厚生労働省委託
2020 年東京オリンピック・パラリンピック競技大会に係る
建設需要に対応した労働災害防止対策事業

外国人就労者に対する教育テキスト

Training Booklet for Foreign Workers

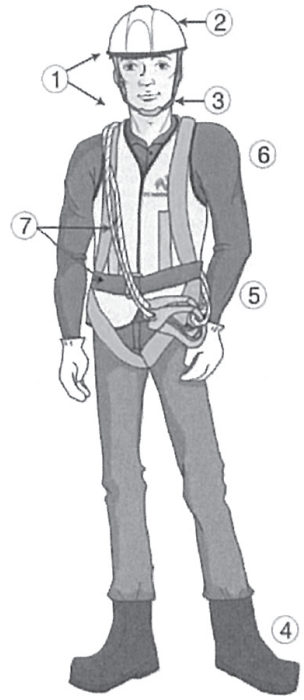
平成 28 年

建設業労働災害防止協会

Contents

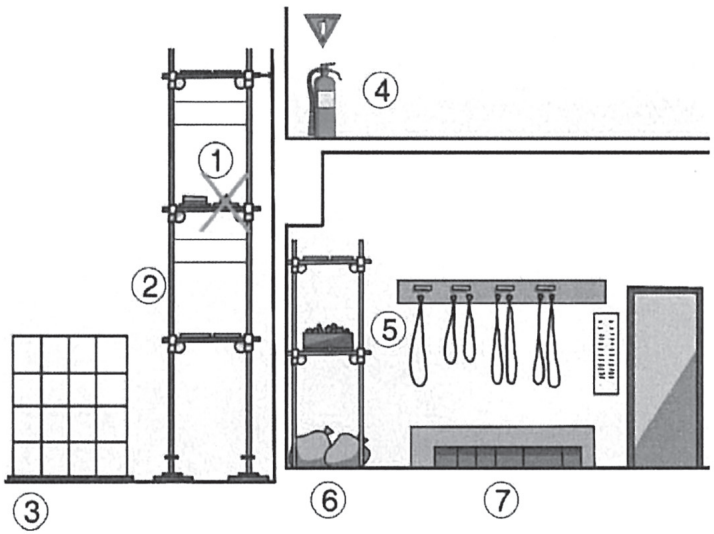
Ⅰ General Management

Ⅰ－1． Work clothes



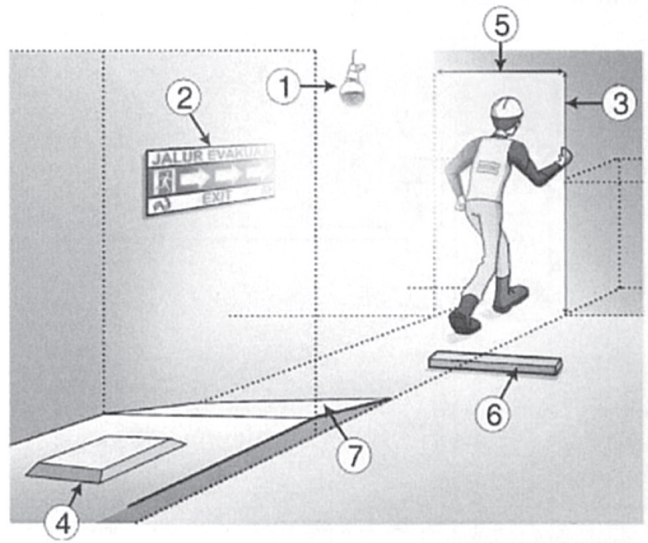
1. Is your helmet and chinstrap undamaged?
2. Is your helmet meant to protect both against falls and falling objects?
3. Is your helmet on straight?
   Is the chinstrap in place?
4. Are you wearing safety boots?
5. Are your sleeves buttoned at the cuff?
6. Do you avoid wearing torn clothes?
7. Are your safety belt and lanyard undamaged?

Ⅰ－2．Keeping things tidy and in order



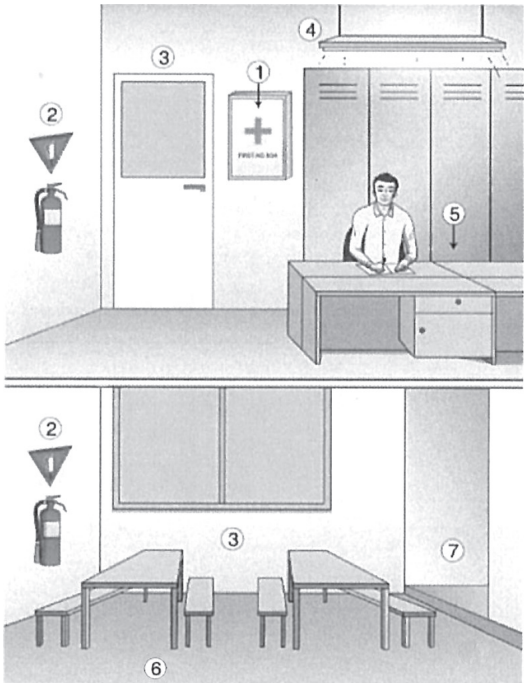
1. Is scaffolding clear of loads or materials that may fall?
2. Is there a safe passageway?
3. Are materials placed parallel to the passageway?
4. Is the area in front of the fuse box and fire extinguisher clear of materials?
5. Are tools and equipment sorted by type?
6. Are unneeded materials properly sorted?
7. Have dangerous materials been removed?

Ⅰ－3．Safe passageways



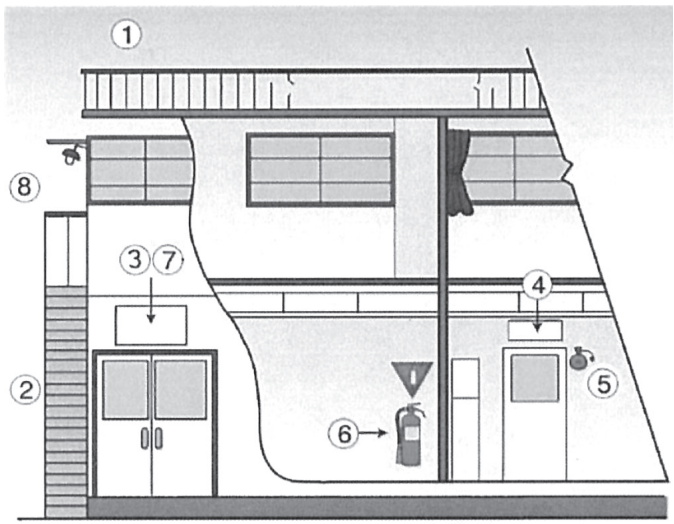
1. Is the lighting in place suitable for the workplace?
2. Are there safe passageways?
   Are they marked clearly?
3. Are there any obstacles in the passageway between the floor and a height of 1.8 meters?
4. Have openings and protruding rebars, etc. been covered?
5. Are safe passageways wide enough?
6. Are safe passageways free of equipment?
7. Are safe passageways slip and stumble free?

Ⅰ－4．Office and rest area



1. Is there a first-aid kit?
   Is there enough medicine?
2. Are fire extinguishers in obvious locations?
3. Is the rest area adequately ventilated?
4. Is it adequately lit?
5. Is the room kept tidy and in order?
6. Are rest facilities in good order?
7. Is there a nap room for those who need a nap?

Ⅰ－5．Dormitory



1. Is the dormitory kept clean, orderly, tidy, and in a hygenic condition?
2. Are passageways and stairs free of objects?
3. Is the name of the administrator displayed?
4. Is each occupant's name displayed?
   Is the capacity indicated?
5. Is there an emergency alarm?
6. Is there firefighting equipment?
7. Are dormitory rules posted?
8. Is there an evacuation staircase if the dormitory has bedrooms on the second floor?
   (Are there two staircases if there are 15 or more occupants?)

Ⅰ－6．Fire-prevention equipment

1. Is the name of the person responsible for fire prevention displayed?
2. Is there water in all ashtrays?
3. Is there a designated smoking area?
4. Is there a fire extinguisher in the smoking area?
5. Are there signs for fire extinguishers?
6. Is the smoking area free of combustibles?

Ⅰ－7．Safe work cycle

Ⅰ－8．Safety signs

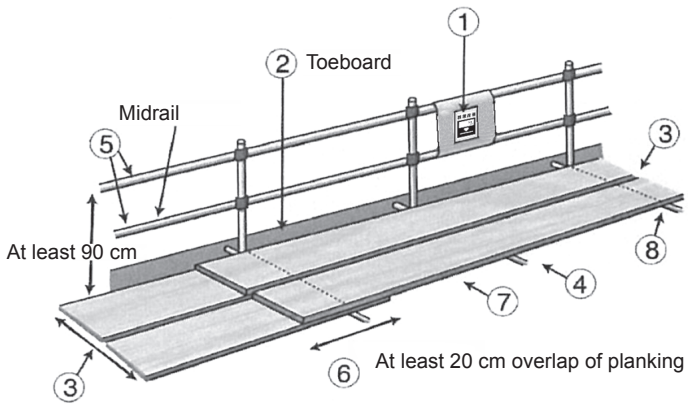
Safety signs are posted on the worksite, at dangerous spots and locations with mutually agreed upon rules. Understand what the signs mean and obey them.

