Director



Tran Le Quoc Thai

# OVERVIEW

**Those working at the construction site must comply with the following:**

Regulations occupational safety and health and fire fighting and prevention.

Safety regulations by the owner, main contractor, and BMB&A enact orderly.

Banner, signboard, slogan about occupational safety and health and fire fighting and prevention.

Do not use alcohol or stimulants when entering the construction site.

Working follows the leader's instruction.

Perform tasks in the correct order.

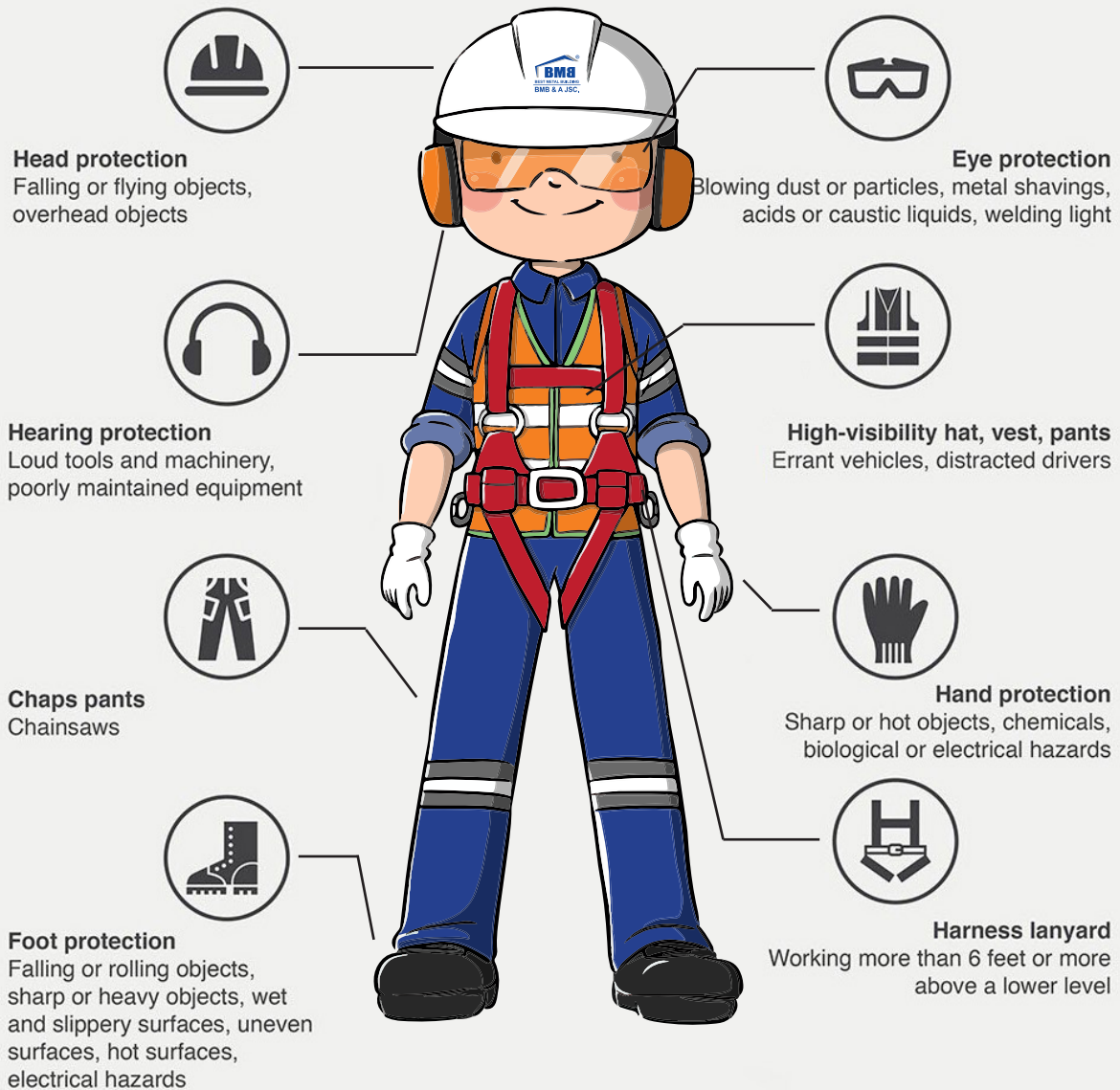
Prepare and submit occupational safety and hygiene measures.

Always management for health and safety training.

Provide employment contract, insurance, physical examination, safety training certificate, practical certificate necessary expertise.

# UNIFORM AND PERSONAL PROTECTION

- BMB&A employees working at the construction site are fully equipped with necessary personal protective equipment items (helmets, safety shoes, reflective vests).
- Personal protective equipment shall be used when necessary and required: (Safety belts, welding-cutting masks, gloves, noise-cancelling earbuds, glasses, masks).
- The quantity and quality of personal protective equipment are fully prepared and kept neatly.



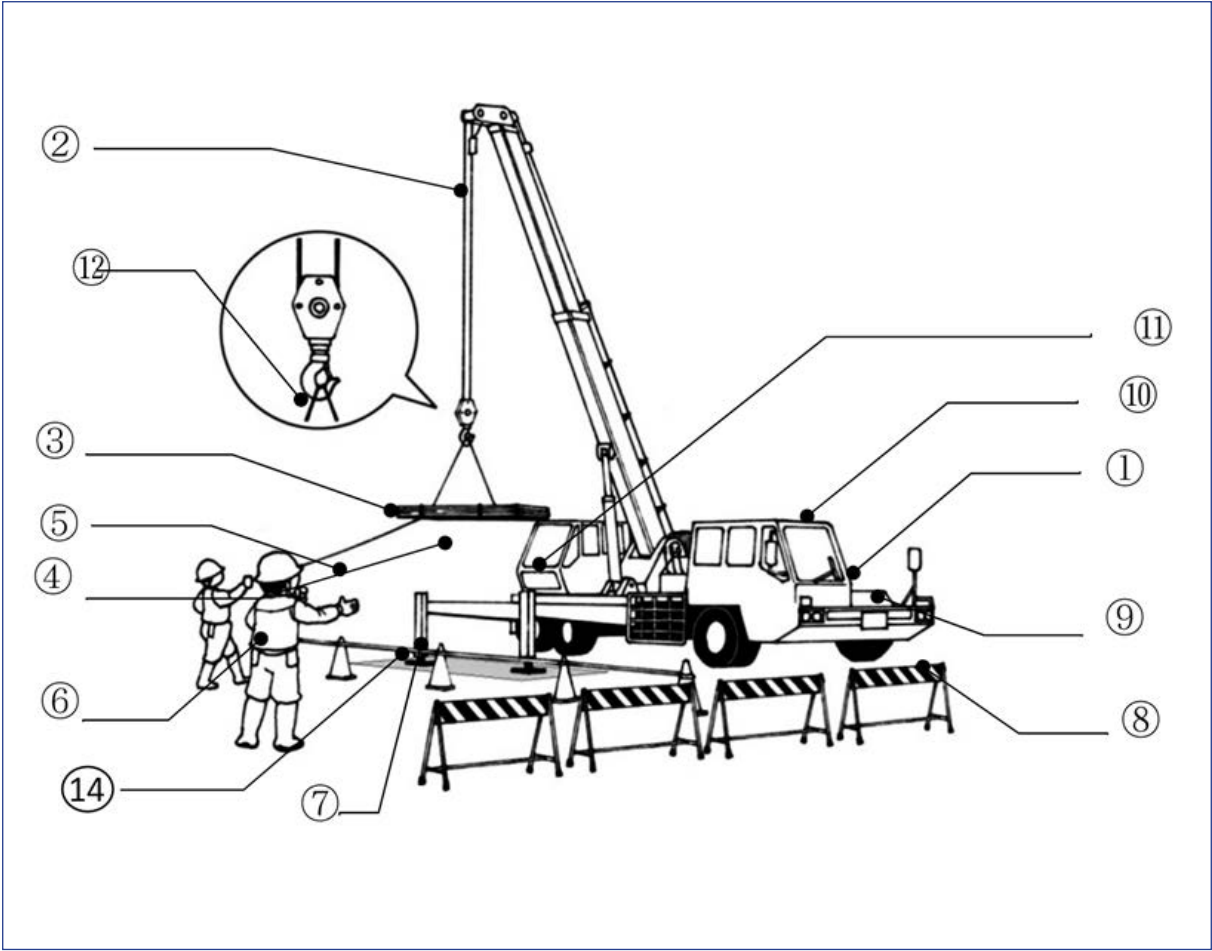


# SAFETY FOR USING MOBILE CRANES

The method for prevention of accidents using a mobile crane has to emphasize.

Mobile crane and equipment support must check fully enough paperwork as registration, inspection, insurance, contract. Work permit issue by management team before allowing equipment working at the job site.

1. Crane operators do not out of the cabin during crane operation.
2. Checking anti two blocking devices working correctly or not.
3. Lifting object weight not over 85% load allowance.
4. No one stands under the hook during lifting.
5. Attach direction line on lifting the object.
6. Assign signal man control by the signal during lifting.
7. The outrigger must be extended to the maximum.
8. Warning board put at radius working.
9. Crane setting at the plane position and stable soil condition.
10. Checking overload alarm device on the crane.
11. Safety board put on the crane.
12. Checking hook and lock hook.
13. Crane stops work when wind over class 5.
14. Setup steel plate under outrigger for weak terrain condition 15.

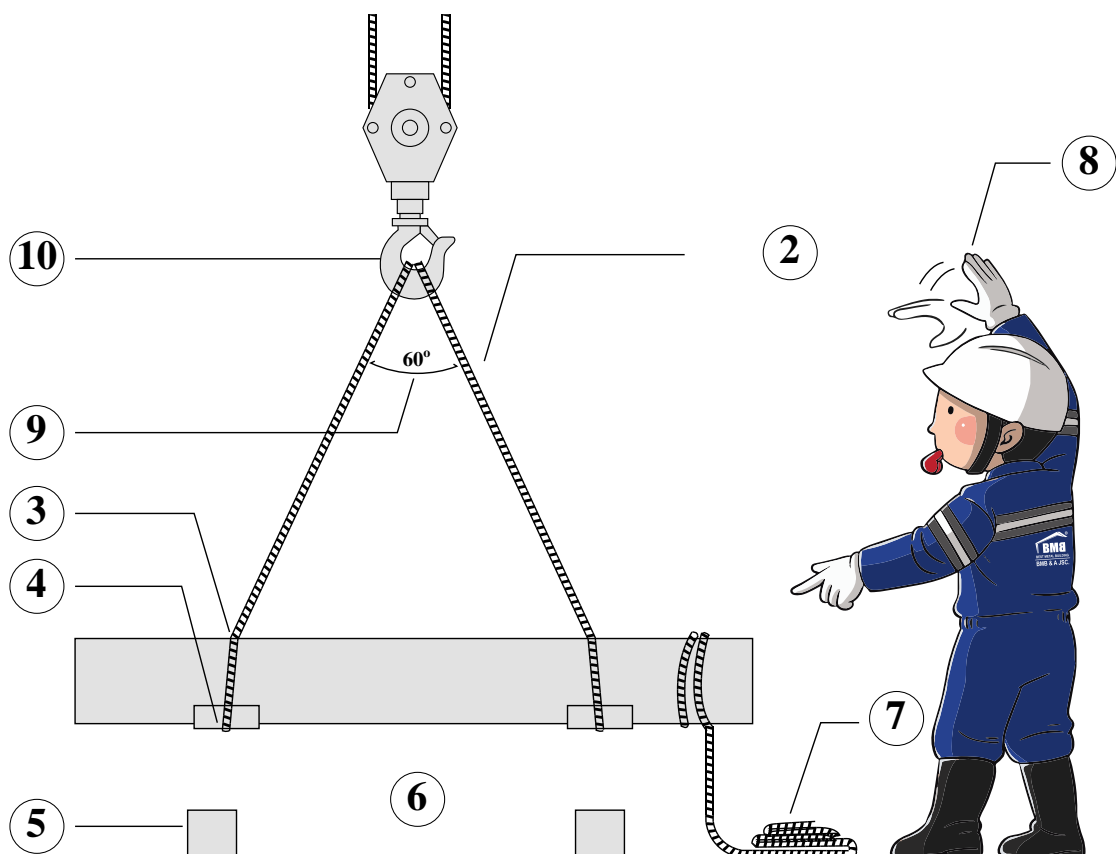


- 15. Crane operator do not out of cabin during crane working
- 16. Checking anti twor blocking device working or not
- 17. Lifting weight is not over 85% lifting allowance
- 18. No one stands under the hook during lifting.
- 19. Attach direction line before lifting.
- 20. Arrange signalman during lifting.
- 21. Outrigger crane divaricated as widely
- 22. Warning board put in crane's working radius

# SAFETY FOR HANGING LOAD

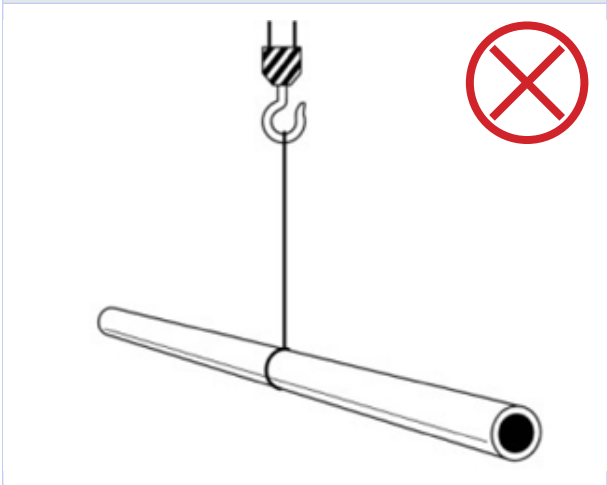
The method of prevention risk by hanging load is emphasized. Tool for hanging load choosing on the value of weight and shape of the object.

