

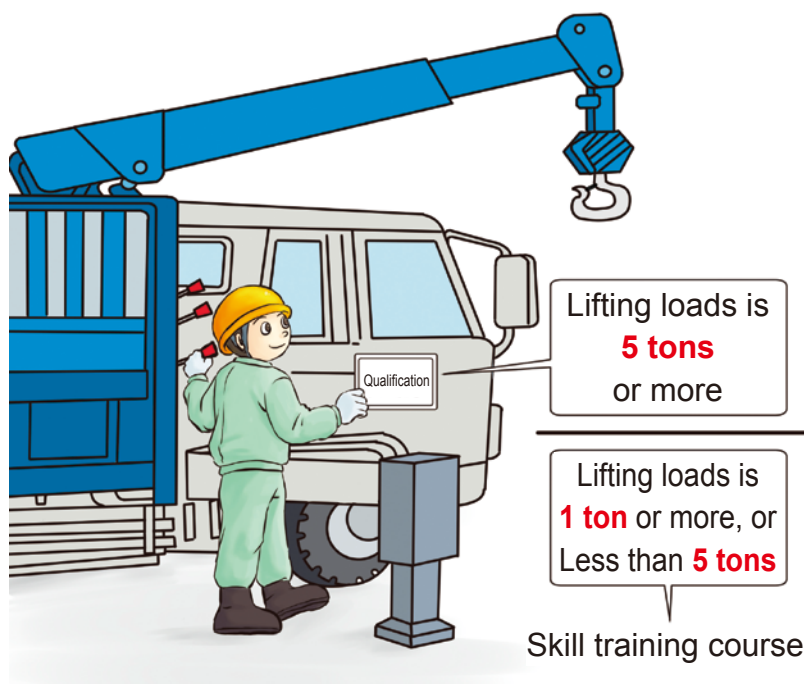
“Reinforcement construction and Reinforcement joint work”

The important points for Safety and health

Crane, slinging, lifting works

(1) Operating qualifications of mobile cranes

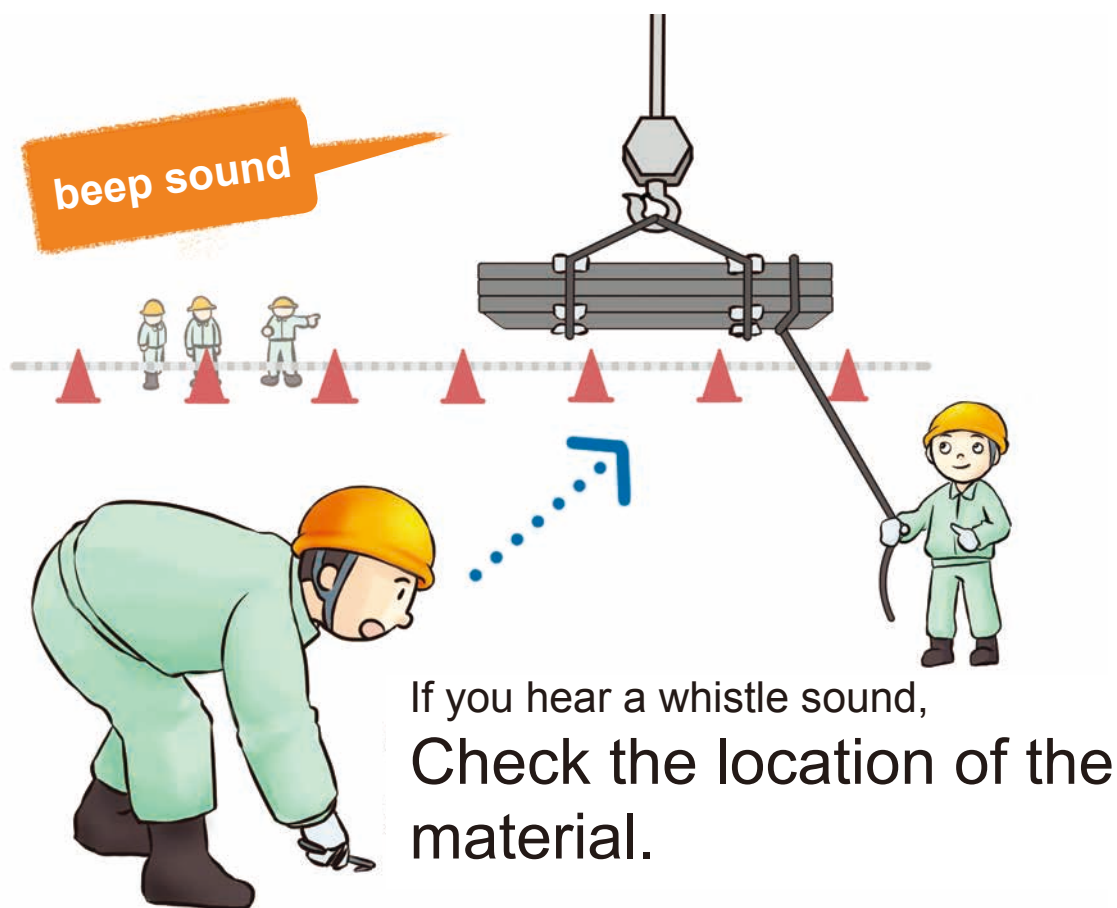
Mobile cranes can only be operated by qualified persons!
When working with mobile cranes, make sure operators are qualified according to the lifting loads of a crane.