Ⅰ－9．In the event of an accident

1. Are first-aid supplies available?
2. Is there a stretcher?

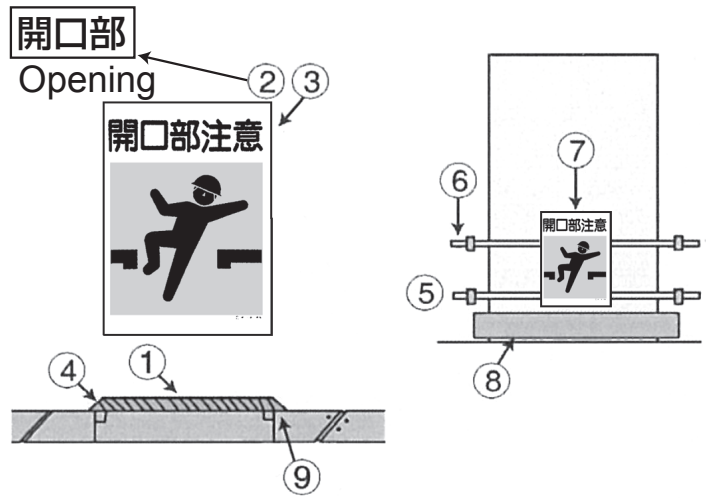
Ⅱ　Preventing Accidents due to Falls and Falling Objects

Ⅱ－1．Working platform



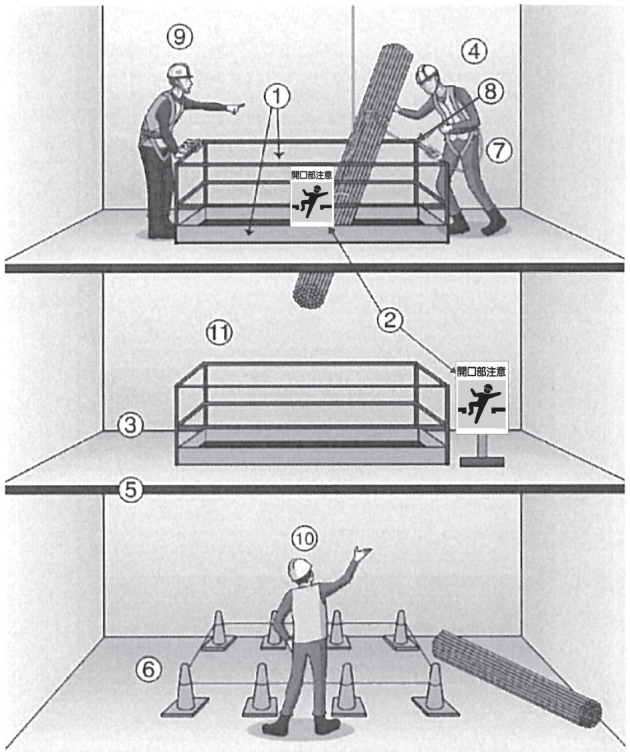
1. Are there signs indicating loading capacity?
   Are loading limits observed?
2. Is there a toeboard? (places where there is a danger of falling)
3. Is the platform at least 40 cm wide?
   Are gaps no more than 3 cm wide?
4. Is the support for the planking no more than 1.8 m long?
5. Is there a sturdy handrail at a height of at least 90 cm?
   Is there a midrail?
6. Do planks overlap each other by at least 20 cm?
7. Is planking supported at at least three points? (in the case of 4-meter long planks)
8. Is planking firmly secured?

Ⅱ－2．Openings



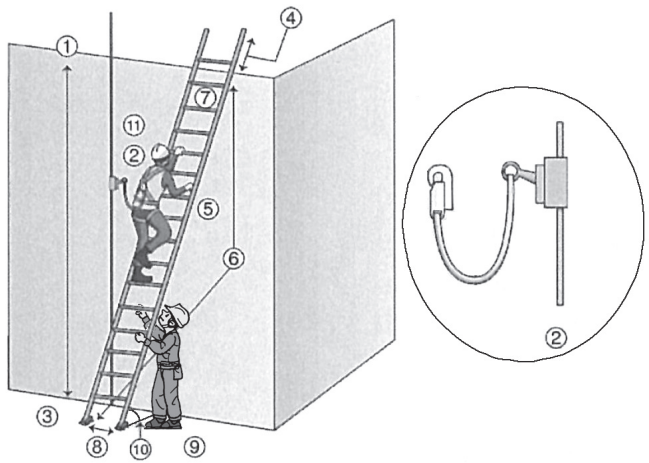
1. Have strong, durable materials been used for the opening cover?
2. Is the opening cover marked with a warning?
3. When the cover is opened for use, is the opening enclosed with a barricade prohibiting entrance?
4. Is the cover constructed so as to prevent stumbling?
5. Is the guardrail strong enough?
6. Has a strong, sturdy handrail been installed?
7. Is there a sign on the handrail marking the opening?
8. Are toeboards installed?
9. Is the opening closed when not in use?

Ⅱ－3．Working around openings



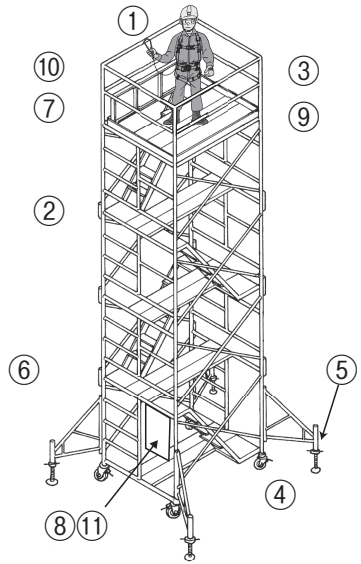
1. Is there a handrail at a height of at least 90 cm?
   Is there a toeboard?
2. Are there signs warning of the opening?
3. Is the area around the opening kept tidy and in order?
4. Has an appropriate area been selected for lifting and receiving loads?
5. Do you avoid performing multi-layer work?
6. Are safety barricades in place?
7. Are safety belts used when receiving objects?
8. Are you using a guide rope for long objects?
9. Is there an operations leader directing rigging work?
10. Are workers performing rigging work licensed to do so?
11. Has a horizontal safety net been installed?

Ⅱ－4．Moveable ladders



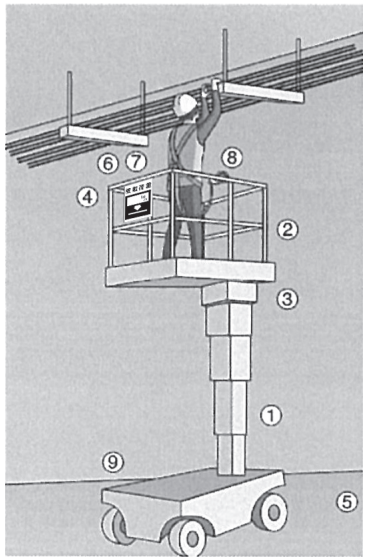
1. Has equipment been installed allowing safe scaling of heights and depths in excess of 1.5 m?
2. Are you using lifelines and safety grips when there is a danger of falling?
3. Are ladders stable?
4. Is the top of the ladder protruding at least 60 cm above its resting point?
5. Do you avoid undertaking work on a ladder that produces a rebound effect?
6. Are you using anti-slip rubber?
7. Is the distance between rungs equally spaced?
8. Is the ladder at least 30 cm wide?
9. Are other workers holding the ladder steady?
10. Is the ladders set at an angle of approximately 75 degrees?
11. Are you climbing up and down the ladder with nothing in your hands?

Ⅱ－5．Rolling towers



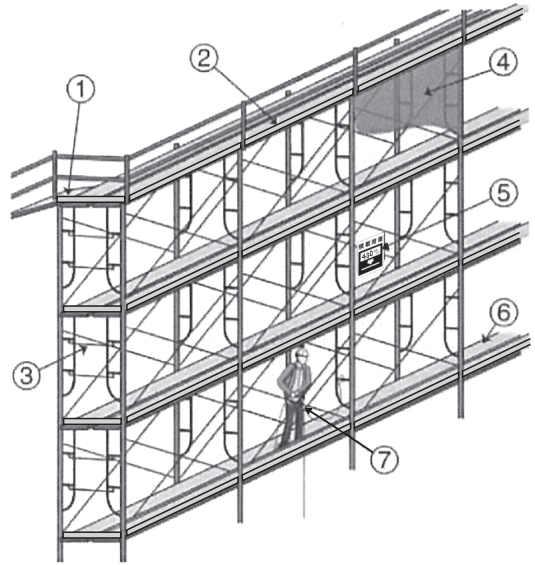
1. Are you using a safety belt?
2. Are there facilities allowing vertical access?
3. Do you climb up and down with nothing in your hands?
4. Do all four wheels of the tower have brakes?
5. Have outriggers been properly set up?
6. Are towers moved only when no one is on them?
7. Is the tower within the height limitation of five levels?
8. Is there a sign indicating who is in charge?
9. Do you avoid using a stepladder or stand on the working platform?
10. Is there a handrail at a height of at least 90 cm?
11. Has a checklist been posted?

Ⅱ－6．Boom lifts



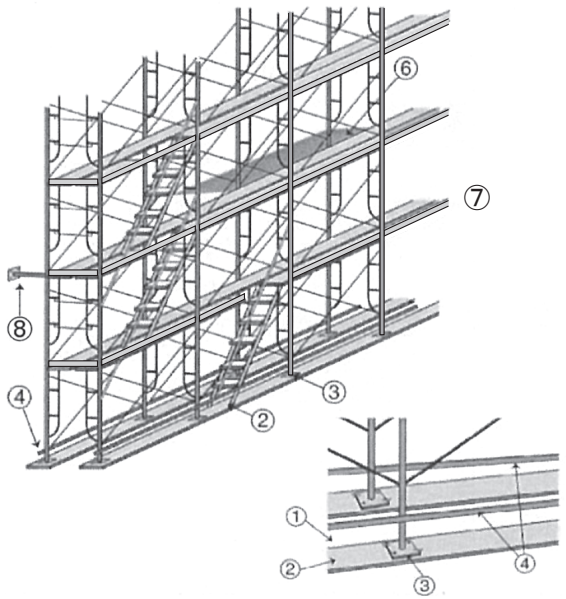
1. Are all parts and wire rope undamaged?
2. Are the working platform and lifting apparatus in good condition?
3. Is the safety apparatus operating normally?
4. Is there a sign indicating loading capacity?
5. Is the work site flat?
6. Do you avoid leaning out over the guardrail?
7. Do you avoid using a stepladder or stand on the working platform?
8. Are you using a safety belt?
9. Do you avoid lowering the working platform before moving the boom lift?
10. Are the outriggers in good condition?
11. The use of boom lifts on inclines is prohibited.