1. Checking any damage on lifting belt as irregular shape, gashes.
2. It is not recommended to use a single rope to tie the load.
3. Checking stability of the object when lifting. Do not allow both lifting and moving sideways.
4. Provide gaskets to protect the lifting belt in the sharp corner and edge of lifting the objects.
5. The support bars must be properly in place before lowering the object.
6. Persons must not stand or walk under the lifting object.
7. Tie direction line on lifting object before lifting.
8. Provide the signalman during lifting.
9. The angle between the two cables is over  $60^{\circ}$ .

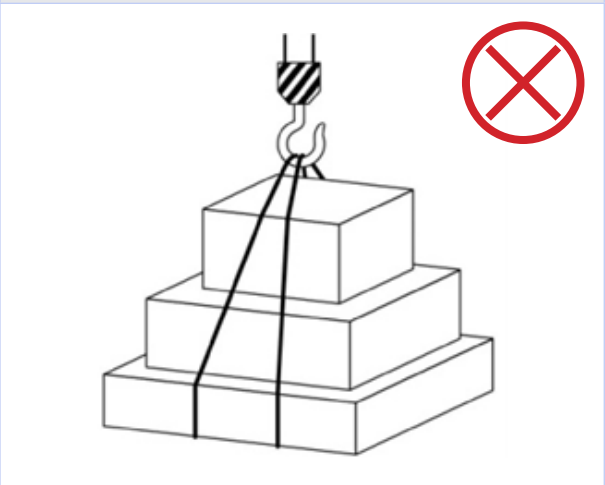


# PROHIBITED AND IMPROPER OPERATIONS

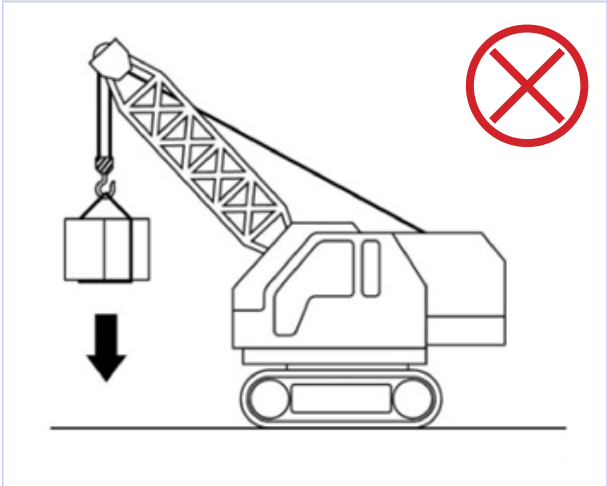
Tie 1 point lifting



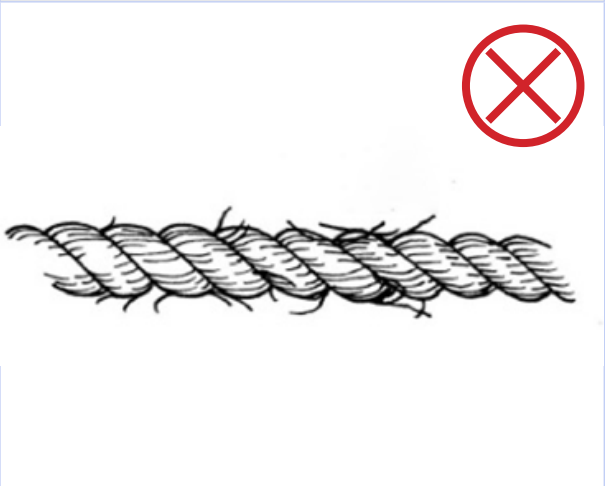
Lifting a mixture of objects



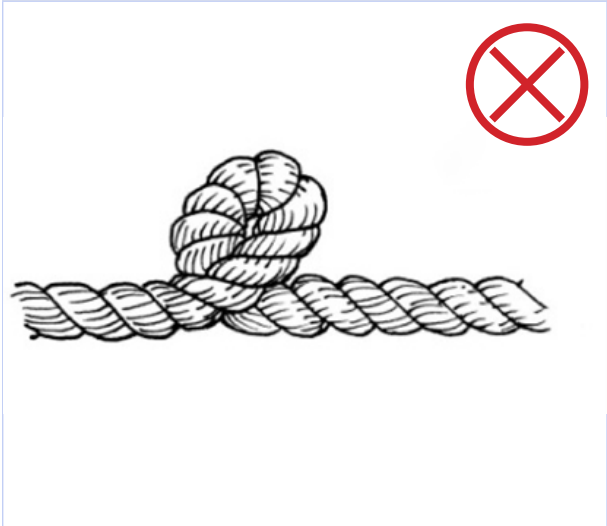
Lifting objects prone to free fall



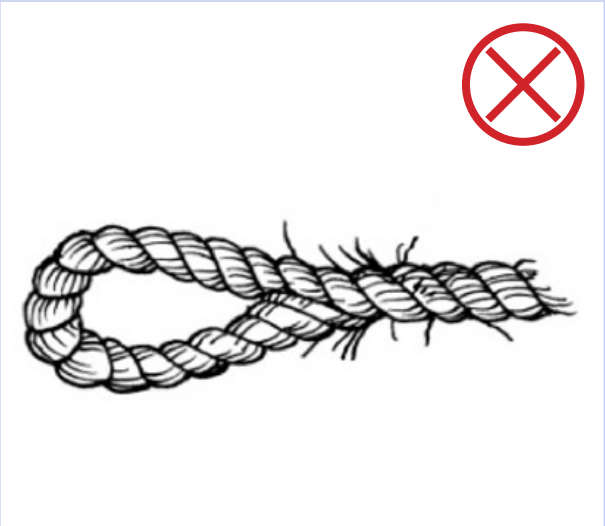
Using cable damaged 10% on one layer




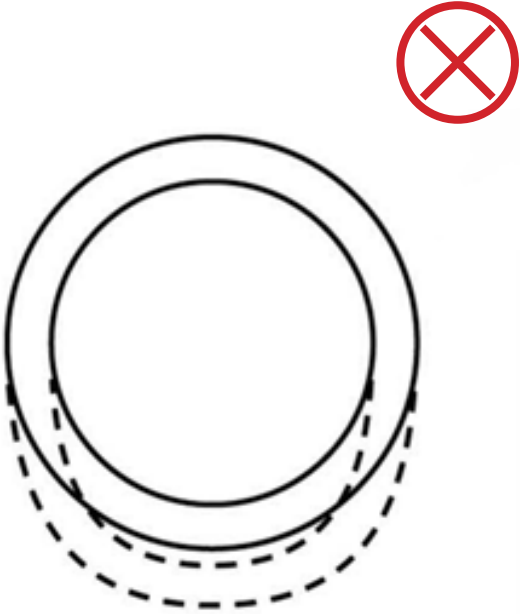


Twisted cable



Damaged cable at the bend position

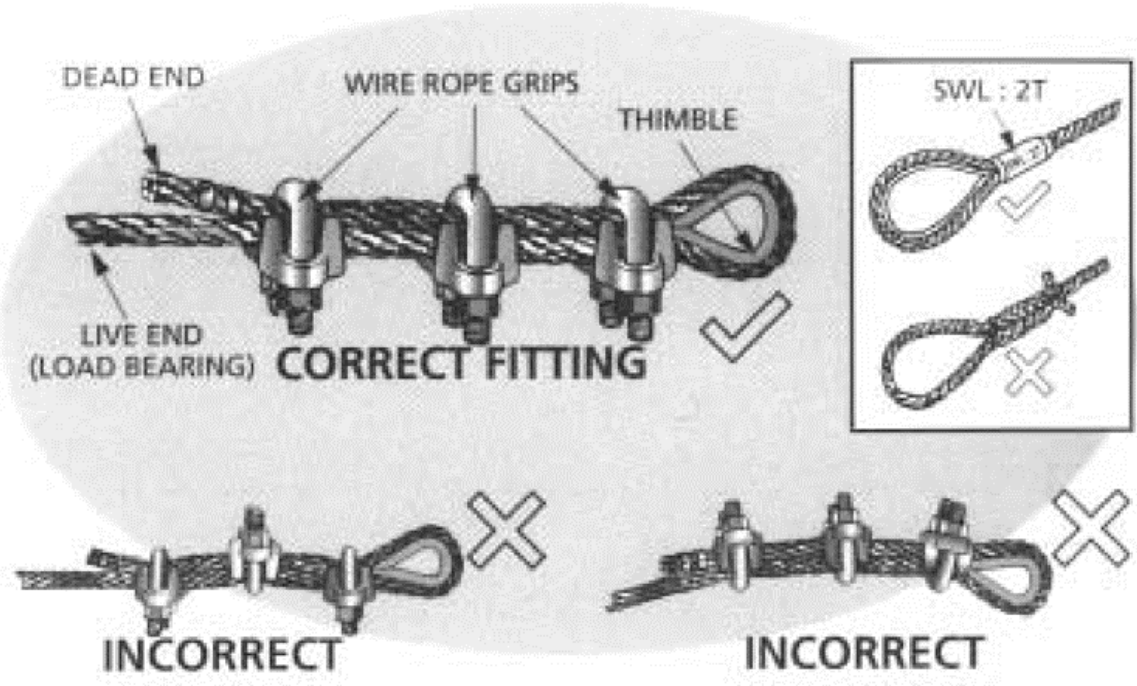


<p>Cable diameter is reduced by more than 7% compared to format diameter</p>	<p>Cable is deformed and corroded</p>
	
<p>The hook is bent</p>	<p>Oval belt</p>
	

Cables must be neatly arranged and carefully stored in boxes or on hangers. Avoid direct contact with corrosive chemicals.



Cable U bolts corrective specification number, size suitable with style cable.

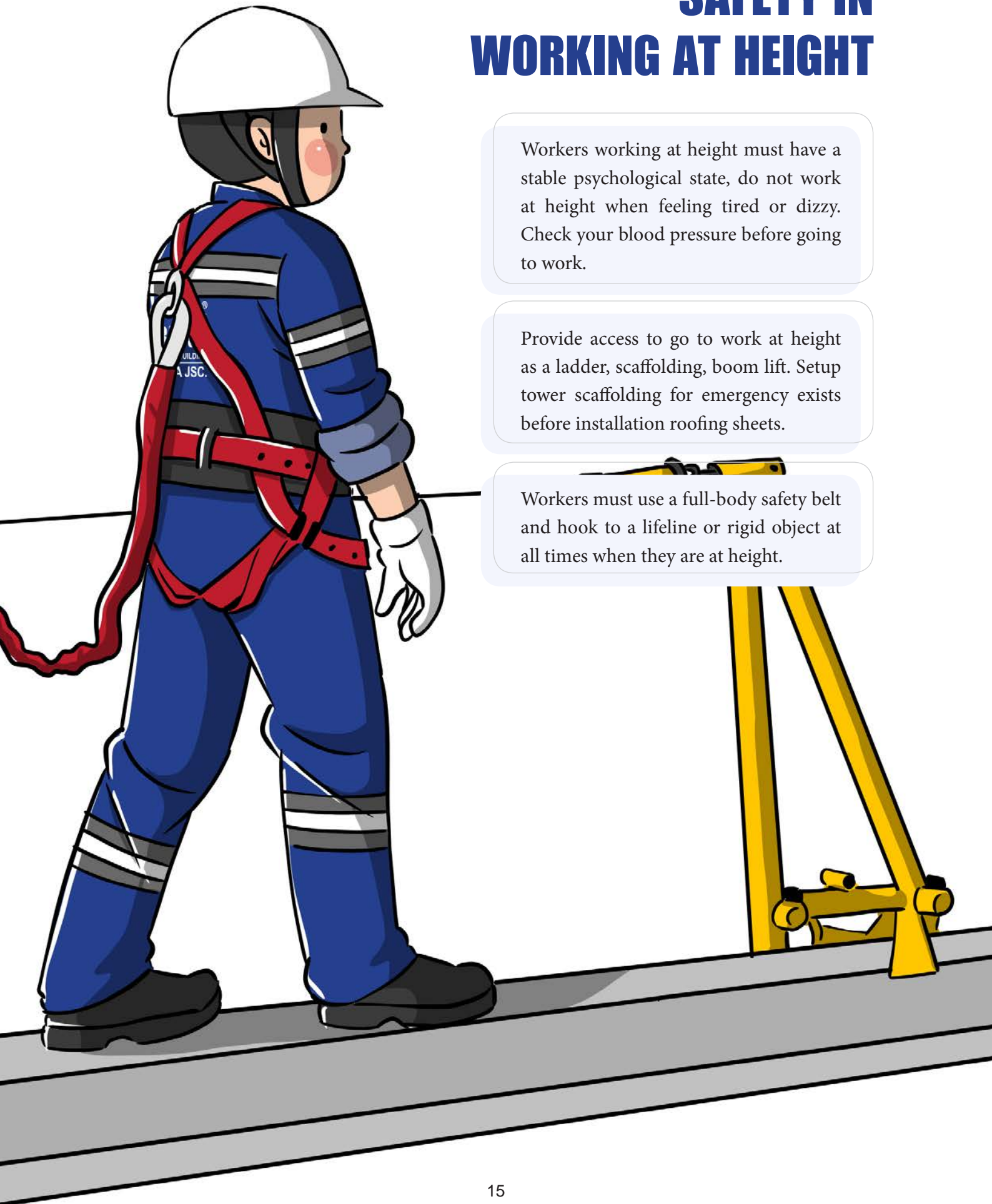


# SAFETY IN WORKING AT HEIGHT

Workers working at height must have a stable psychological state, do not work at height when feeling tired or dizzy. Check your blood pressure before going to work.

