



## Accident Sharing and Preventive (ASAP) Program

### “Don’t sway my way”

On 14 Aug 2016, at about 2045hrs, the Occupational Safety and Health Division of Ministry of Manpower was alerted to an accident involving a worker onboard a vessel docked at Jurong Port Pte Ltd’s premises at Jurong Port Road.

<https://www.wshc.sg/wps/portal/wshc/bulletin?action=publicViewBulletin&bulletinID=BU201608170000010871>

It was reported that at about 2040hrs, a bundle of steel bars being lifted out of the cargo hold of the vessel using the vessel’s crane swung and hit a worker who was assisting in the lifting operation. The worker was later pronounced dead at the scene.

As part of the safe lifting operation, a lifting plan is essential. Part of it is the review of the load movement while being hoisted away to :

- eliminate or reduce the risks to the public or facilities in the immediate vicinity of the lifting operation;
- avoid having the load being maneuvered over people or near operatives;
- avoid striking, trapping or crushing persons;
- avoid striking any other structures such as buildings;
- ensure that entrance and exit paths of existing passageways are not compromised by risks arising from the lifting operations; and
- provide suitable gates/ barriers to prevent inappropriate/ unsafe access to any lifting zone.

### COMMUNICATION

Communication on site is not simply just talking and the other party listening.

Raised questions to the work crew would allow the supervisory staff to counter check the required information being brought across and understand by the work crew.

Pre-lift trial could also provide an overview of the movement of load being hoisted.

### POINTERS TO SHARE

- ❖ Lifting Plan- Position of lifting equipment, personnel and of the load, before and after the lift operation.
- ❖ Check load – it must be properly rigged
- ❖ Do Pre-lift trial
- ❖ Use of Tagline

The use of the tagline will put a distance between yourself and the load in the event of load shifts or moves unexpectedly. In practice, the tagline is to pull the load whereas tagline rod to push the load.

The tagline can help keep a load under control but remember when tending tag lines, never loop the line around your hand, arm, or body. This could cause you to be dragged along with the load. Tag onto the load firmly before it started to swing/spin.

Wear gloves to avoid rope burn.

### Questions can be asked before the activity in the tool box talk:

- 1 Are you aware of what is happening around you and above you?
- 2 What is the safe distance from the load?
- 3 What is the length of tag line require?
- 4 What is the obstruction, size of opening from cargo vessel or power line along the maneuvers path?
- 5 When the lifted load reach near to the designated location, how to retrieve the tagline?

### The use of tagline

Taglines are used for the following purposes:

1. to oppose uncontrolled rotation of a freely suspended load as it is lifted, maneuvered/relocation under the influence of forces such as wind acting on it.
2. alter the rotational attitude of a suspended load as it is guided along a path or to position it in a particular attitude
3. assist controlling swinging induced in lifting
4. avoid the need for persons to put their hands directly on a load to control it where that would pose a hazard, allowing a safe distance between them and the load.

Tagline should be made from nylon, polypropylene, rope or natural fibre. The use of wire rope is not recommended as its strand may break and such strands could cause injury to personnel. It should be semi-stiff or coated so as not to easily tangle and be in single length, continuous without joins.

The load may rotate as it is lifted due to the action of wind forces and also the load lines tend to spin as the load is lifted. Using tag lines, the load can be held static allowing the spin-up to shake out at the bearing in the hook block.



### Don’t lift light loads with large sail areas in high winds

This is a guide to help for effective sharing in tool box talk.

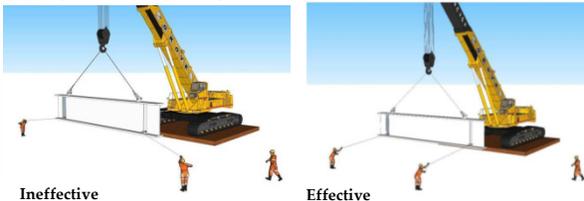


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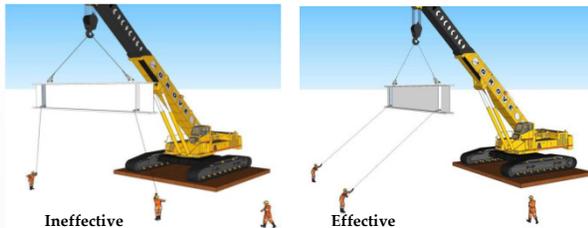
### Don't sway my way" Cont'd..

The inertia force occurred when the crane move/slew in constant speed after lifting the load. If the crane suddenly stops moving, the load's momentum keeps it moving and would swing like a pendulum until it comes to rest. To minimize this, the crane operator should gently accelerate and decelerate the crane so the load keeps up with the crane without swinging wildly.

Effective pulling of tag line are required to utilize of the moment arm as great as possible and close to 90 degree angle (perpendicular) to the load.



The pull would be most effective when the tagline is near horizontal, as the height of lifted load increase the effectiveness of pull decreases. Thus, if nearing vertical with the tag line, the pull is all vertical and does not contribute to prevent load from rotation of load.



#### Location for connecting Tagline

Taglines should be :

- attached to the load towards it's (lateral) extremes to get best "purchase" against rotation
- attached to a lug, nozzle, structural member or other substantial and solid member capable of taking a significant force without being deformed or damaged or moving

Tag lines should not be:

- attached to the rigging supporting the load (unless that is the only option and is assessed to be safe to do so)
- attached to door handles, valves or items of equipment
- attached where they could slip off as the operation proceeds

### Do's and Don't for Tagline

#### Do's

- ❖ Always use a rope intended and recommended for tagline use
- ❖ Take extra care when using tag lines while wearing gloves to ensure that the line does not become entangled with the glove.
- ❖ Make sure that at all times the personnel handling tag lines work at a horizontal distance from the load equivalent to its height above the handling area, maintaining an angle between the line and the horizontal of not more than 45 degrees.
- ❖ Keep all sections of the line, including slack, in front of the body, between the handler and the load.
- ❖ Ensure that when two or more persons are handling the same line, ALL of them must work on the same side of the line. Any slack must be kept in front of the group.
- ❖ Hold the tag line in such a manner that it can be quickly and totally released.

#### Don't

- ❖ Don't secure or attach tag line in any manner to adjacent structures or equipment. This includes the practice of making a "round turn" on stanchions or similar structures and surging the line to control the load.
- ❖ Don't loop tag line around wrists, or other parts of the body.
- ❖ Don't place yourself between an immovable object and a load that is not firmly on the ground.
- ❖ Don't step into a loop of tagline
- ❖ Don't retrieve taglines by going under load.
- ❖ Don't use tagline with any knot along it lengths. not to be used to:
  - pull a load out of its natural suspended line inducing in-haul or out-haul of the load lines
  - hold a load against wind forces trying to push it out of line
  - contribute to supporting the load.

Reference to : <http://www.wshc.sg>

- Code of Practice on Safe Lifting Operations in the Workplaces;
- Effective Toolbox Meeting (English & Mandarin)

This is a guide to help for effective sharing in tool box talk.

Visit [siso.org.sg/members](http://siso.org.sg/members)  
for more safety tips

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