Ⅱ－7．Framework scaffolding (upper section)



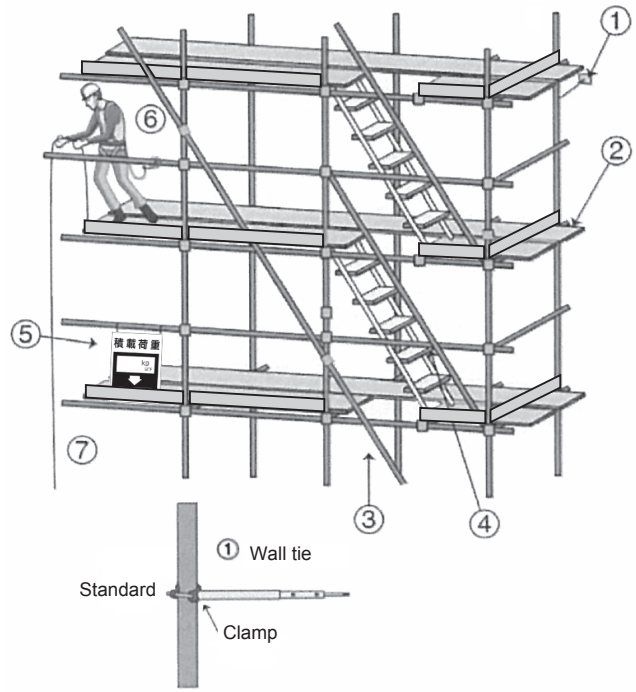
1. Is there a passageway between the scaffolding and the building?
2. Is the scaffolding clear of materials?
3. Have terminal blocks been installed?
4. Has vertical netting been installed?
5. Is the load less than 400 kg per span?
6. Is the working platform at least 40 cm wide?
   Are gaps in the working platform no more than than 3 cm wide?
7. Are you using a safety belt on the scaffolding?
8. Is the space between the scaffolding and the building no more than 30 cm?
9. Has horizontal netting been installed where gaps exceed 30 cm?

Ⅱ－8．Framework scaffolding (base section)



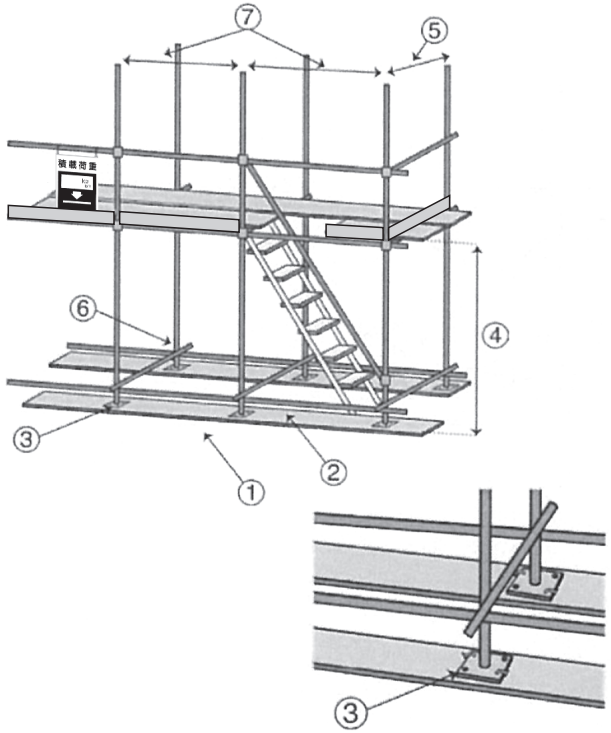
1. Has the ground surface been compacted?
2. Have baseplates been used?
3. Have jack bases been secured to the sill with nails?
4. Are the lower parts of standards connected with ledger pipes?
5. Is the space between the scaffolding and the building no more than 30 cm?
6. Has horizontal netting been installed where gaps exceed 30 cm?
7. Have braces been installed throughout the scaffolding?
8. Have wall ties been properly installed?

Ⅱ－9．Pipe scaffolding (upper section)



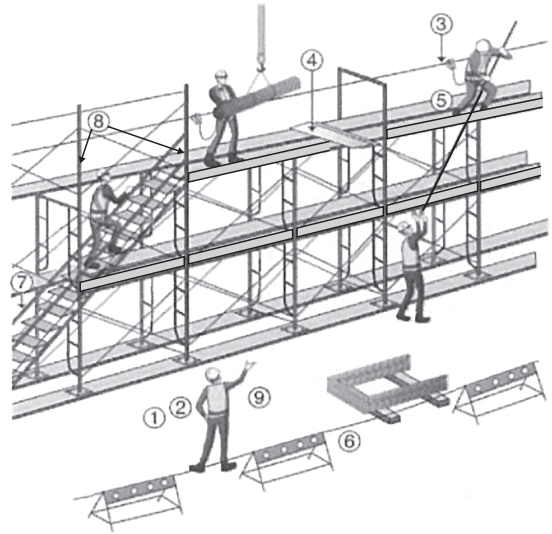
1. Have wall ties been properly installed?
2. Is the working platform at least 40 cm wide?
   Are gaps in the working platform no more than than 3 cm wide?
3. Are long diagonal braces bound tightly to all standards?
4. Are there appropriate facilities for vertical access?
5. Is there a sign indicating loading capacity?
6. Are you using a safety belt on the scaffolding?
7. Is the load less than 400 kg per span?

Ⅱ－10. Pipe scaffolding (base section)



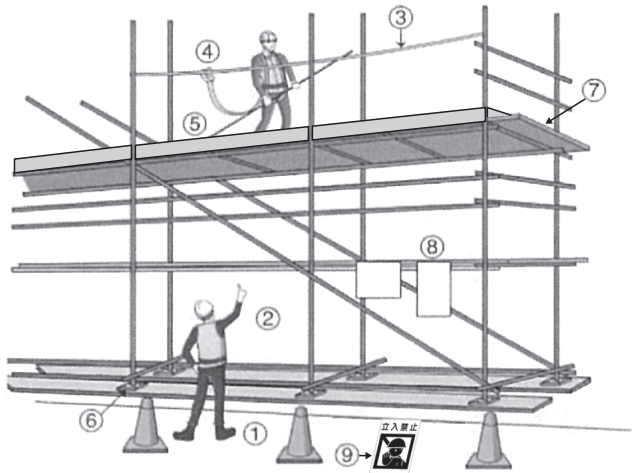
1. Has the ground surface been compacted?
2. Have baseplates been used?
3. Have pipe bases been secured to the sill with nails?
4. Is the first level platform no higher than 2 m?
5. Is the width of the scaffolding no more than 1.5 m?
6. Are the lower parts of standards connected with ledger pipes?
7. Are spans between standards no more than 1.85 m wide?

Ⅱ－11. Assembling and dismantling framework scaffolding



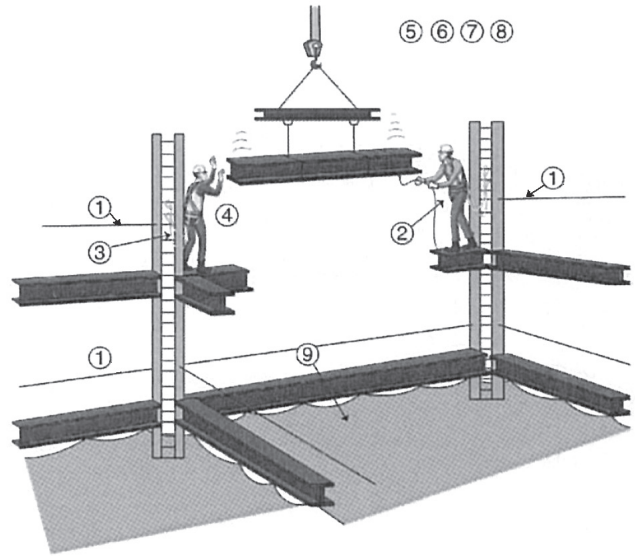
1. Has an operations chief or operations leader been appointed?
2. Has a signalman been appointed for the lifting and lowering of materials?
3. Is there a lifeline?
   Are you using a safety belt?
4. Are any materials on the scaffolding unstable?
5. Do you avoid throwing materials down from the scaffolding?
6. Have barricades and Do Not Enter signs been put in place?
7. Have vertical access facilities been installed for each level?
8. Is the interval between lifeline posts no more than 10 m?
9. Do workers have the necessary licenses?

Ⅱ－12. Assembling and dismantling pipe scaffolding



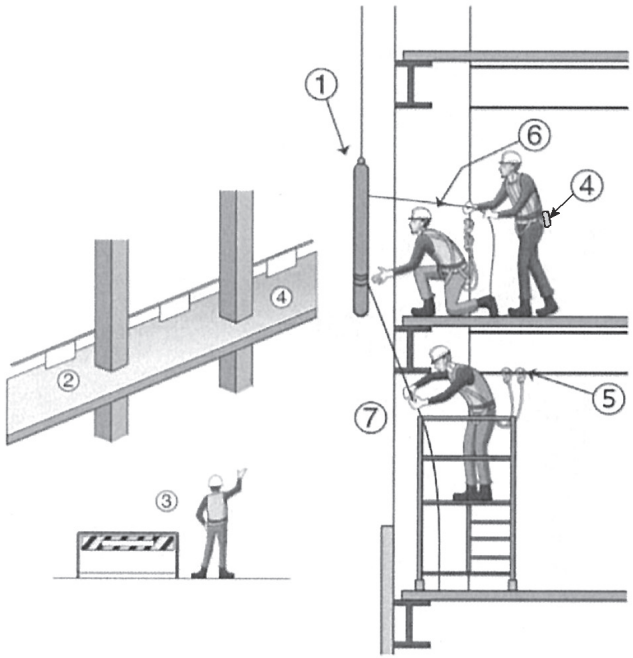
1. Has an operations chief or operations leader been appointed?
2. Has a lookout or signalman been appointed?
   Is there a sign indicating that person?
3. Is there a lifeline?
   Is the interval between lifeline posts no more than 10 m?
4. Are you using a safety belt?
5. Do you avoid performing multi-level work?
6. Have baseplates been used?
   Are pipe bases secured with nails?
7. Is planking firmly secured?
8. Is there a sign indicating the operations chief?
9. Have barricades, rope, and Do Not Enter signs been put in place?