Provide access to go to work at height as a ladder, scaffolding, boom lift. Setup tower scaffolding for emergency exists before installation roofing sheets.

Workers must use a full-body safety belt and hook to a lifeline or rigid object at all times when they are at height.

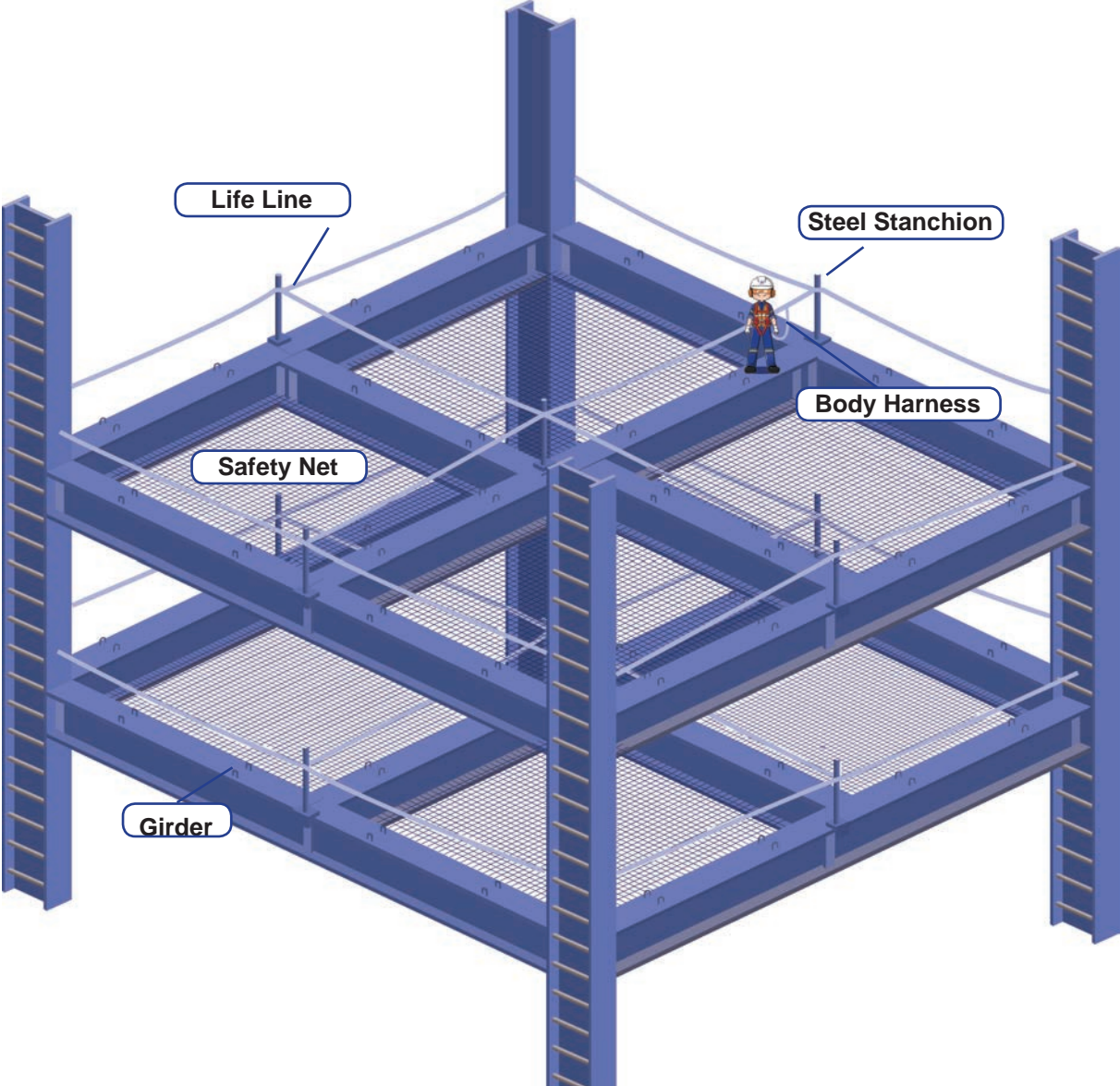


Set up lifeline and stanchion setup before workers come to work. Inspection lifeline and stanchion by test load before using.

The seat belt hook position must be higher than the waist.

Installation safety net after completion mainframe.

When carried up high to work, construction tools must have straps to tie on hands, and connection bolts are packed into the bag for carrying up. It is strictly forbidden to throw or drop construction tools or materials from above or vice versa.

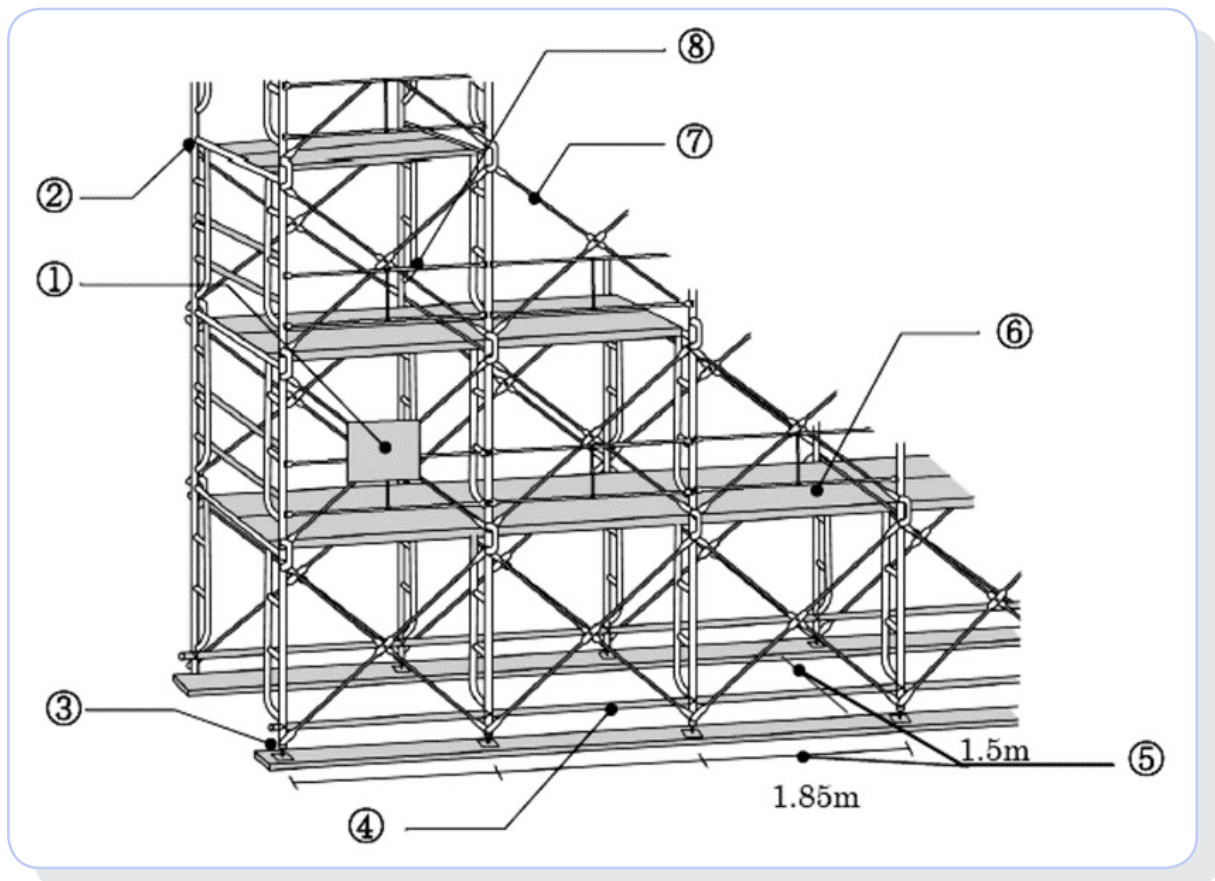




# SAFETY FOR WORKING WITH SCAFFOLDING

Scaffolding including frame, bracing, pin, jack base, ladder, flatform.

1. Scaffolding permit using placed at where is recognizable.
2. Anchor scaffolding to solid structures.
3. Jack base placed on the cushion underlay plate.
4. Steel pipe braces right next to the base.
5. The cushion underlay plate corrective space.
6. Total flatform width is more than 30cm, flatform clearance is less than 1cm.
7. Fully install cross brace on all sides.
8. Install a handrail on all floors.



# SAFETY IN WORKING WITH MOBILE SCAFFOLDING

Wheel locks are required for mobile tower scaffolds.

Do not move the scaffolding when there are people or objects on the scaffolding.

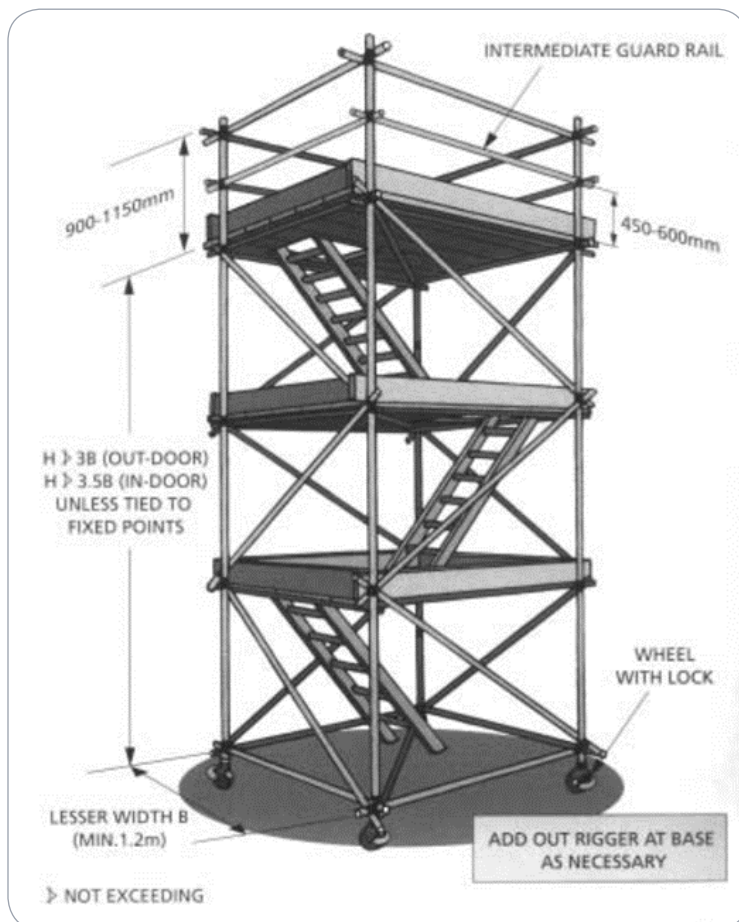
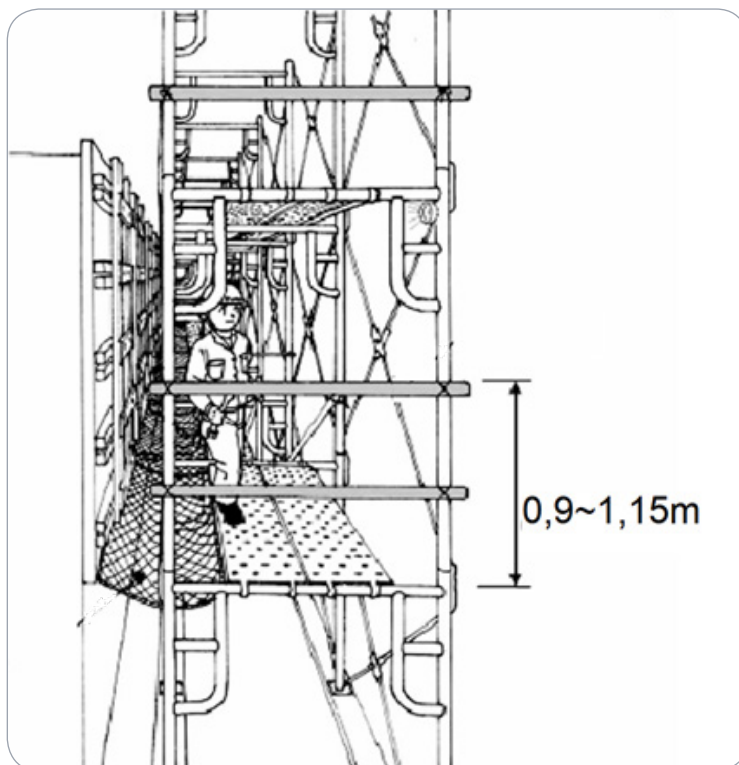
Use the rope to bring material and handtool up or down, do not throw from above to top or vice versa.