	Qualification	Skill training course	Special education
Operation of mobile cranes with the lifting loads is 5 tons or more	○		
Operation of mobile cranes with the lifting loads is 1 ton or more, or less than 5 ton	○	○	
Operation of mobile cranes the lifting loads is less than 1 ton	○	○	○

(2) Never enter under a suspended load in crane works!

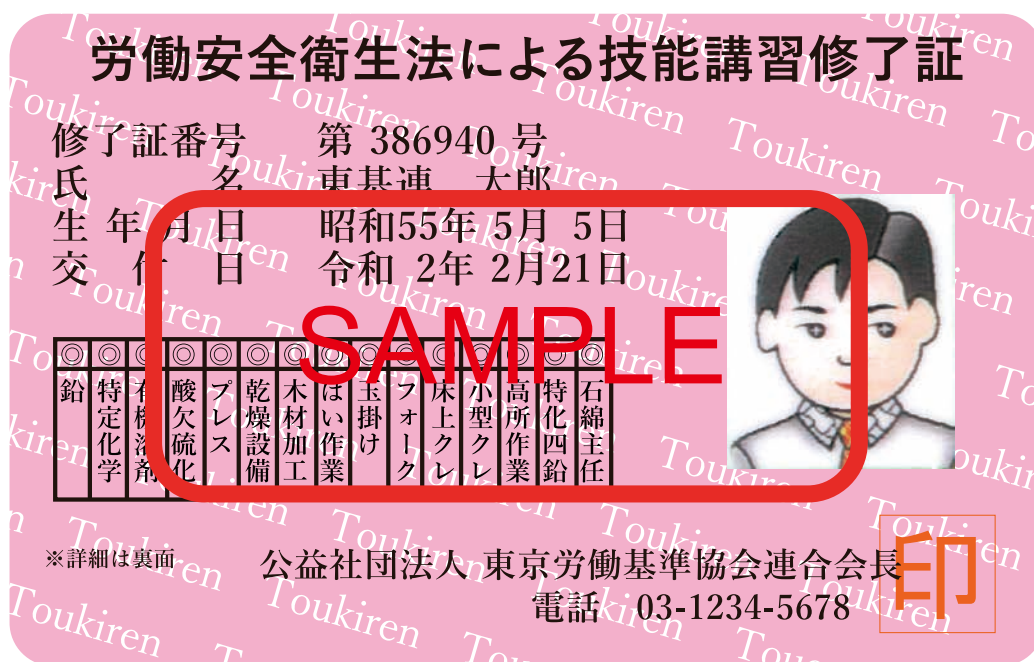
- Thoroughly prohibit people entering under a load by calling, whistle, siren, etc.!
- If a material passes overhead, stop working and check the position of the materials!