Ⅱ－13. Steel frame erection



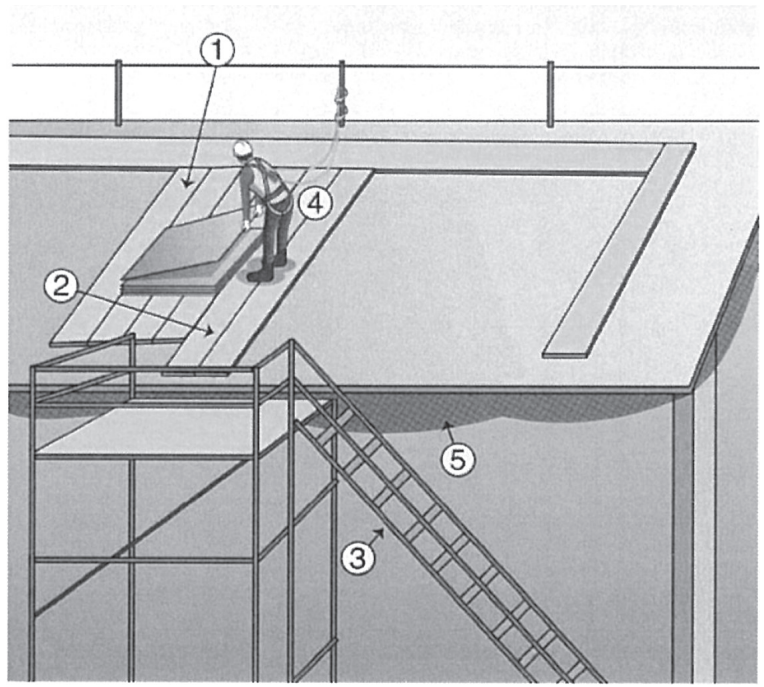
1. Is there a lifeline?
   Is the interval between lifeline posts no more than 10 m?
2. Are you using a safety belt?
3. Are you using a lifeline and safety grips when climbing up and down?
4. Do you have a toolbelt?
5. Are you using appropriate signaling methods with the crane operator?
6. Is the steel frame erected properly based on an assembly plan and work procedures?
7. Has an operations chief or operations leader been appointed?
8. Have barricades, rope, and Do Not Enter signs been put in place?
9. Has a safety net been installed?

Ⅱ－14. Installing precast concrete exterior wall panels



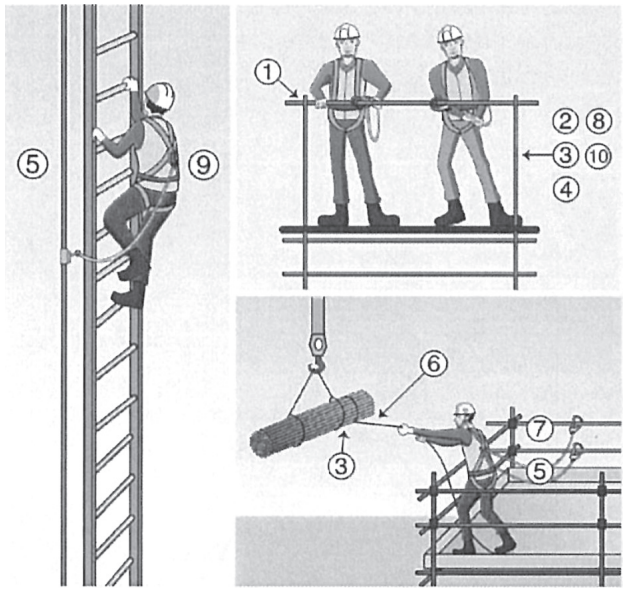
1. Are precast concrete panel hooks in normal condition?
2. Have fall prevention measures been taken under the installation site?
3. Has a lookout been stationed?
   Have barricades, rope, and Do Not Enter signs been put in place?
4. Do you have a toolbelt for small items?
   Are lines attached to tools to prevent falling?
5. Are you using a safety belt?
6. Are you using guide ropes?
7. Did you reset the safety net after installing the precast concrete panel?

Ⅱ－15. Slate roof work



1. Are materials used on the roof placed on top of planking?
2. Are passageways at least 30 cm wide?
3. Is there adequate access to the roof?
4. Are you using a safety belt?
5. Is there a horizontal net?

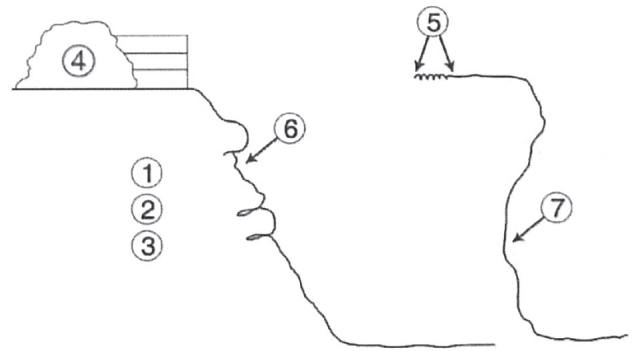
Ⅱ－16. Using safety belts



1. Are your safety belt and lanyard undamaged?
2. Is your safety belt attached at the level of your hipbone?
3. Is the D ring positioned at the level of your hipbone?
4. Are the hooks placed higher than your waist?
5. Are you using a safety belt in danger zones?
6. Are you using a guide rope to control materials?
7. Are the attachment points for safety belts (hooks) strong enough?
8. Is the lanyard in contact with anything that has an acute angle?
9. Are you using a lifeline and safety grips on access ladders?
10. Do you avoid placing your body weight on the safety belt?

Ⅲ Preventing Collapses and Cave-ins

Ⅲ－1－1. Excavation work

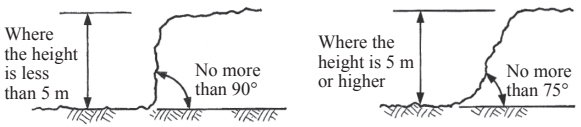


1. Items to investigate before excavation work:
   * Form, geology, and stratum
   * Cracks, groundwater, and spring water
   * Underground installations (cables, gas pipes, and water pipes, etc.)
   * Gushing gas or water
2. Has an operations chief been appointed for excavations over 2 m?
3. Has an operations chief been appointed for shoring work?
4. Has all surplus soil been cleared from the top of the slope after excavation?
5. Has the area been checked for loose stones and cracks?
6. Is the face of the slope covered during rain?
7. Is there no undermining?
8. Is there adequate lighting at night?

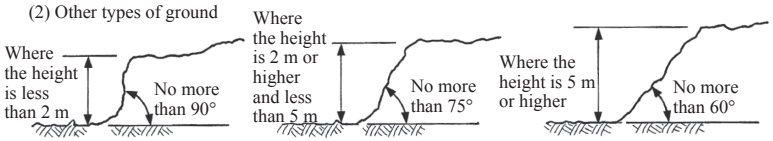
Ⅲ－1－2．Excavation work

Has surface soil and loose rock that could collapse been removed?

(1) Ground composed of bedrock or hard clay

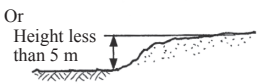


(2) Other types of ground



(3) Ground composed of sand

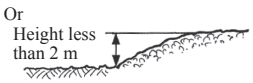
Or



• Make the gradient no more than 35° or the height less than 5 m.

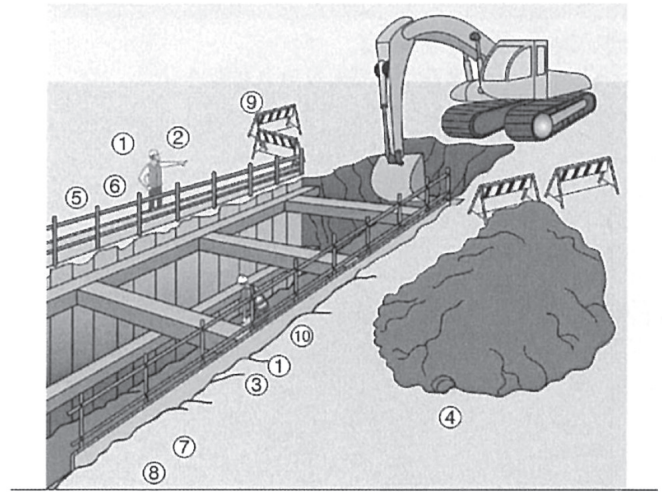
(4) Ground in a collapse-prone state due to blasting, etc

Or



• Make the gradient no more than 45° or the height less than 2 m

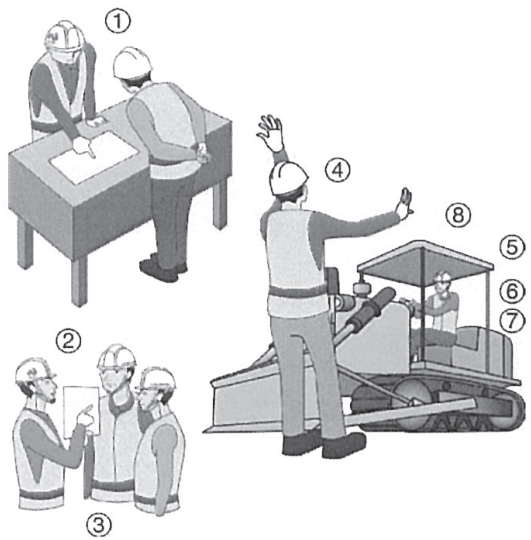
Ⅲ－2．Shoring work



1. Has an operations chief been appointed for excavations over 2 m?
2. Is there a checklist related to cracks and falling rocks?
3. Is the shoring work carried out according to plan?
4. Is excavated soil put in a safe location?
5. Is there shoring and a guardrail where the depth is 1.5 m or greater?
6. Were the waling and struts installed early?
7. Has an operations chief been appointed?
8. Do you check the condition of the ground before starting work? Do you check the condition of the ground after rain and earthquakes?
9. Have barricades and Do Not Enter signs been put in place?
10. Are there any stairs?