Installation protective net around the scaffolding tower. The protection net is installed in 1 layer with a height of 10m each, if the height of the scaffolding is more than 20m, the number of layers of protection nets is more than 2.

The height of the scaffolding does not exceed 3 times the width of the scaffolding.

Scaffolding's handrail height 90cm~115cm.

On each floor, supply enough braced, ladder, platform, and kick plate.



# SAFETY IN WORKING NEAR OPENINGS

Fences, railings, or objects covering openings must be located in areas where workers can fall.

1.

Setup lifeline.

2.

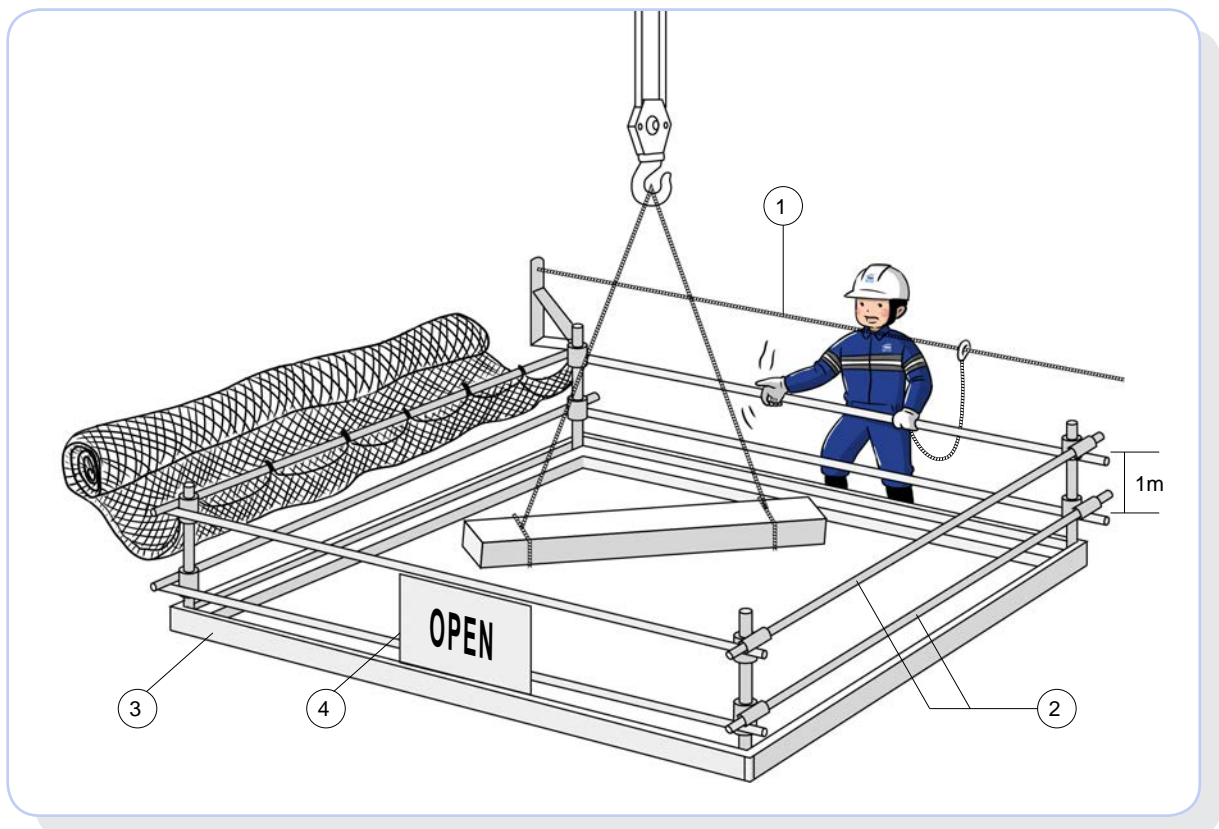
Handrail not less than 1m.

3.

Installation kickplate.

4.

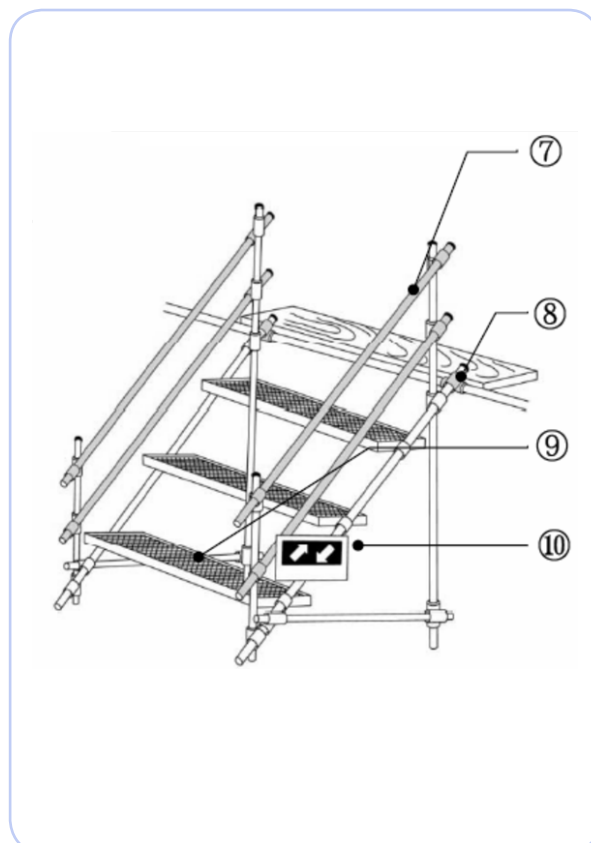
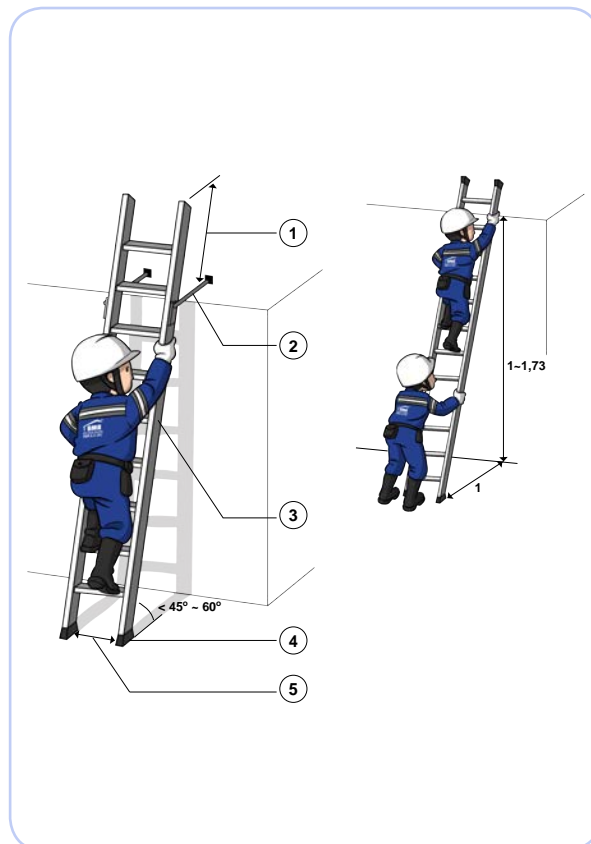
Warning board opening.



# SAFETY USING LADDER

Climbing ladders are used where the height or working depth is more than 1.5m.

1. The length of the ramp above the ladder must be more than 60cm.
2. The brake bar must be installed.
3. Check the ladder for any damage or rust.
4. The ladder is equipped with an anti-slip device, or another worker can assist by holding the ladder instead of the anti-displacement device.
5. The ladder width is more than 30cm.
6. The ladder length does not exceed 9m.
7. The railing height is not less than 90cm.
8. The ladder supports are strong enough.
9. The steps are evenly spaced.
10. The sign of the ladder is in the correct position.



# SAFE ACCESS

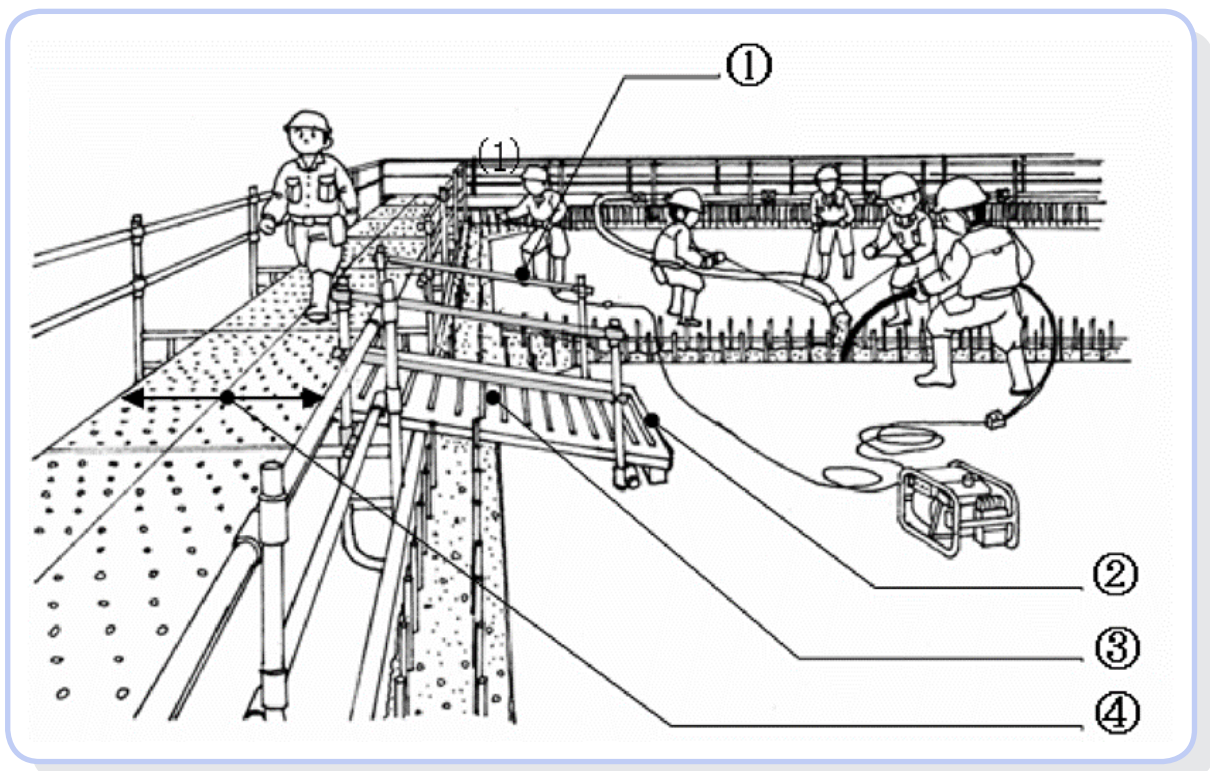
Safety access must be arranged on the construction site to prevent workers from falling and not to affect equipment moving.

1. Set up the railing for the walkway. The height of the handrail is from 90cm~115cm, the handrail must be strong enough.

