(学) 外国人労働者に対する安全衛生教育教材作成事業(建設業)

"Tunnel propulsion and Construction Machinery and Earthwork"

The important points for Safety and health

# Safety in the earthworks

### (1) Excavation work

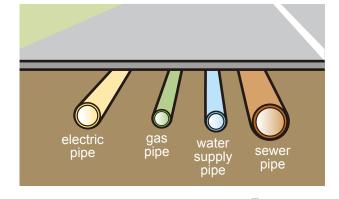
- 1. Inspect the work site before the work.
- Check the presence of loose rocks, falling rocks and cracks
- Confirmation of changes in hydrous and spring water







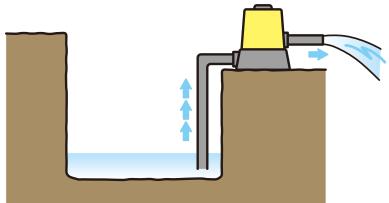
• Check the presence of buried objects such as gas pipes and electric wire cables.



2. Remove debris that may fall, and install retaining walls and shorings.



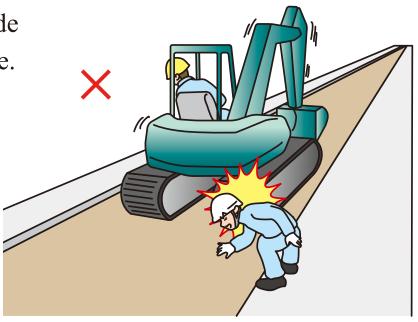
3. Rainwater and groundwater are drained at the work place that causes the collapse.



4. Do not dig as an undermining.



5. Make sure to assign a guide when work near a machine.

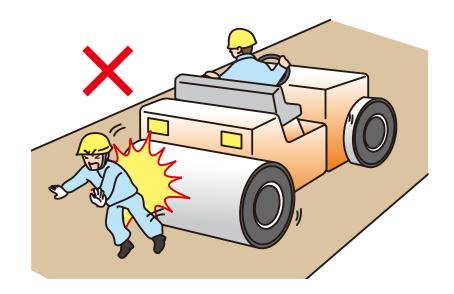


# (2) Back-filling

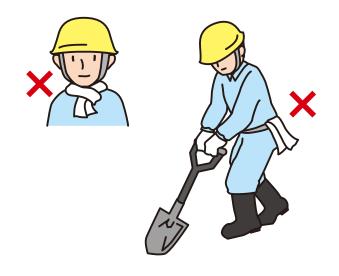
1. Make sure there is a guide when working with machines.



2. Avoid entering the blind spots of a construction machinery.

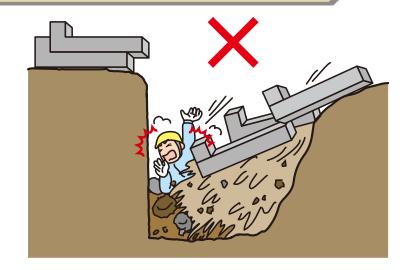


3. Do not wear clothes that are easily caught by a machine. Do not put a towel on your neck or waist.

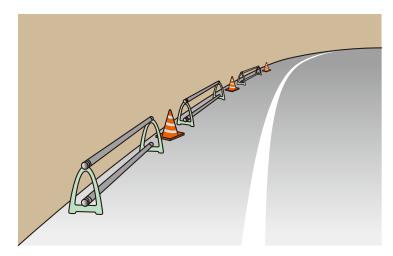


# (3) Banking/cut earth work

1. Do not place heavy objects on the top of a slope.



2. Barricades will be installed on the top of a slope and shoulders to prevent falls.



3. When working on a slope, wear a personal fall arrest system (fall prevention harness).

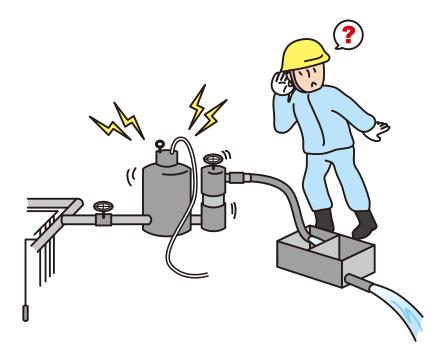


## (4) Water treatment work

1. Keep away from places that have the potential for a land subsidence or a landslide.



2. If you hear any abnormal noise from a pump or piping, report it to an operation leader without approaching them.

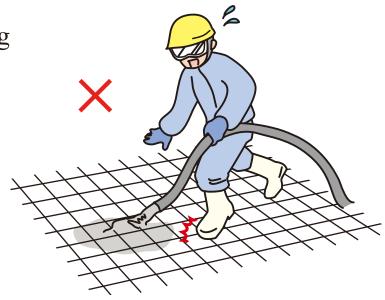


# (5) Concrete pouring work

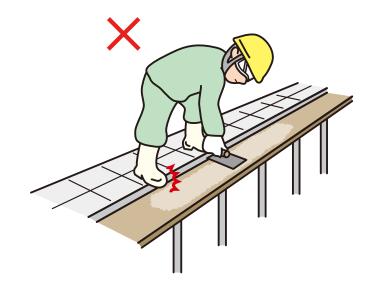
1. Be careful not to get caught in the vicinity of a rotating machine such as agitators.



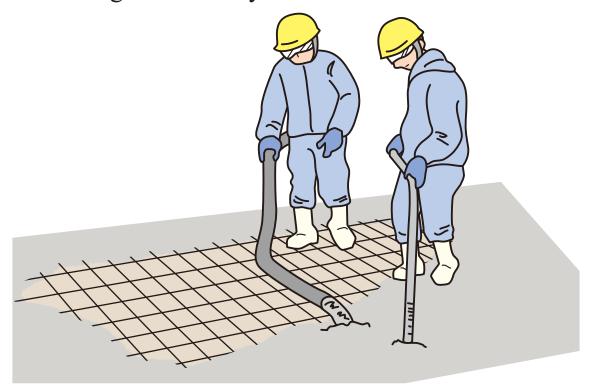
2. When walking on reinforcing bars, be careful not to trip, fall, or clothes being caught.



3. Be careful of falling from the concrete pouring scaffold. In places where the height is 2m or higher, use a personal fall arrest system (fall prevention harness).



4. Make sure that ready-mixed concrete does not scatter and adhere to the skin or get into the eye.



5. When using concrete vibrators, etc., get the prescribed education.



## (6) Work to be performed by an operation chief (Only related to earthworks)

- 1. Excavating of the natural ground and the earth shoring
- 2. Oxygen deficient/hydrogen sulfide
- 3. Assembling, etc., of scaffoldings
- 4. Assembling, etc., of the concrete form shoring
- 5. Excavating of a tunnel, etc
- 6. Bulk loading works



# (7) Items that require training/education for driving/operation/use (Only related to earthworks)

- 1. Operations of vehicle-type construction machines
- 2. Operations of cranes
- 3. Operations of mobile cranes
- 4. Slinging works
- 5. Assembling, etc., of scaffoldings
- 6. Operations of aerial work platform vehicles
- 7. Operations of forklift
- 8. Handling of vibrational tools
- 9. Operations of a transferring vehicle on rough terrain
- 10. Operations of road-rollers
- 11. Operations of oxygen deficient/ hydrogen sulfide
- 12. Operations of excavating tunnel, etc.