- Accidents during lifting works are often serious!
- Once you get injured, it must be serious!

(3) About a qualification of slinging

- In slinging works of a reinforcement work, it is difficult to use different qualifications depending on the suspension load of a mobile crane, so in principle, those who have completed the skill training work should carry out the work!
- Be sure to carry the qualification certificate (certificate) during slinging works!



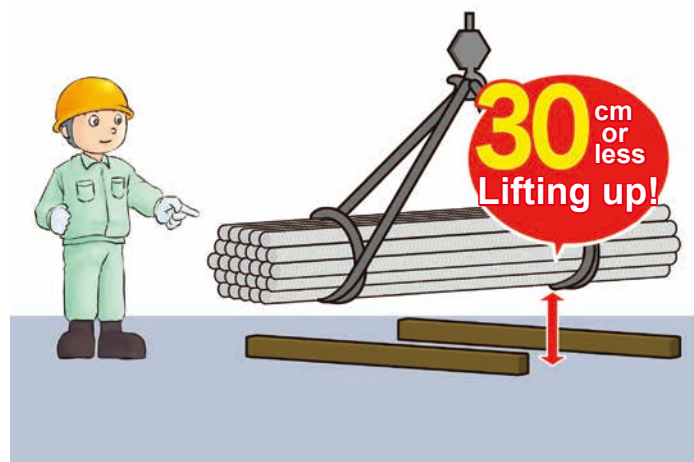
- Sometimes, serious accident occurs in slinging works.
- Recognize that once you get injured, it must be serious!

(4) The 3-3-3 campaign for slinging works

When carrying out a slinging work, follow the 3-3-3 campaign!

1. Dynamic lift off: 30cm

Lift up 30cm once, and check the load balance. (inclination?)



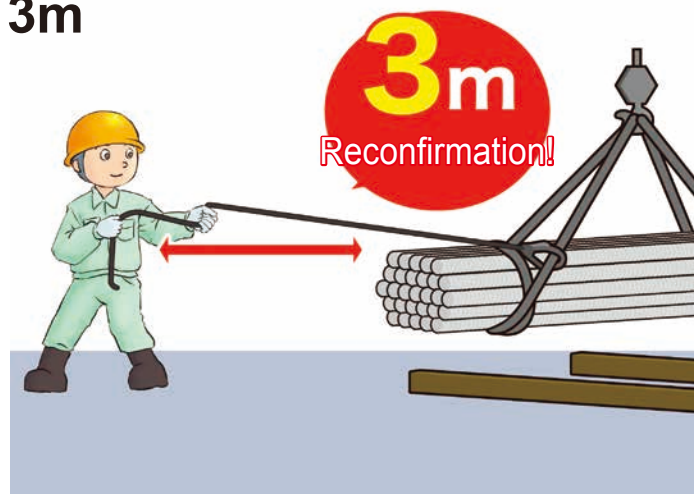
2. Pause: 3 seconds or more

Check the package. (load collapse?)



3. Leave away from the load: 3m

3m away from the load with the rope. (reconfirmation of the load and the wire)



(5) You must think that a load collapses!

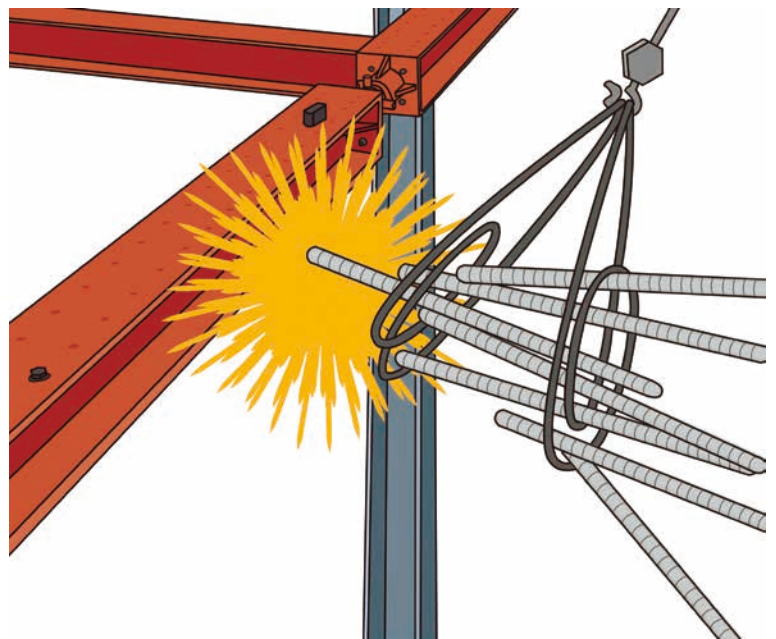
Impossible! Such that, a load collapse actually happens due to various factors!