2. With a height of over 1m, have to install a ramp strong enough for the walkway.

3. With an anti-slip edge by steel or wooden ramps.

4. The minimum width of the walkway is 40cm.

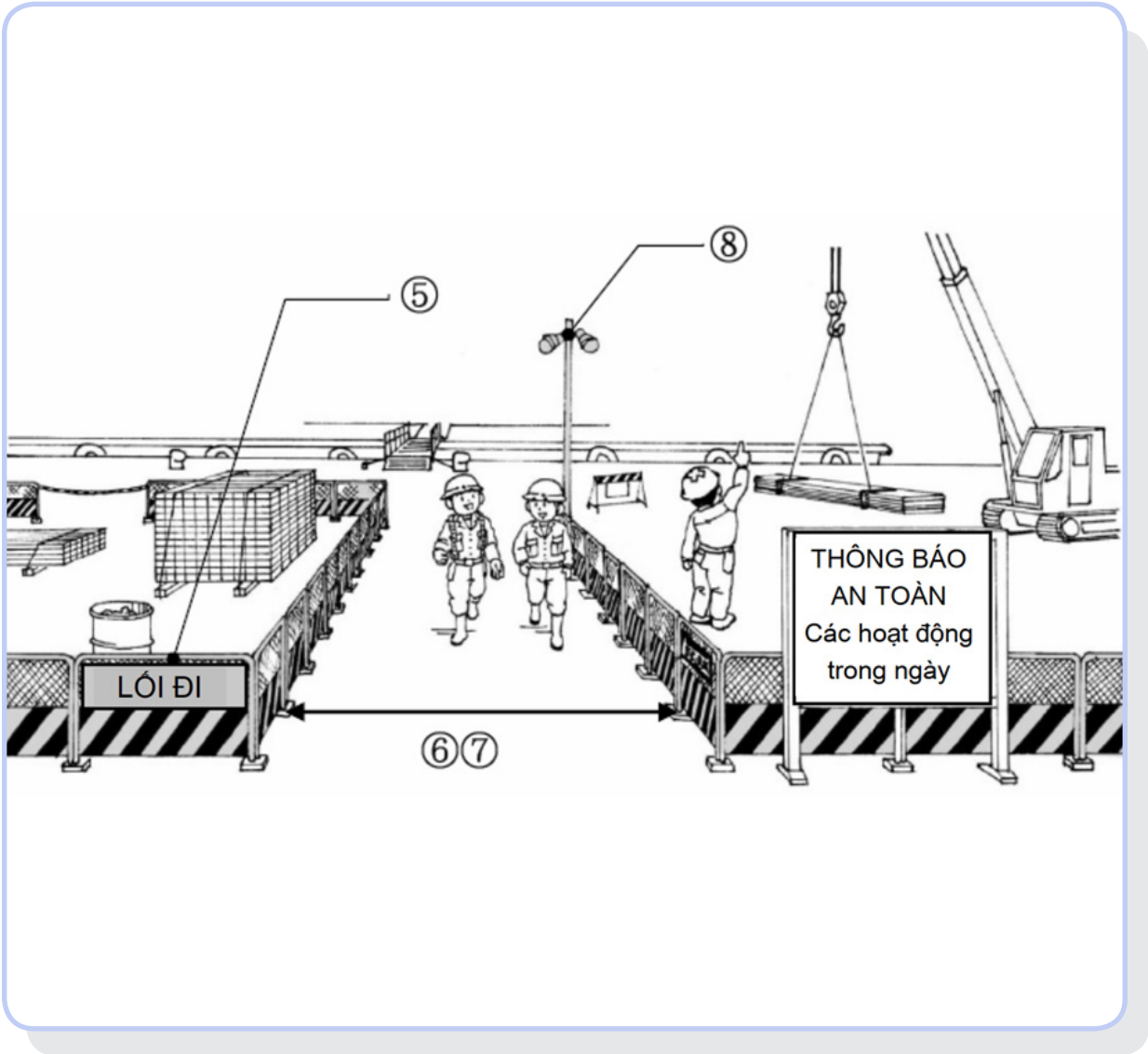


5. Walkway signs board are in place.

6. The width of the walkway design depends on demand.

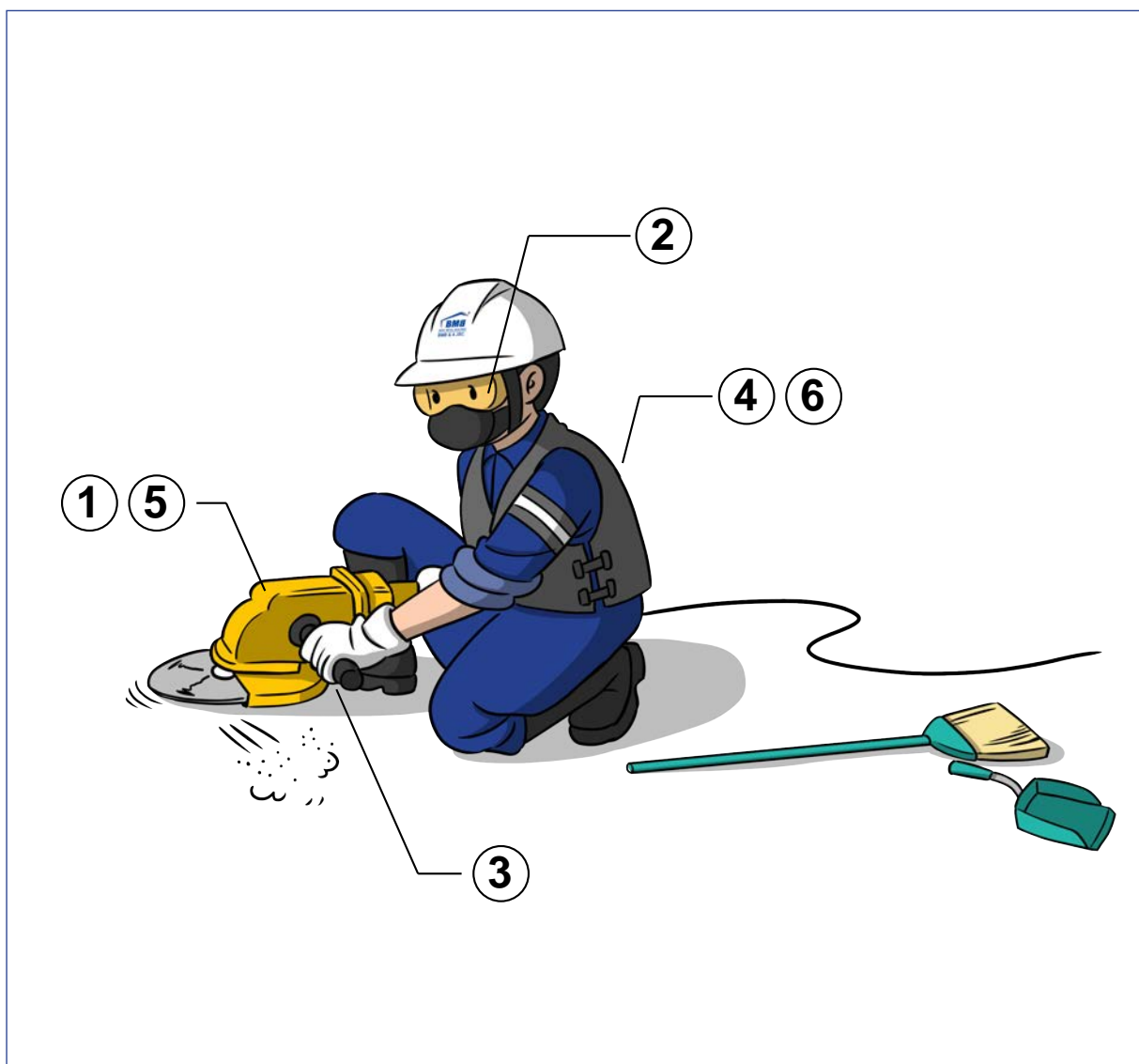
7. Do not leave material on the walkway.

8. Supply lighting for the walkway.



# SAFE USE EQUIPMENT HAND TOOL

- Inspected equipment hand tool before using under all conditions. Approved sticker valid for a certain period posted on tools and equipment. Equipment with gears, belts, coupling, fans, etc., shall not be operated without guards for dust and iron shaves.
- Gloves, glass, or masks must be worn while using grinders, drilling guns, tightening guns.
- Any equipment or tools found on site and which does not meet the HSE requirements may be seized by the safety team. The equipment and tools may be put into the site bonus fund.



# SAFETY FOR ELECTRIC WELDING

- Inspection welding cable and any damage of isolated layer damage.
- PPE must be worn (protective shield, three-fingered welding glove, insulating boots...)
- Welding places must-have equipment for fire fighting and fire prevention.
- Isolate flammable objects in the welding area.
- Insulating for equipment: Welding clamp, electric board, welding cable, power cord,...





# SAFETY FOR TRANSPORTATION & LOADING

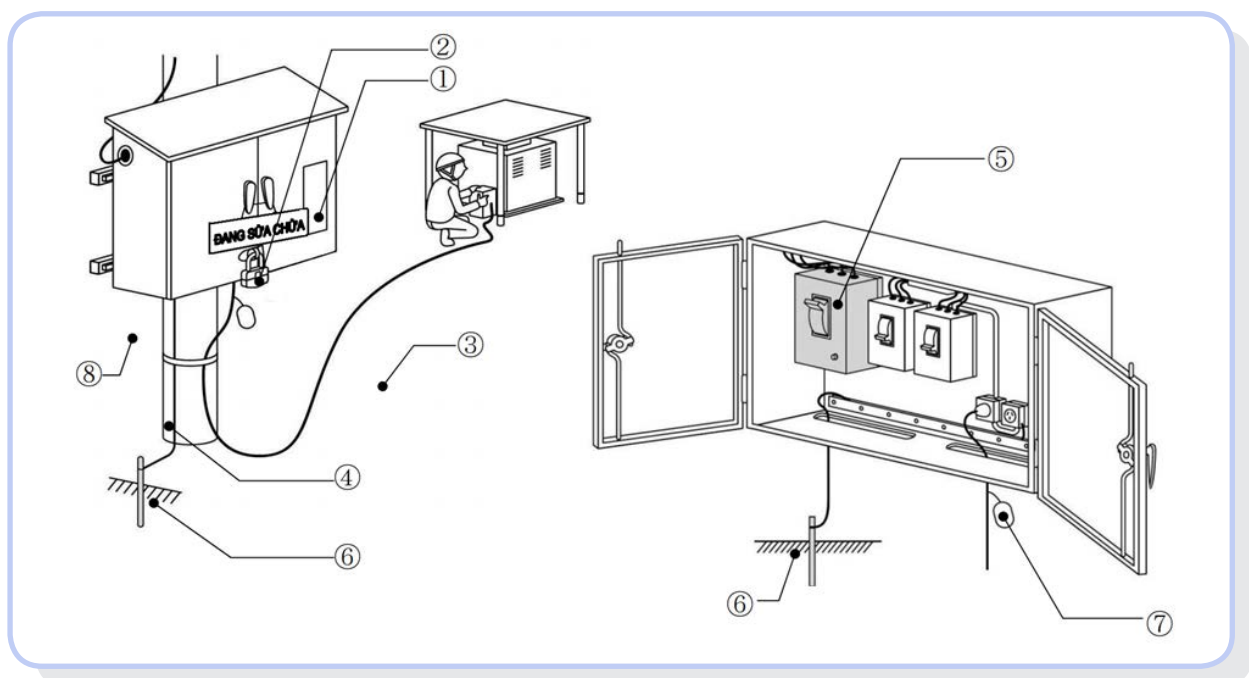
1. Before entering the construction site, trucks must be registered at the gate with a permit before entering the construction site.
2. Limited speed and load of the truck based on ground condition.
3. The travel route must be foreseen to prevent landslides or subsidence of the road surface.
4. Material arranged neatly on the vehicle body. Tie material on the vehicle by cable to prevent crashes.
5. Parking vehicle on flat ground to unload or upload. Parking far from bord pit or swampy.



# SAFE FOR ELECTRICITY USING

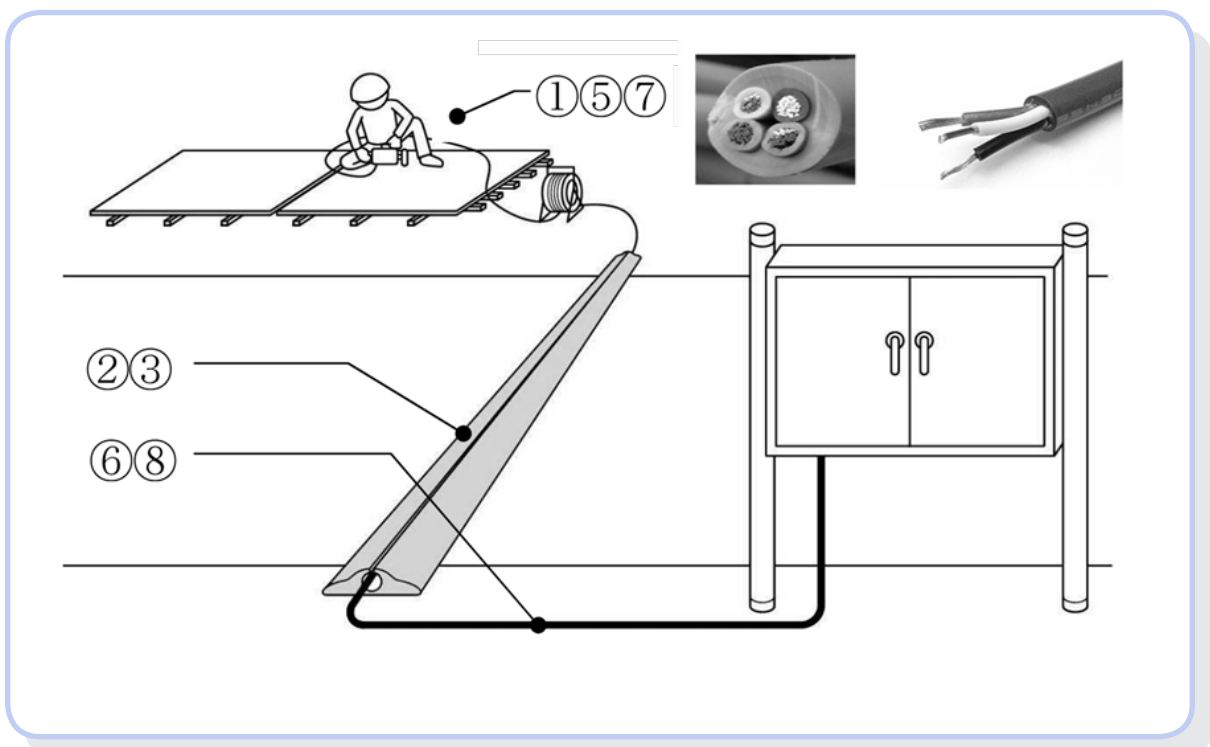
## A. Safety of electrical cabinets.