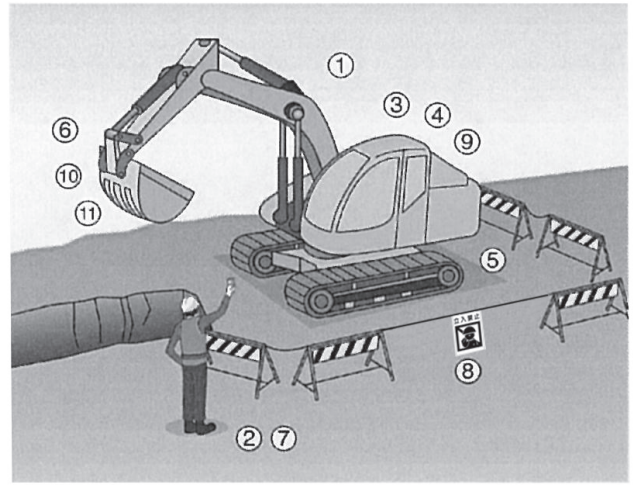
Ⅳ Preventing Accidents with Construction Equipment, etc.

Ⅳ－1． Working with construction vehicles



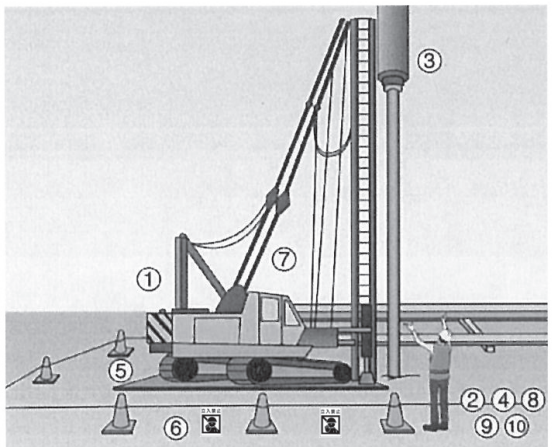
1. Has a work plan for construction vehicles been drawn up?
   • Type and capability
   • Operation routes
   • Work methods
2. Has the stationing of workers been determined before starting work?
   Have dos and don'ts been explained to all persons concerned?
3. Have all vehicles been checked before starting work?
   (Statutory inspection and voluntary inspection)
4. Have flaggers been appointed?
   Are signals standardized?
5. Do operators have a sufficient understanding of the vehicle's characteristics?
6. Are the vehicles used only for their intended purposes?
7. Are workers seated on vehicles other than in the driver's seat?
8. Are operators appropriately licensed?

Ⅳ－2． Hydraulic shovels



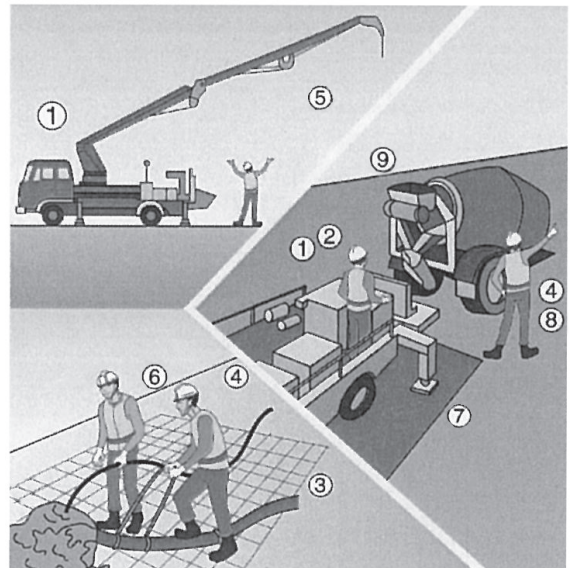
1. Is the excavation conducted based on a work plan and procedures?
2. Has an operations chief been appointed?
3. Are operators appropriately licensed?
4. Are brakes, clutch, and hydraulic system, etc., checked before work?
5. Is the setup site for shovels strong enough?
6. Are you staying outside of the shovel's turning radius?
7. Are signalmen stationed in narrow areas?
8. Are safety barricades in place?
   Have flaggers been stationed?
9. Are operators stopping the engine when leaving the driver's seat?
10. Is there no undermining?
11. Is the hydraulic shovel used as a crane?

Ⅳ－3． Pile drivers and pile extractors



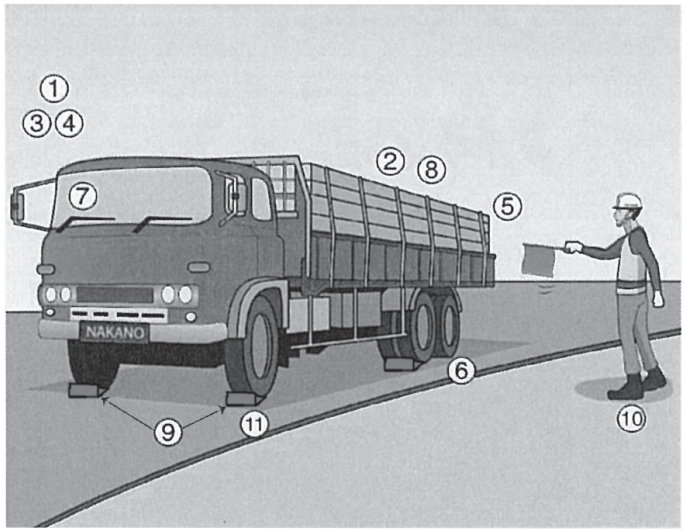
1. Are operators appropriately licensed?
2. Is piling work conducted based on a work plan and procedures?
3. Are the clutch, brakes, and hoisting wire in proper condition?
4. Are signals standardized?
5. Are steel plates used under the pile driver?
6. Have barricades been set up to stop other workers from approaching?
7. Are operators stopping the engine when leaving the driver's seat?
   Is the hammer lowered?
   Are the brakes applied?
8. Has an operations chief been stationed during assembly and moving?
9. Has a lookout been stationed?
   Have signalmen been stationed?
10. Have signalmen been designated?

Ⅳ－4． Concrete pumps



1. Are transfer pipes assembled by an appropriately licensed worker?
2. Is the assembly of transfer pipes conducted under the direction of the operations chief based on established work procedures?
3. Are the pipe connections in good condition?
4. Are signals standardized?
5. Is the area under the boom clear of workers?
6. Has the order for pouring concrete into formwork been decided?
   Have all persons concerned been informed?
7. Are steel plates used on soft ground?
8. Have flaggers been stationed?
9. Have measures been taken to prevent spray when washing the transfer pipes?

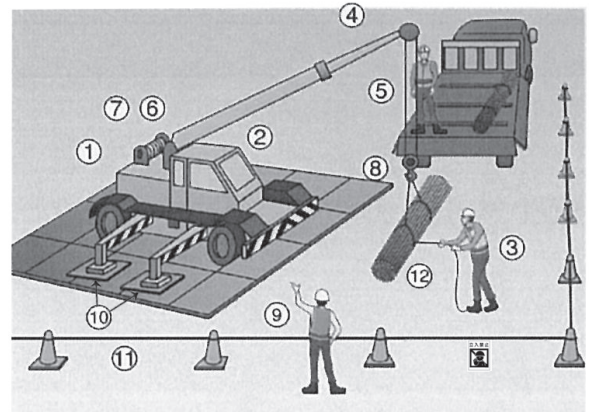
Ⅳ－5．Dump trucks



1. Have the brakes and clutch been checked before driving?
2. Is the load within the maximum capacity?
3. Are the taillights functioning normally?
4. Are indicators, such as for lights, functioning normally?
5. Is the alarm functioning normally?
6. Are the tires free of mud?
7. Are drivers following traffic rules?
8. Has the dump bed lift been checked?
9. Are wheel chocks used on sloping ground?
10. Have flaggers been stationed?
11. Does the crew have the designated number of members?

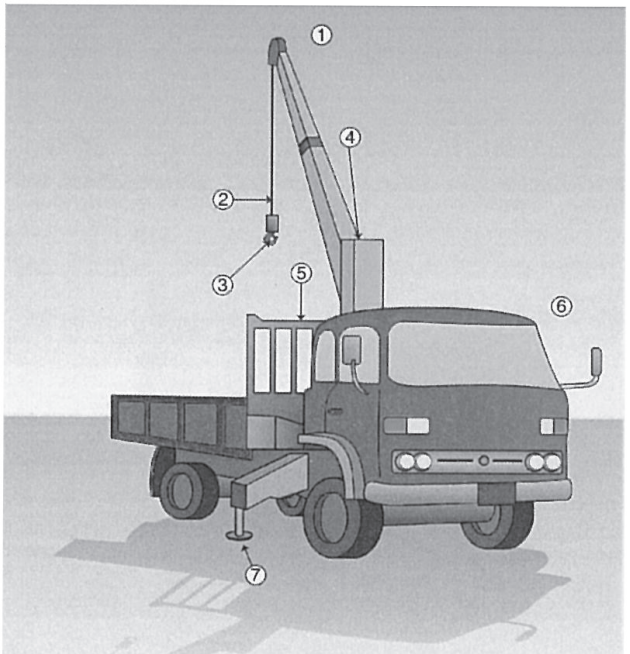
Ⅴ Preventing Accidents with Cranes, etc.

Ⅴ－1．Mobile cranes



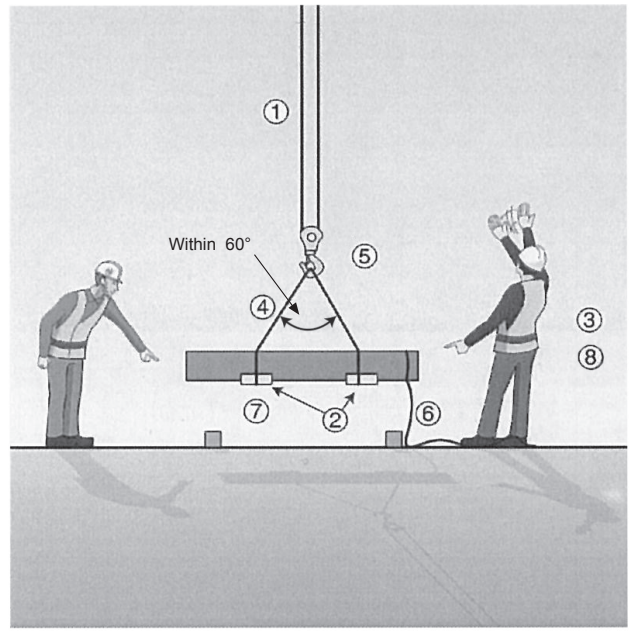
1. Has the working method been determined?
   Has an operations leader been appointed?
2. Are operators appropriately licensed?
3. Are riggers appropriately licensed?
4. Is the crane's capacity adequate for the work plan?
5. Is the wire free of damage?
6. Are the brakes and clutch operating properly?
7. Is the overload protector switched on?
8. Is the hook latch in proper condition?
9. Has a signalman been designated?
   Has the signaling method been determined?
10. Is the ground strong enough?
    Are outriggers extended to their maximum length?
11. Have barricades been set up around the crane?
12. Is the area under the load clear of people?