Case 1

A suspended load touches a shore strut, and the materials fell to the underground due to the collapse of the load

Matters to pay attention

If a suspended load touches an object, the load will collapse, to avoid this use a guy rope carefully when unloading.

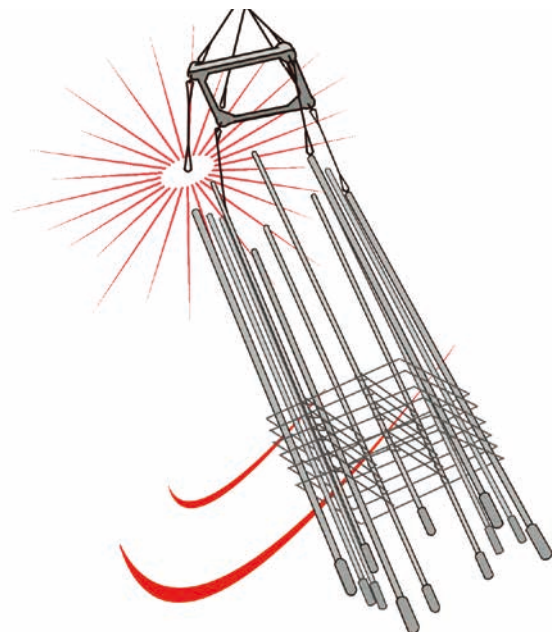


Case 2

A sudden stop or turn produces a large force that is applied to a suspended load, and it causes to collapse and fall

Matters to pay attention

A crane operator should not perform a sudden action that applies force to the suspended object.

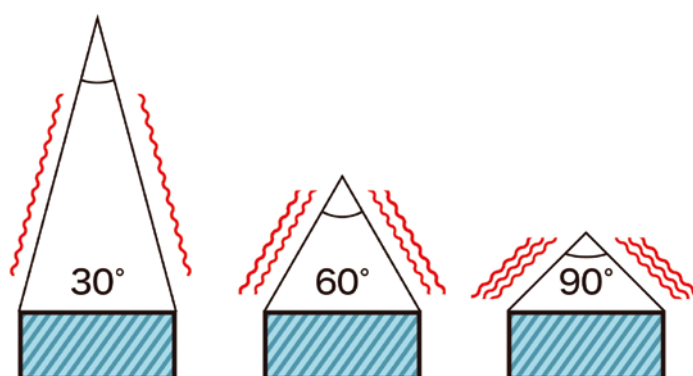


(6) You must think that a wire may break!

Even if the weight of a wire is within the allowable range, the load on the wire will increase when the hanging method is incorrect!