1. The person in charge of the electrical cabinet is displayed on the cabinet.
2. Post an “under repair” sign and lock it up while the equipment is being repaired.
3. Do not place obstacles near the power distribution cabinets.
4. Electrical cables of all kinds go through openings below the power distribution cabinet.
5. The grounding breaker must be in good working order.
6. The ground wire must be connected to the correct position.
7. Circuit breakers must be put in a recognizable place.
8. The electrical cabinet elevation height is 1.5m from the ground.



## B. Temporary power cables.

1. Power cables may not be exposed to high temperatures.
2. Power cables along the walkway must be properly protected.
3. The cable covering material may not be damaged.
4. Non-fixed power cable is a type of cable with insulation: “cable”, cable sheathed with vinyl or rubber.
5. Do not place heavy objects on power cables.
6. Waterproof cables and connecting equipment must be used in wet places.
7. Do not expose the terminals of power cords; they must have a protective outer layer.
8. Power cords must be checked before use.



- Connection the electric machine, power tools, lights and other equipment to electric system by industrial sockets and plugs.



Plug - Socket

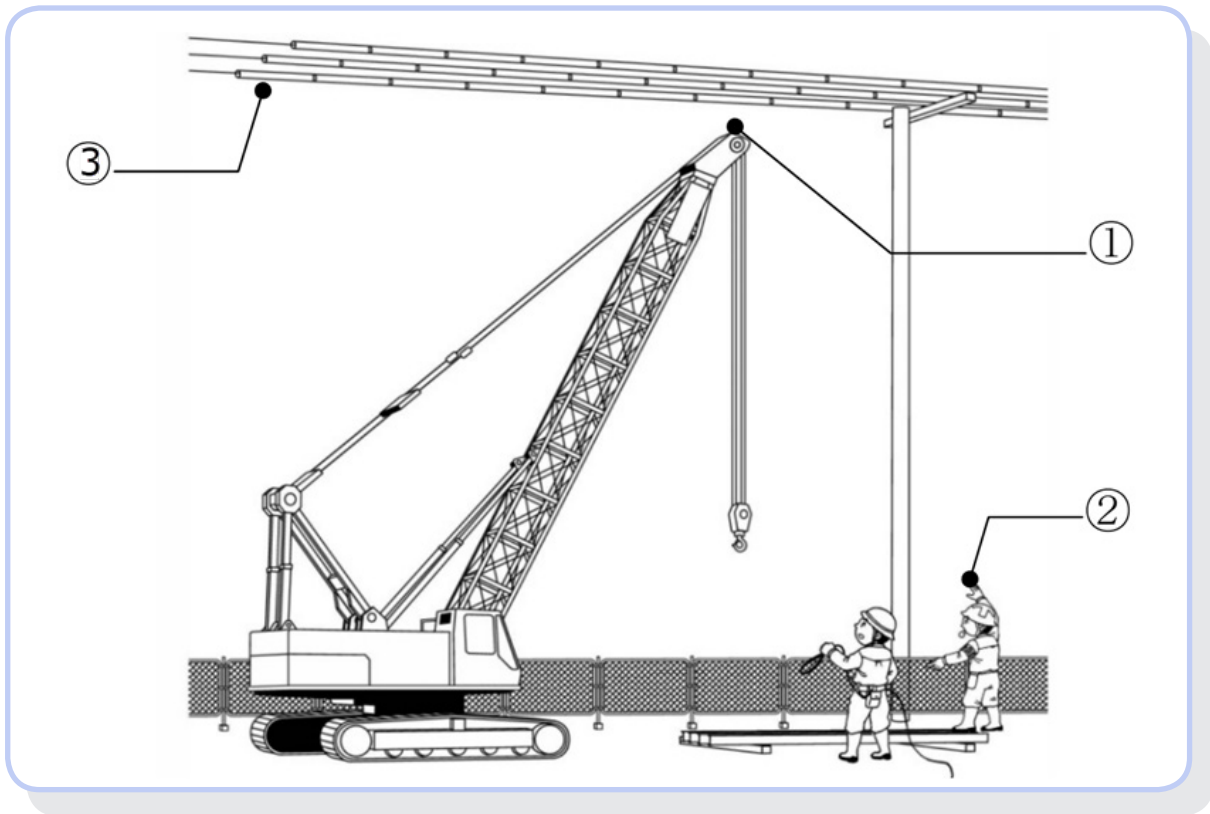
- Electric wires for the construction site must be placed on the bracket carrier at the height of 2.0m from the ground for the construction site and 5.0m for the places where vehicles pass.



## C. Construction near power lines

Erection near power cables, precautions must take to prevent accidents caused by electric shock.

1. Keep a safe distance from live power lines.
2. Arrange a permanent supervisor.
3. Erection near the power line, have to protect the power line with protective rubber cable trays.



SAFE DISTANCE (BY VOLTAGE LEVELS) FOR POWER LINES

Line voltage (KV)	Minimum allowable distance (m)
Below 15	0.7
Above 15 and below 35	1.0
Above 35 and below 110	1.5
Above 110 and below 220	2.5
Above 220 and below 500	4.5

# FIRE FIGHTING AND FIRE PREVENTION

Fire fighting equipment must be arranged at the construction site according to the place of use and the object of fire fighting.

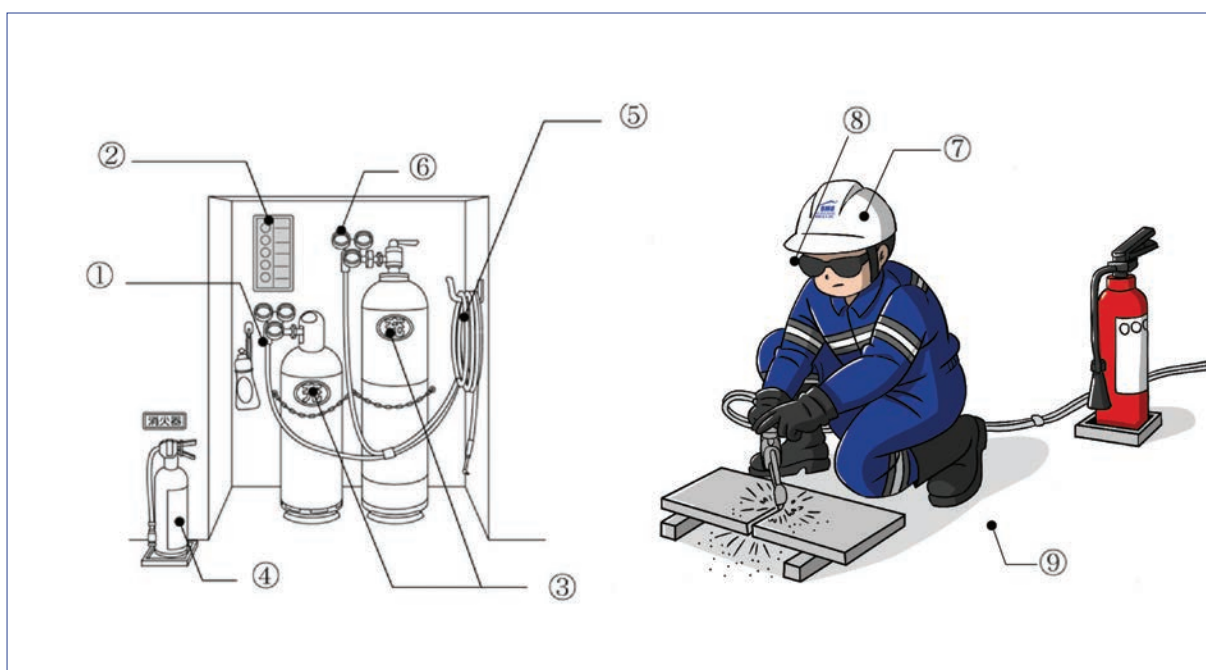
No entry, dangerous, flammable signs must be installed.

Flammable and explosive materials must be placed in a separate store, ensuring ventilation for the store to prevent fire.

The oxygen gas cutting tool must have a fire arrester. Check for any cracks at pipe and pipe connections on equipment. Check for damage and instability of the pressure reducer on the equipment and the pressure of the compressed air. Protective goggles, gloves, and masks for workers must be used.

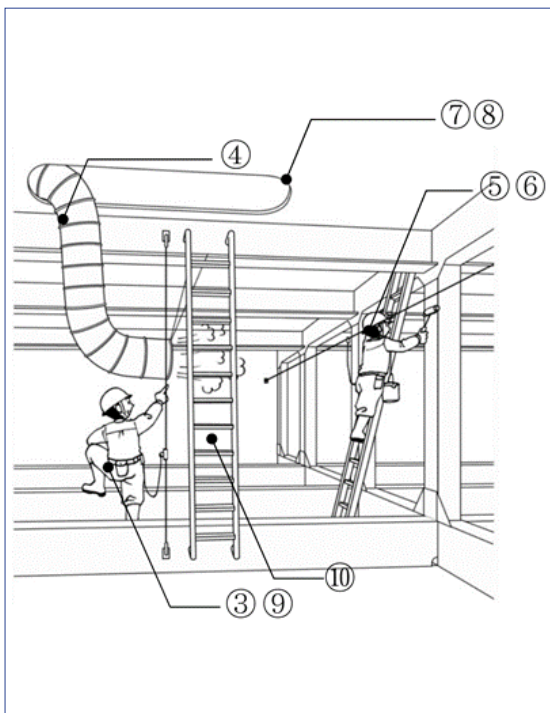
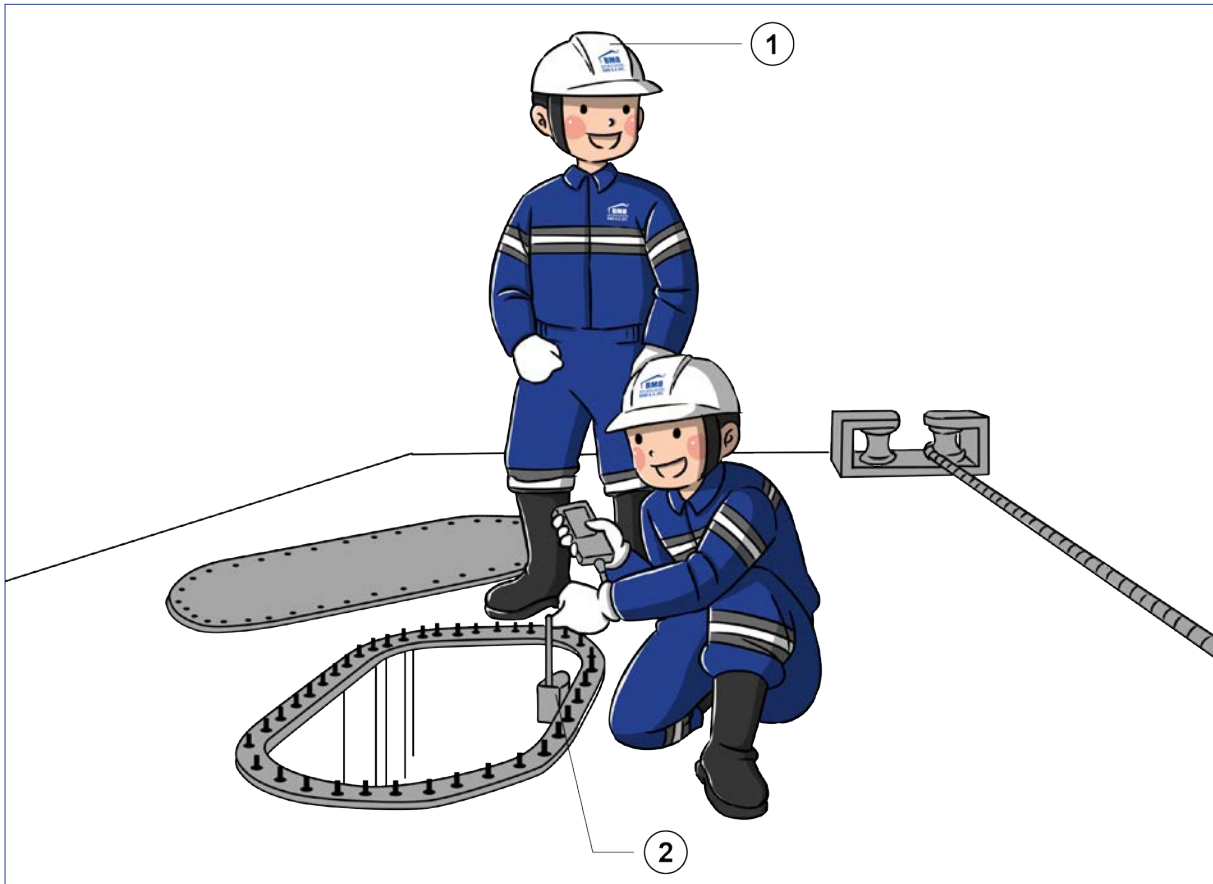
Fire extinguishers must be located at locations where fire hazards. fire-resistant sheets were installed to prevent fire from spreading over a wide area.