Ⅴ－2．UNIC cargo cranes



1. Is the overwinding alarm working correctly?
2. Is the wire in proper condition?
3. Does the hook rotate well?
   Is the hook latch in proper condition?
4. Are load weights under lifting capacity?
5. Is the wire rolled correctly?
   Are the brakes operating properly?
6. Are operators appropriately licensed for the applicable crane?
7. Is the ground strong enough?
   Are outriggers extended to their maximum length?

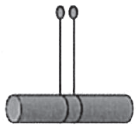
Ⅴ－3－1．Rigging operations



1. Do you avoid using damaged wire?
2. Do the corners of loads have sling protection?
3. Are riggers appropriately licensed?
4. Is the angle of the sling 60° or less?
5. Are loads hauled with more than one sling?
6. Are tag lines used for long loads?
7. Are operators stopping loads just after leaving the ground to check the stability?
8. Is work performed under the direction of a rigger chief?

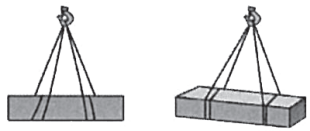
Ⅴ－3－2．Rigging operations

1. Single sling
In principle, forbidden.



Tag Line Use
A tag line is used when lifting long materials.
It is used to prevent a load from swinging.

2. Double Wrap Basket Hitch
The double wrap basket hitch is a safe way to lift long materials.

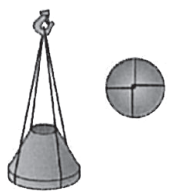


3. Choker Hitch
The chocker hitch is not advisable, because it bends the wire to a severe degree.

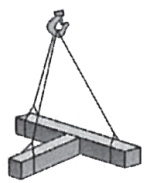
Tight hitch　Loose hitch

4. *Hakama*
A strong bag is used.

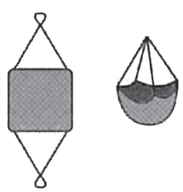
6. Others



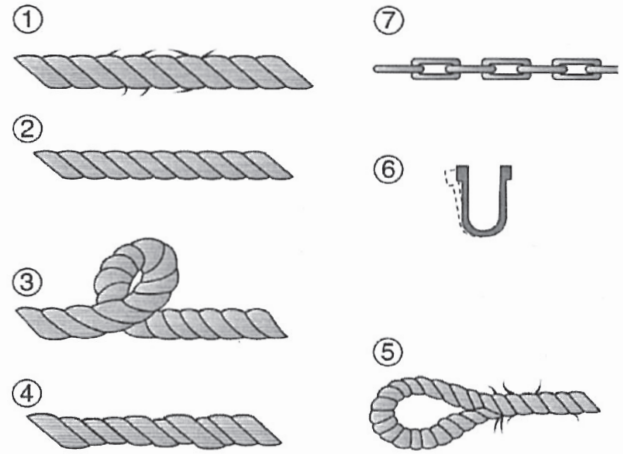
Three leg sling



5. Wire net
A wire net is used for lifting small materials.



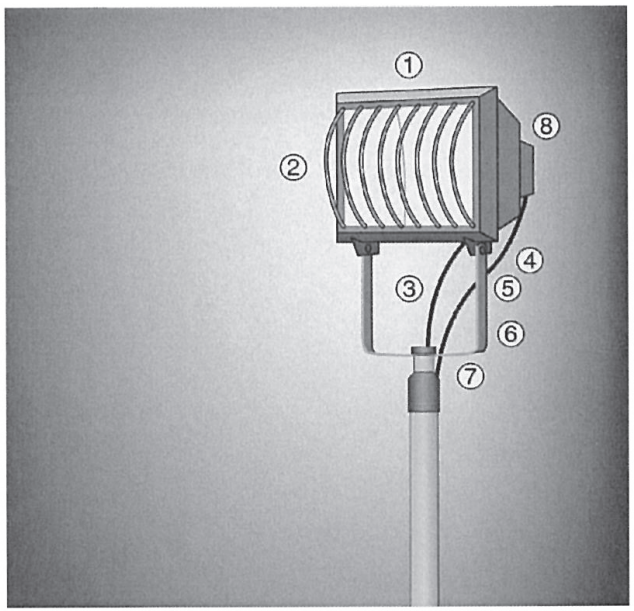
Ⅴ－4．Rigging equipment



1. Wire ropes in which 10% or more of the wires in a single strand are cut
2. Wire ropes in which the diameter is 7% or more smaller than usual
3. Wire ropes with kinks
4. Wire ropes that are corroded or badly marked
5. Wire ropes with damaged eye splices
6. Deformed or cracked shackles and clips
7. Chain that has stretched 5% or more from the original length at the time of manufacture

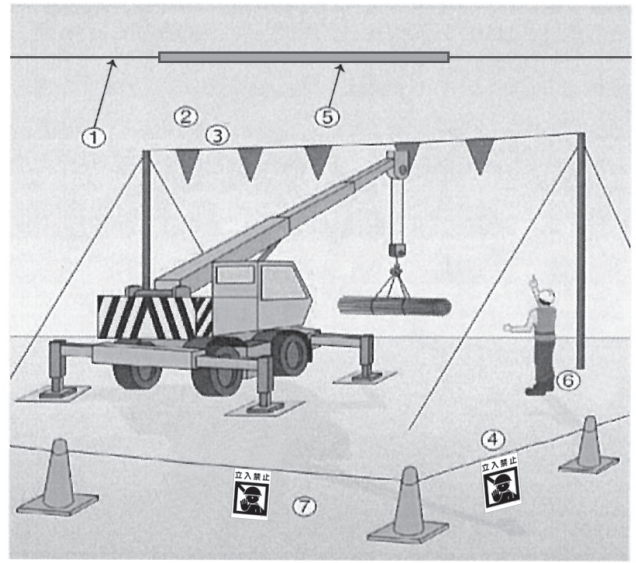
Ⅵ Preventing Electric Shock Accidents

Ⅵ－１． Temporary lighting



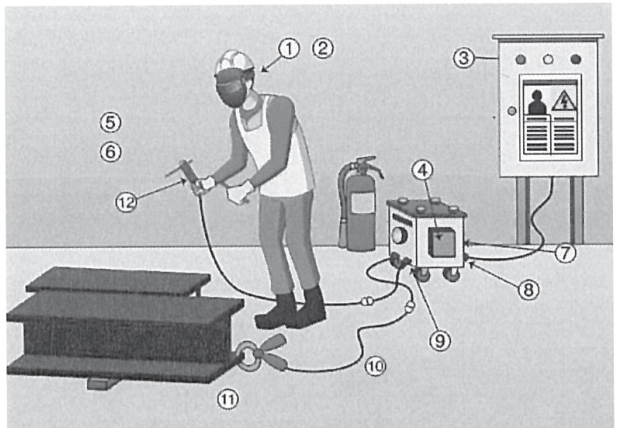
1. Are all electric bulbs and sockets free of damage?
2. Is there a bulb cover?
3. Are all cables free of damage?
4. Are flexible cables used?
5. Are the flexible cables undamaged?
6. Are the flexible cables used as rope?
7. Are any portions of the flexible cables overheated?
8. Are the plugs undamaged?

Ⅵ－２． Working near overhead power lines



1. Have the positions of power lines been checked?
2. Have safety provisions been discussed with the electric company?
3. Have voltage, position, and distance been checked? Have danger signs been posted?
4. Is the area roped off to prevent electrical shock?
5. Have power lines been fitted with protective covers?
6. Has a lookout been stationed?
7. Has a safe distance been ensured between the crane and power lines?

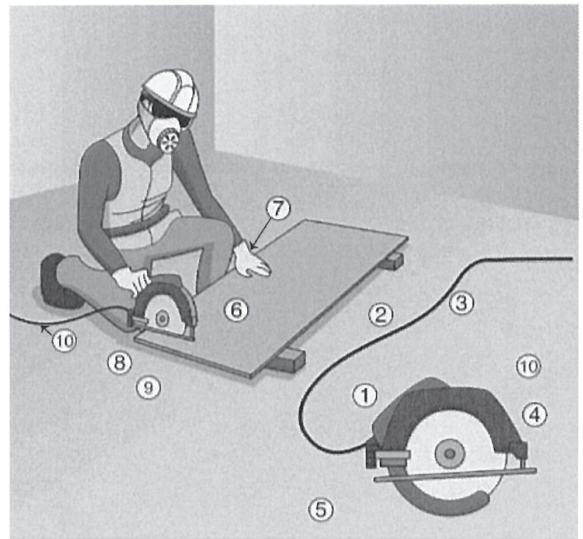
Ⅵ－3．Welding work



1. Is protective equipment such as goggles and leather gloves used?
2. Are the workers appropriately licensed?
3. Is the circuit breaker operating properly?
4. Is the automatic electric shock prevention device working properly?
5. Are workers working away from wet areas and in dry clothes?
6. Are workers working away from areas exposed to rain?
7. Is the name of the person in charge displayed?
8. Is the system grounded?
9. Is the cable connection taping in proper condition?
10. Have loose cables been protected?
11. Has the ground clamp been connected near the welding location?
12. Is the holder undamaged?