Dangerous hanging methods 1

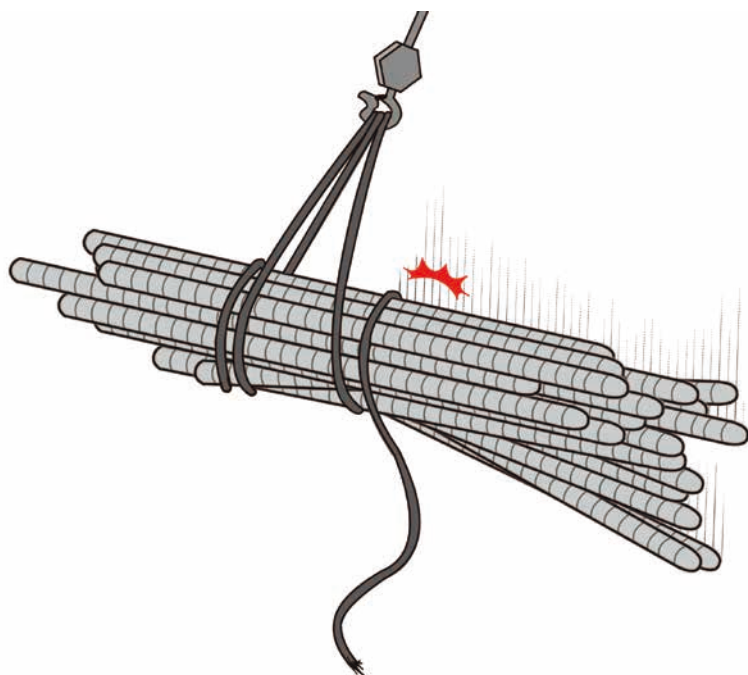
When the angle is large, the burden of the load increases that causes breaking of the wire!



As the hanging angle increases, the tension increases.

Dangerous hanging methods 2

When the materials is not leveled, a heavy load is applied to one side that causes breaking of the wire!



(7) You must think that a suspended load may swing!

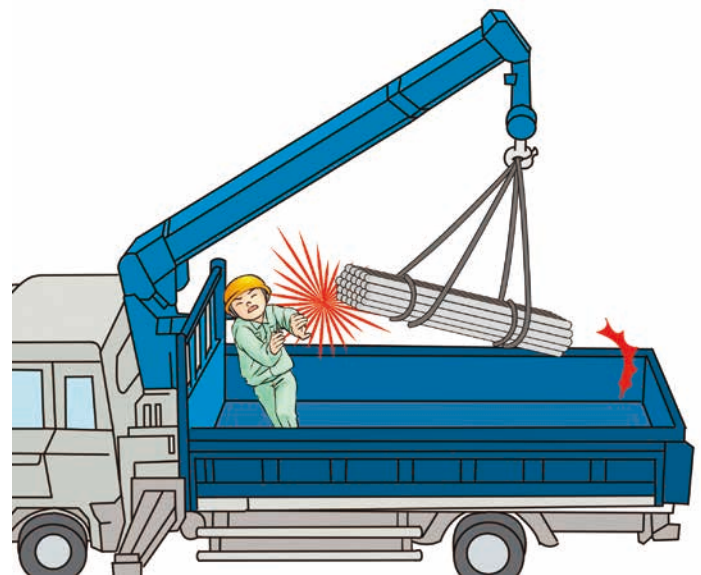
The suspended load moves significantly by a slight movement or an operation of a hook!

You must be careful because it may move significantly due to the wind, etc.!

Be careful the moving loads to avoid getting caught!

Occurrence situation

The load was hoisted without perceiving being caught, and the material was shaken significantly and a worker was caught between the truck bed and the material.



Matters to pay attention

1. Always check the position of a boom and a hook whether the burden is added to the suspended load.
2. Move the material to a position where it will not be pinched even if it moves, and then lift it up.

There are many accidents caused by unexpected movement of a load, so be careful of a lifting work!

material may move due to a variety of factors, such as an incorrect handling of a crane or an incorrect signaling!

(8) To prevent injuries from crane, sling and lifting work (summary)

- Cranes can only be operated by qualified persons! A license or the skill training is required for reinforcement constructions!
- Never enter under the suspended loads! The load collapses!
The load drops!
- A qualification is required to carry out slinging works! In principle, the skill training is required for reinforcement constructions!
- When carrying out a slinging work, follow the 3-3-3 campaign!
- You must think that “the load collapses”!
- You must think that “a slinging wire may break”!
- You must think that “the suspended load may swing”!

There are many accidents caused by unexpected movements of the load, so be careful of lifting works! Remember that the material may move due to a variety of factors, such as an incorrect handling of a crane or an incorrect signaling!