Be calm when fire fighting, disconnecting the circuit breaker, isolating the fire, not letting it touch the surrounding materials. Use a fire extinguisher, water, or sand to put out the fire. Quickly notify the nearest fire department for assistance.



# PREVENTION HEALTH CONFUSION

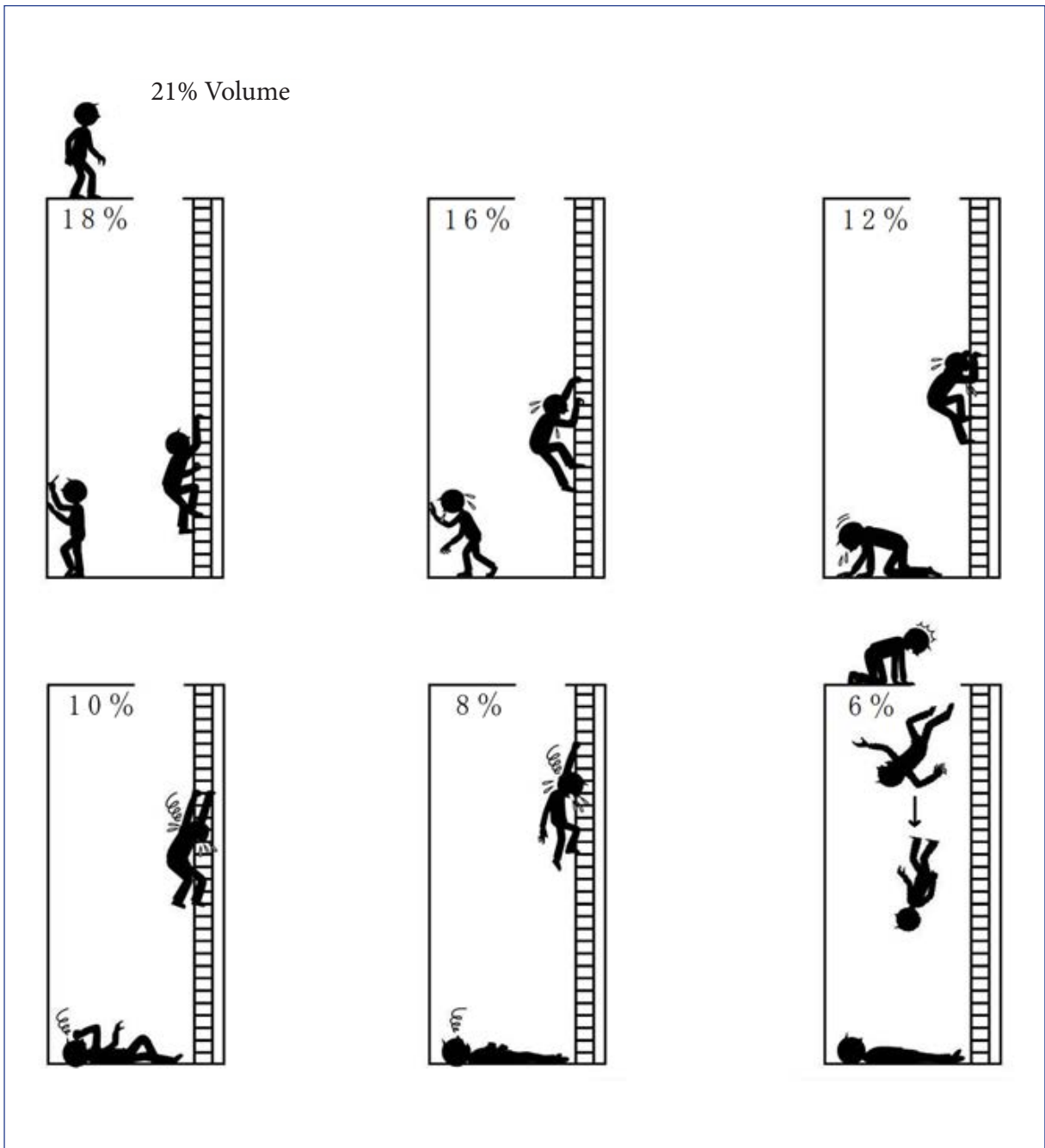
## 1. Hypoxic



- Hypoxic when working in underground tunnels, manholes, was closed for a long time.
- Oxygen content at workplaces must be measured before starting work.
- Safety belts must be used for workers working at height or when moving down the tunnel.
- Prepare emergency equipment oxygen masks, ladders, ropes. The number of people working in the underground tunnel must be counted before and after work.
- All workers must stop work immediately and exits from the job site when there is a possibility of hypoxic.

### Oxygen content and hazard hypoxic

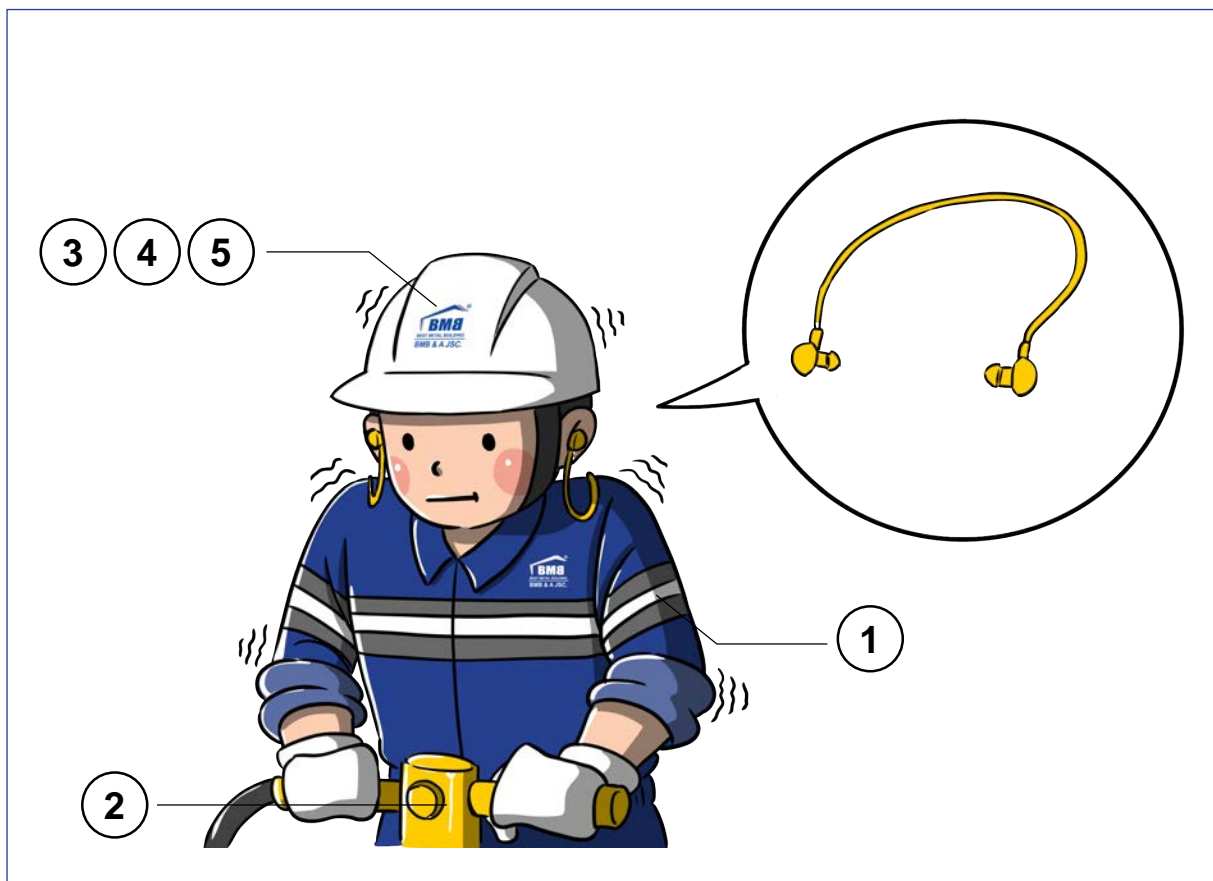
21%: Normal oxygen content equal to the ground level.
18%: Safe limit yet requiring further ventilation.
16%: Increased breathing and heart rate, headache, nausea.
12%: Dizziness, nausea, inability to balance oneself (Risk of accident due to fall from high).
10%: Pale face, unconsciousness, vomiting, airway obstruction.
8%: Unconsciousness, coma, convulsions and death within 6 minutes.





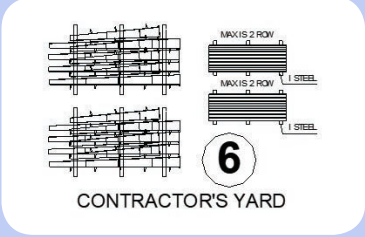
## 2. Vibration, noise and dust

- Vibration and noise caused by drilling work, tightening connection bolts.
- Provide PPE (gloves, earplugs) for workers doing jobs with vibration and noise.
- Machines with low vibration and noise are recommended.
- Masks must be used when working in dusty places. Spray water to keep moisture to prevent dust from spreading
- Give safety instructions for workers in performing works with elements of vibration and noise.
- Working time must be limited when performing jobs with elements of vibration, noise, and dust. Workers cannot work out the prescribed limits of working hours.



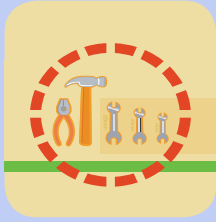
# SITE CLEANING AND SAFETY FACILITIES

**1** Arrange materials neatly and do not place them directly on the ground, do not place materials on the walkway or obstruct machinery and equipment moving.



**2** Displacement materials such as bolts, tape, stud bolts, screws, plugs etc., must be stored in a dry place and protected from rain. Metal sheets, flashing firmly tie and making a slope for rainwater drainage. The material yard must have protective fences.

**3** Do not leave construction tools indiscriminately in the store. Construction tools must be kept in boxes or hang on hooks.



**4** Build a store to keep dangerous chemicals.

**5** Set up a garbage collection area and classify garbage such as construction materials waste, domestic garbage, garbage containing chemicals, etc.

**6** Set up smoking areas with signs and fire extinguishers included.

7



Setup temporary resting areas for workers around the construction site. The temporary resting area, which is required to be well ventilated, free from dust and noise pollution, supplies some chairs, a roof cover, and a rubbish bin at rest areas. The number and size of temporary rest areas depend on the project.

8

Set up a lighting system for working at night. Limiting erection works at height when it is dark. Priority working at underground such as moving materials, structural combinations, painting work at the ground.

9

Provide clean drinking water for workers at temporary rest areas.

10



Provide medical beds, medicine cabinets, and first aid equipment at the construction site. Nurses must always be on duty at the construction site during the construction site uptime.

11

Provide toilets with complete equipment such as sinks, toilets, soaps, water and arrange to be cleaned daily. The number of toilets depends on the number of workers using it with a standard of no more than 30 people / 1 toilet.



## Scope of application:

Construction and erection sections.

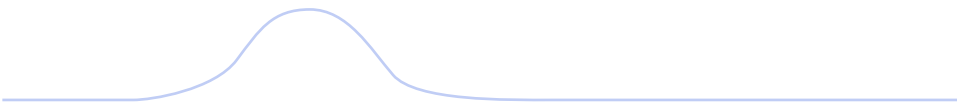
- BMB workers
- Subcontractors, Suppliers.
- HSE, BMB staff.

Penalties:

- Occupational Safety staff takes pictures of violating workers => makes records => sends a notice of the penalty form and the specific amount of fines to the Team Leaders weekly.
- The total amount of fines for occupational safety violations will be summed up and deducted from the bonus for each work item after the project final settlement is completed.