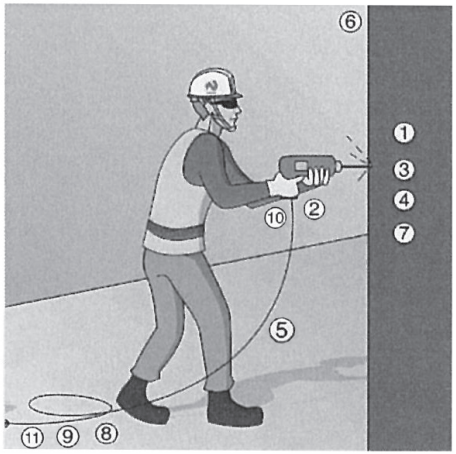
Ⅶ Preventing Accidents with Power Tools

Ⅶ－1．Circular saws



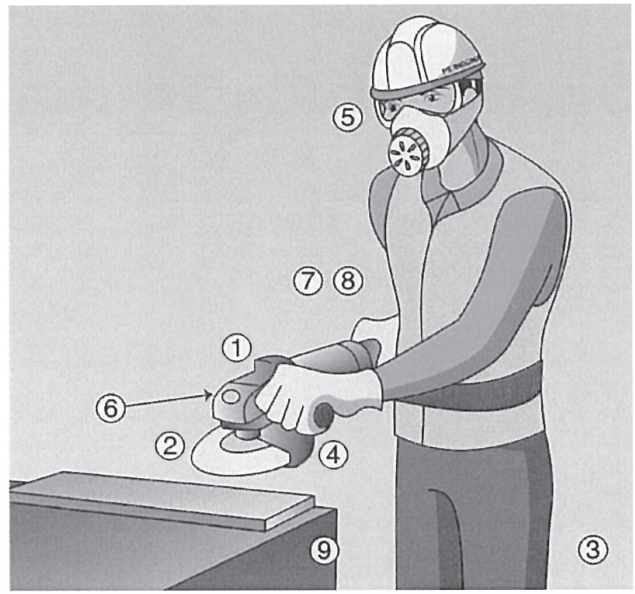
1. Is the blade undamaged?
   Are all bolts and screws tight?
2. Are the flexible cables undamaged?
3. Is there a ground system?
4. Is the protective cover in proper condition?
5. Is the brake in proper condition?
6. Is the saw used on a stable base?
7. Wearing gloves while using a circular saw is prohibited.
8. Is the circular saw making any abnormal sounds while in use?
9. Are you making sure you do not carry a circular saw while the blade is moving?
10. Are workers checking the position of the cable before cutting?

Ⅶ－２．Electric drills



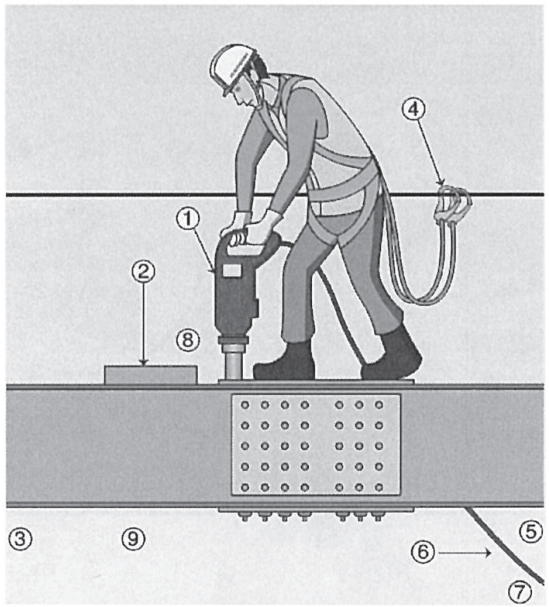
1. Is the drill bit undamaged?
2. Is the drill switch operating properly?
3. Is the drill used in front of the body?
   Are workers in a safe position?
4. When drilling a hole in a vertical surface, are workers making sure that no one is on the other side?
5. Do the flexible cables have three cores?
   Is there a ground system?
6. Is the material secured in place?
7. Are there no unusual sounds or vibrations during use?
8. Is the cable in the proper position?
   Will the cable get in the way during work?
9. Are the flexible cables undamaged?
10. Are drills turned off when carried?
11. Are drills unplugged when not in use?

Ⅶ－３．Grinders



1. Is the grinder suited to the work done?
2. Is the grindstone undamaged?
3. Are grindstones changed by a qualified person?
4. Is there a protective cover?
5. Are workers wearing dustproof goggles and a dust mask?
6. Are grinders run without grinding for one minute before use to check that they are in proper condition?
7. Are the flexible cables and plugs undamaged?
8. Do plugs have a grounder?

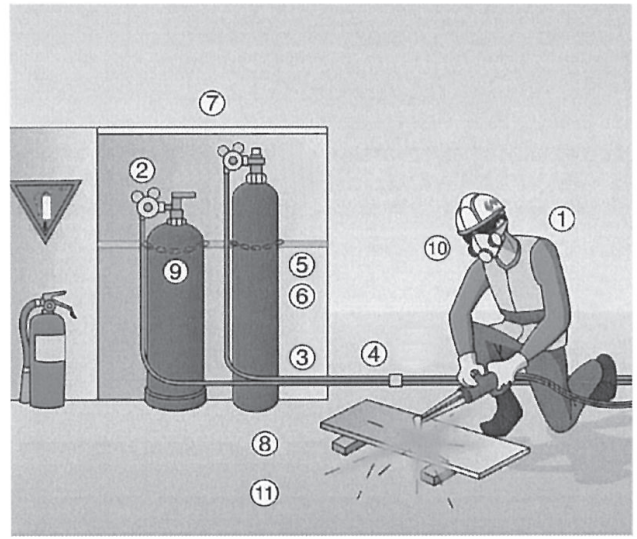
Ⅶ－４．Impact wrenches



1. Is the wrench spinning idly or going in reverse?
2. Are beams clear of scattered bolts?
   Are bolts stored in boxes?
3. Are high-tension bolts used as temporary bolts?
4. Are workers using a full harness?
5. Are flexible cables pulled forcefully?
6. Are flexible cables undamaged?
7. Is the grounding system adequate?
8. Do the sizes of nuts and the wrench match?
9. Is the area underneath work performed above clear of people?

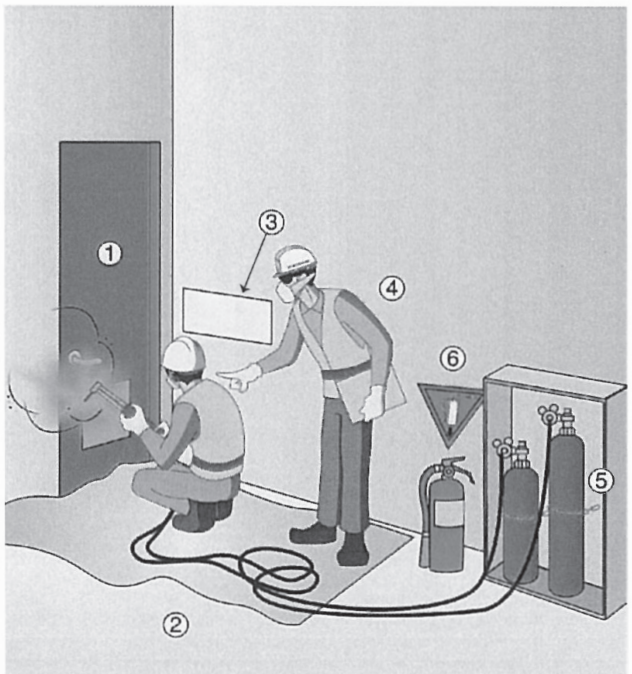
Ⅷ Preventing Accidents from Fire and Explosion

Ⅷ－１．Gas welding and cutting work



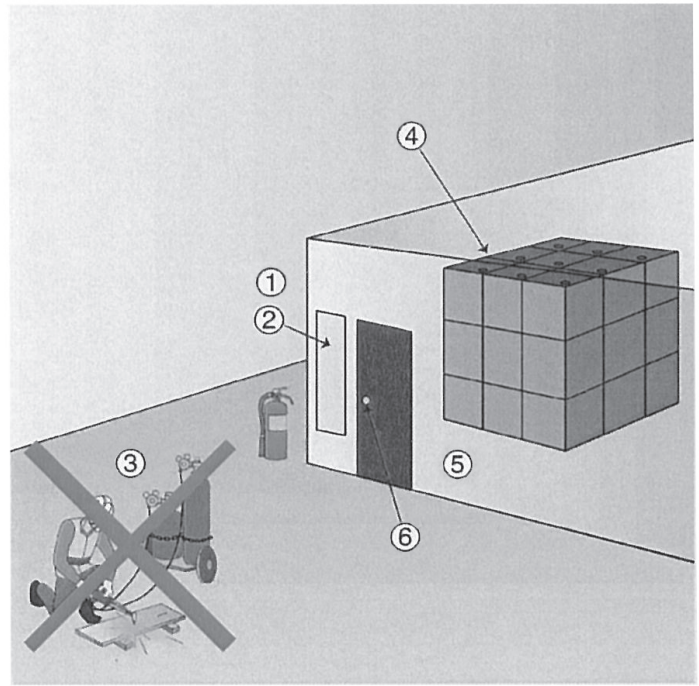
1. Are workers appropriately licensed?
2. Is the pressure gauge functioning properly?
   Is the pressure regulator functioning properly?
3. Does the hose have any holes?
4. Is the hose connected securely to the correct instrument?
5. Are gas cylinders kept at a temperature of no more than 40 degrees?
6. Are gas cylinders stored in a well-ventilated area?
7. Are gas cylinders kept away from locations where fire is used?
8. Have gas cylinders been secured with a rope, etc.?
9. Are empty cylinders marked as empty?
10. Are workers wearing welding goggles, leather gloves, and protective footwear?
11. Are fire-prevention sheets used?

Ⅷ－２．Working near foamed plastic insulation



1. Are areas near places where fire is used clear of combustibles?
2. Are workers using fire-prevention sheets?
3. Has a sign been posted indicating the areas where heat insulation work will take place?
4. Is work conducted under the direction of the operations leader?
5. Have gas cylinders been secured with a rope, etc.?
6. Is there a fire extinguisher nearby?