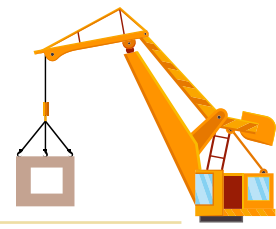
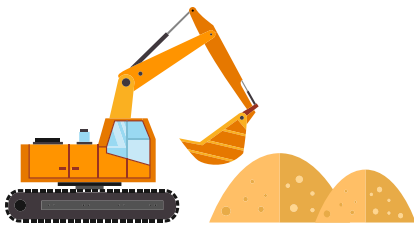
NO	Content	Penalty/Bonus	Remedial measures	Note
I. Personal acts of violations in work.				
1	Using stimulants or explosives when working (wine, beer, drugs, etc.)	10 USD	Being exiled from the work	
2	Entering or leaving the construction site without a card.	50 USD	Having one's violation recorded	
3	Not wearing PPE, shoes, hats, vests, gloves, welding glasses for welding and cutting operations, safety belts for tasks done at height.	10 USD	Having one's violation recorded	
4	Wearing one's hat without locking the straps, wearing seat belts not in accordance with regulations.	50 USD	Having one's violation recorded	
5	Not joining the weekly safety sessions.	10 USD	Having one's violation recorded and being retrained	
6	Employing workers under 18 years of age or illegal labours.	50 USD	Having one's violation recorded and being exiled from the work	
7	Joking on the construction site.	10 USD	Having one's violation recorded	
8	Opposing the Superintendent, Supervisor, Safety Supervisor, disobeying orders and regulations of the construction site.	10 USD	Having one's violation recorded, and being exiled from the work	

9	Defecating in the wrong place.	10 USD	Having one's violation recorded	
10	Disposing of garbage in the wrong place.	10 USD	Having one's violation recorded	
11	Committing theft or destruction of properties on the construction site.	100 USD	Exiled from the construction site Having one's violation recorded	
12	Parking one's vehicles in the wrong place	5 USD	Having one's violation recorded	
13	Arbitrarily entering or leaving areas with prohibition signs, warning flags, and announced dangerous areas.	100 USD	Having one's violation recorded	
14	Not having sufficient dossiers on workers and arbitrarily employing workers without input training.	5 USD / PERSON	Having one's violation recorded	



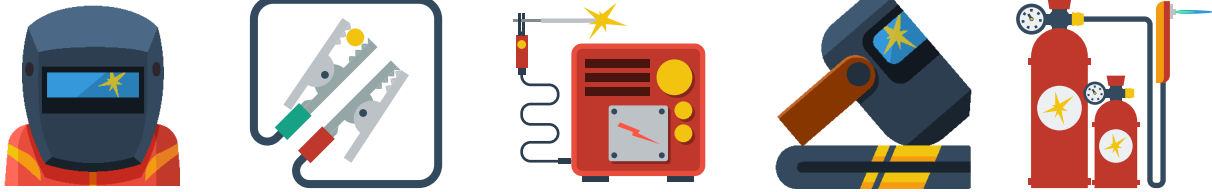
II. Safety rules for working at height (> 2m, or < 2m where tasks are done above thorny, dangerous objects)				
1	Not wearing safety belts or safety hooks.	10 USD	Having one's violation recorded	

2	Not equipping oneself with lifelines or life nets.	10 USD	Having one's violation recorded	
3	Letting materials fall to the bottom.	10 USD		
4	Not equipped with securing wires for construction equipment such as locks, hammers, bolting machines, etc.	10 USD		
5	Constructing without warnings below, warning wires or signs.	10 USD		
6	The scaffolding not being guaranteed, without planks, cross braces or ladders, etc.	10 USD		
7	Scaffolding 3 layers do not supply pipe support to prevent fall.	10 USD		
8	Using ladders without anchors, ladders not being secured.	10 USD		
9	Minimum scaffolding with 2 planks or more.	10 USD		
10	Using a mobile scaffolding while people and materials remain on it.	10 USD		



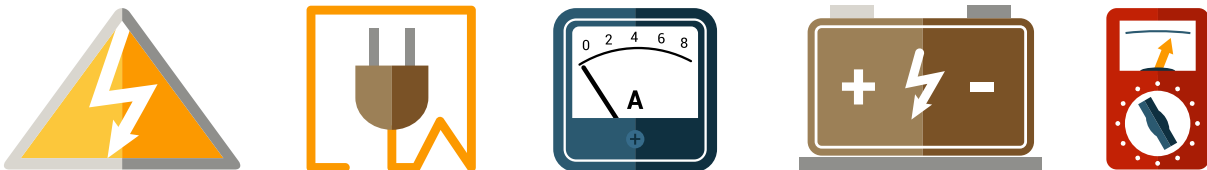
III. Rules on lifting equipment				
1	Constructing without a work permit, not checking against the checklist.	10 USD		
2	The crane footing not being fully deployed, the crane's footing base not being in place.	50 USD		
3	Deliberately performing craning tasks when the safety of cables, shackles and hooks is not ensured.	50 USD		
4	The crane driver using mobile phones and joking around during craning operation.	50 USD		
5	Loading the crane in imbalance, not complying with requirements.	50 USD	Having one's violation recorded, being re-trained in craning operation	
6	Lifting or lowering equipment or materials exceeding the allowable load.	50 USD		
7	The crane assistant or driver does not have class 3 safety certificates for craning operation.	20 USD		
8	Not placing warning bands or warning signs at the craning area.	10 USD		
9	Removing or disabling the limiter tripping device during lifting.	50 USD		
10	Arbitrarily letting others drive or replace one's role without informing the Safety Committee or without assignments.	50 USD		





IV. Safety rules on hot work, welding and cutting operations.

1	Processing without certificate and setup fire fighting system.	15 USD	Having one's violation recorded	
2	Use oxygen gas without fire arrestor.	15 USD		
3	Use home-made welding clamp, 1 welding machine attach 2 welding clamp.	15 USD		
4	No worn PPE as safety goggles, gloves, etc.	15 USD		



V. Safety rules on electrical work

1	Using construction equipment without stamping.	15 USD	Having one's violation recorded, faults attributable to warehouse, safety, Construction Teams/Sub-contractors.	
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2	Removing construction protective devices, covers, plugs and so on.	15 USD	Having one's violation recorded	
3	Using zinc wires or not hanging power cords.	15 USD		
4	Not using industrial plugs, using old power cords or unsafe connectors.	15 USD		
5	Not using Leak Proof Circuit Breaker, LECB device.	15 USD		
6	Not covering the equipment when it rains.	15 USD		
7	Not powering off the equipment after construction.	15 USD		



VI. Safety rules on hygiene work

1	Not tidying up the site after finishing the working session.	10 USD	Having one's violation recorded	
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# EFFECTIVE IMPLEMENTATION

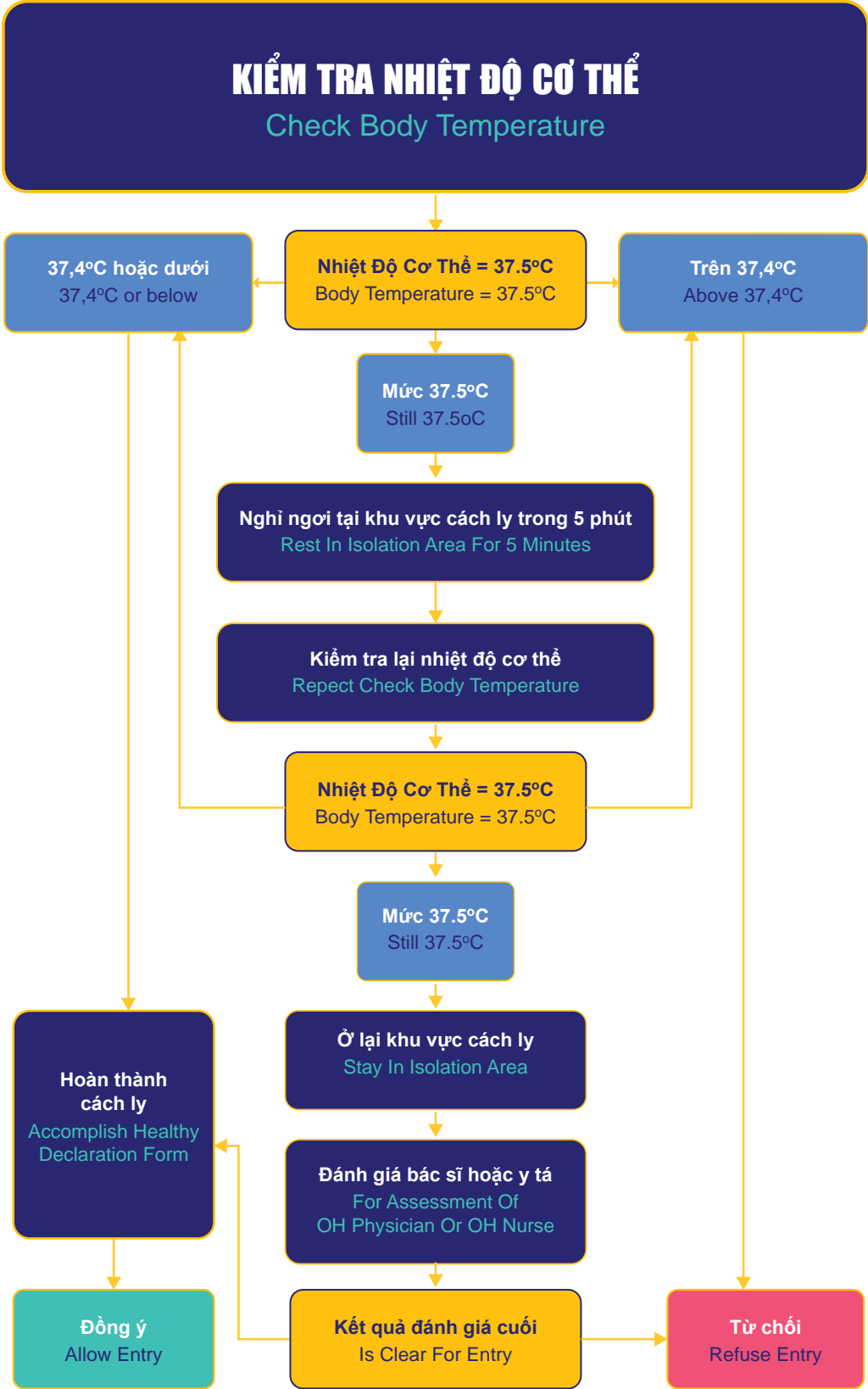
Party B is responsible for disseminating all of these regulations to their workers.

In case any collective or individual does not sign any record of violation, the HSE team will still impose the penalty when there are grounds such as records, photos, or any other relevant evidence. The penalty shall be deducted directly from the payment volume or salary and bonus.

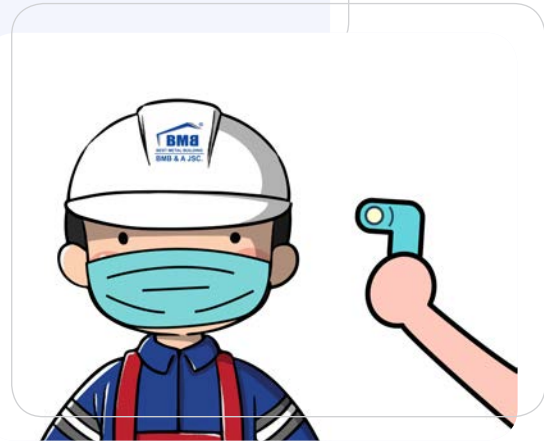
In addition to the above regulations, Party B is responsible for complying with the requirements of the Employee, consultant, or related parties during the working performance

Prepared by	Checked by
Nguyen Xuan Giang Huynh Huyet Dat	Nguyen Van Ha

# COVID PREVENTION MEASURES ON THE CONSTRUCTION SITE



1. Check the body temperature on site.



2. Isolation room for suspected infected people




3. Testing




# 5K AT THE CONSTRUCTION WORKS


**1 Face mask**  
Wear a mask when going work and during yourtime at the company.




**2 Disinfection**  
Regularly wash your hands with soap or antiseptic solutions. Sanitize frequently touched surfaces. Keep your workplace cleaned and well-ventilated; the room temperature must not exceed 25°C.



**3 No gathering**  
Do not gather in large numbers.



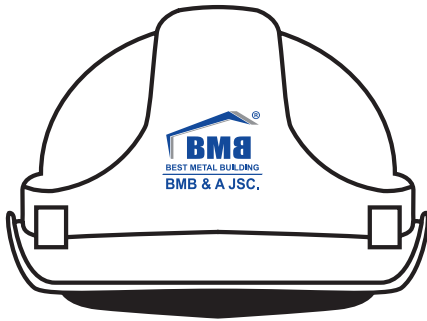
**4 Health declaration**  
When you have signs of **COUGHING, FEVER, SHORTNESS OF BREATH** notify immediately the National Steering Committee for COVID-19 Prevention and Control by hotline: **1900 9095** or the local health authority for instructions on safe medical examination.



**5 Distance**  
Keep a minimum distance of 2m when interacting with others.



# HELMETS FOR HSE STAFF



White version

Blue version



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## Safety Handbook

BEST METAL BUILDING AND ACCESSORY JOINT STOCK COMPANY  
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Hotline: 0767676170  
Website: [bmbsteel.com.vn](http://bmbsteel.com.vn)