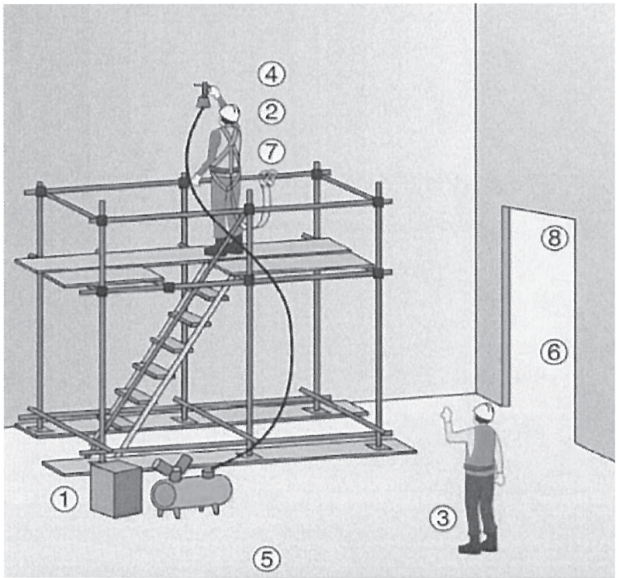
Ⅷ－３．Handling hazardous materials



1. Has the site manager appointed a person to be in charge?
2. Is there a DO NOT ENTER sign?
3. Do you avoid using fire near hazardous materials?
4. Has permission been obtained from the fire department for materials requiring special permission?
5. Are hazardous materials stored in a proper condition?
6. Is the hazardous materials storage facility locked by the appointed persons?

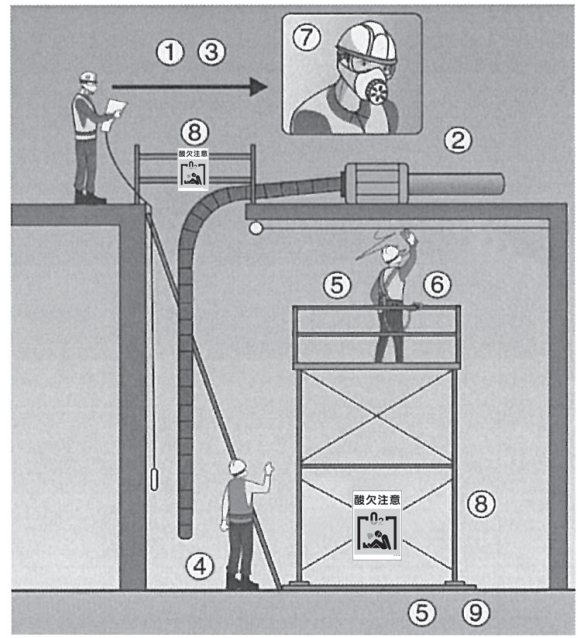
Ⅸ Preventing Work-related Illness

Ⅸ－１． Working with organic solvents



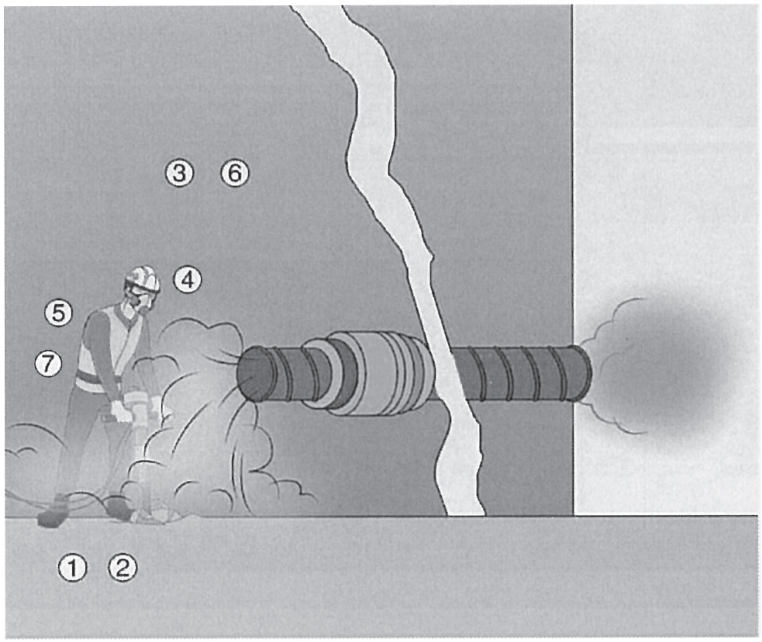
1. Have paints with minimal hazardous properties been chosen?
2. Are you aware of the hazardous properties of materials?
3. Is work conducted based on work procedures under the direction of an operations leader?
4. Are you using a gas mask?
5. Is the area near the worksite free of flame?
6. Is there adequate ventilation?
7. Have workers been properly trained to work with organic solvents?
8. Are there proper measures in place to prevent the theft of empty containers?

Ⅸ－２． Working where there is a danger of oxygen deficiency



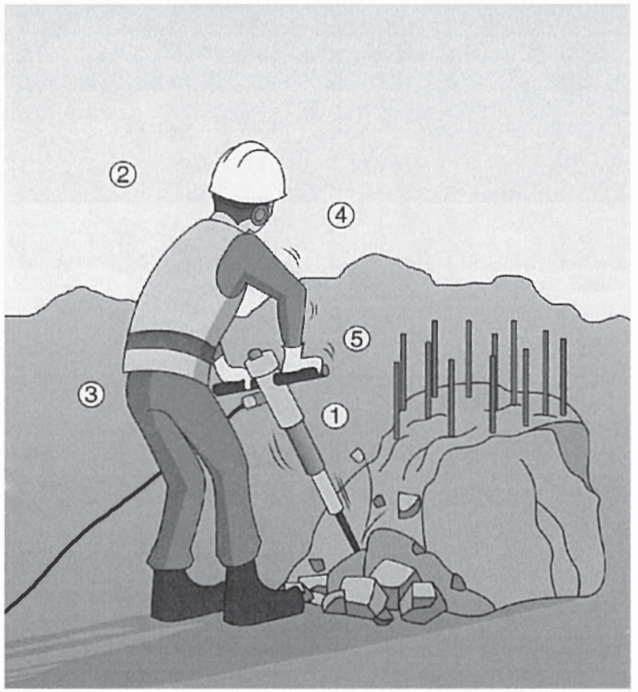
1. Is the operations chief measuring oxygen concentration?
2. Is there adequate ventilation?
3. Is the number of workers entering and leaving checked?
4. Is work conducted under the direct instruction of the operations chief?
5. Have workers been properly trained in matters related to oxygen deficiency?
6. Are there facilities to which safety belts can be attached? Are you using a safety belt?
7. Are there oxygen masks available?
8. Are there warning signs about the danger of oxygen deficiency?

Ⅸ－3．Dusty work



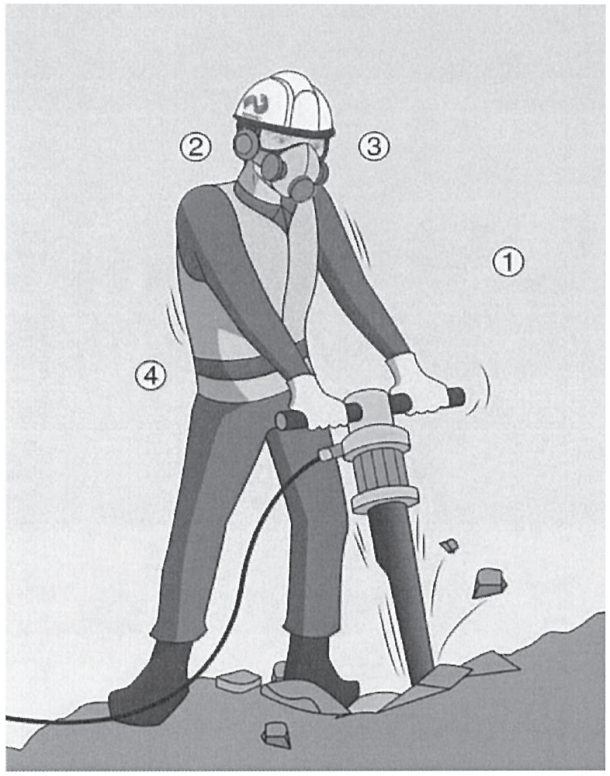
1. Is the worksite always kept clean?
2. Is water sprinkled to keep dust down?
3. Is there adequate ventilation?
4. Are workers using dust masks and dustproof goggles?
5. Have you had the specified health checkups?
6. Is the level of dust measured during tunnel work?
7. Have you received specialized training?

Ⅸ－4．Work with a risk of vibration disorder



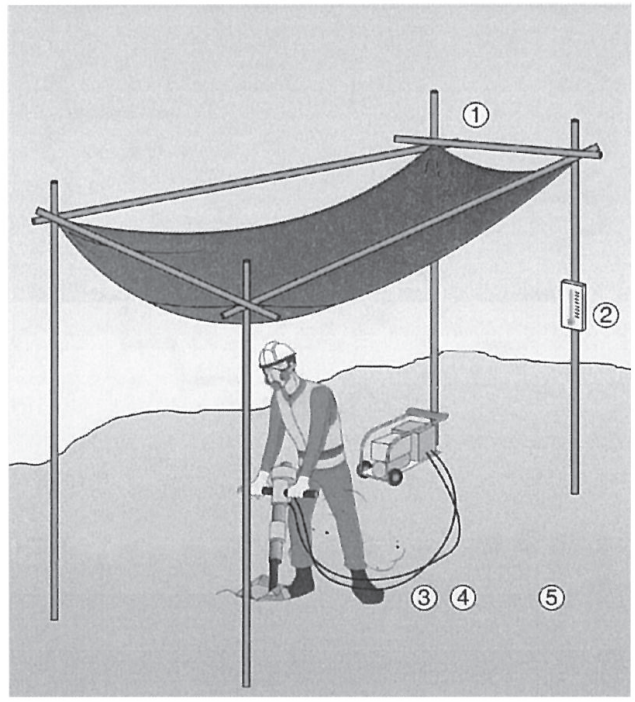
1. Are vibrating tools inspected before work?
2. Is vibration work limited to two hours per day for each worker?
3. Have you had the specified health checkups?
4. Are you doing warmup exercises?
5. Are you using anti-vibration gloves, an anti-vibration handle cover, and earplugs?

Ⅸ－5．Work with a risk of noise injury



1. Are noise prevention measures in place?
2. Are you getting hearing tests?
3. Are you using earplugs?
4. Have you been properly trained about noise prevention?

Ⅸ－6．Heatstroke



1. Are there sunshades for outdoor work?
2. Are temperature and humidity measured?
3. Are you taking in water, salt, and sports drinks?
4. Is a supervisor monitoring your condition?
5. Are you resting at appropriate intervals?