

# Head Injury Due to Windssock Mast Failure

**SAFETY ALERT**

## Description of incident:

After having replaced lights on top of the windssock mast located on the jet fuel tank deck, the electricians' team (2 members) was in the process of raising the windssock mast from horizontal to vertical position using the designed jacking bolt assembly.

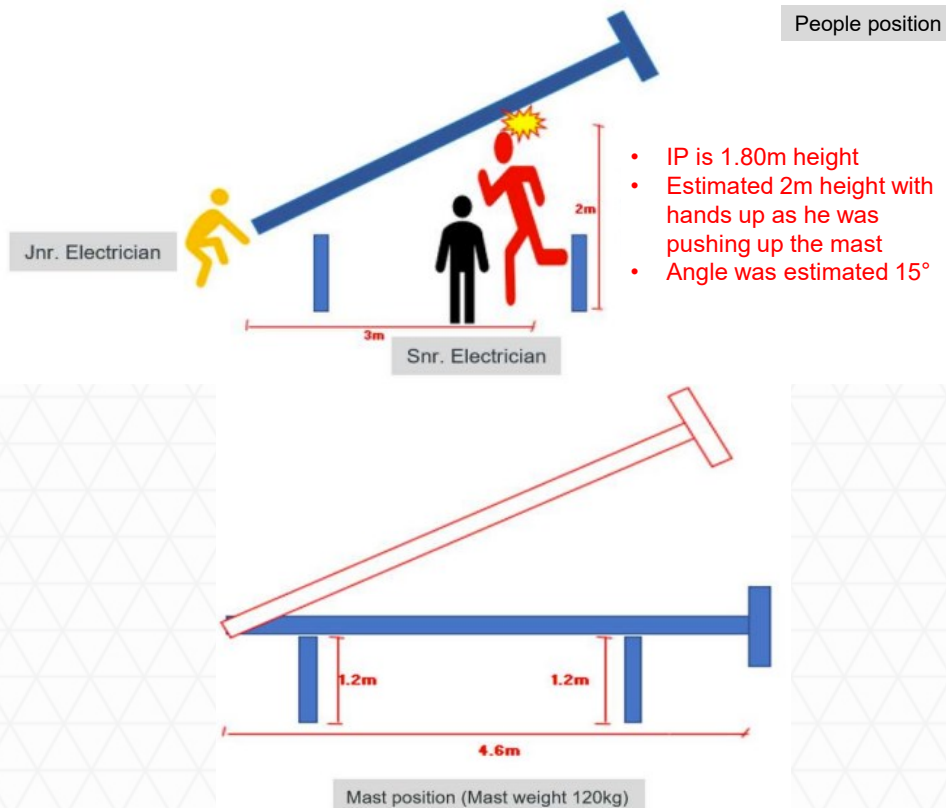
IP came up to the deck at the time the work was being performed by the electricians' team. IP was not part of the job and was coming from a task at the helideck.

After witnessing the electricians' team reassembling the jacking bolt assembly, IP got involved in the task first with the provision of a cotter pin as requested by the Senior Electrician and then later by positioning himself under the windssock mast with the Senior Electrician to push it up while it was being raised by the Junior Electrician.

The electricians' team used an adjustable wrench to disassemble and reassemble the mast jacking bolt assembly.

While jacking up of the mast was taking place, the IP moved away from the mast when a mechanical failure of the jacking bolt assembly occurred causing the windssock mast to rapidly come back down.

IP did not manage to get out of the line of fire of the descending mast in time and mast struck IP on his head. IP was not wearing a hard hat.



## Findings:

- Castle lock nut was found worn out.
- Jacking bolt assembly was wrongly assembled. Both washers found at the bottom below the bushing and no washer underneath the castle nut. The bushing makes direct contact against the castle nut. Torque is created by the friction between the threads of the male (rod) and female (nut).
- Electricians' team used an adjustable wrench to lower and raise the mast. A specific tool (designed tool for jacking of windssock mast) exists and was available on site.
- Task of raising and lowered windssock mast is under the responsibility of mechanics and marine teams.
- The work took place without notifying and obtaining authorisation from the Area Authority. Job considered as routine. Risk of dropped object and line of fire not taken into account.
- Helideck is a PPE free zone when no helicopter operation is going on.
- Stop Work/Time-out authority not applied to stop IP from reaching the workplace or getting involved in the task.
- Poor visibility/illumination in the area where job was being performed.

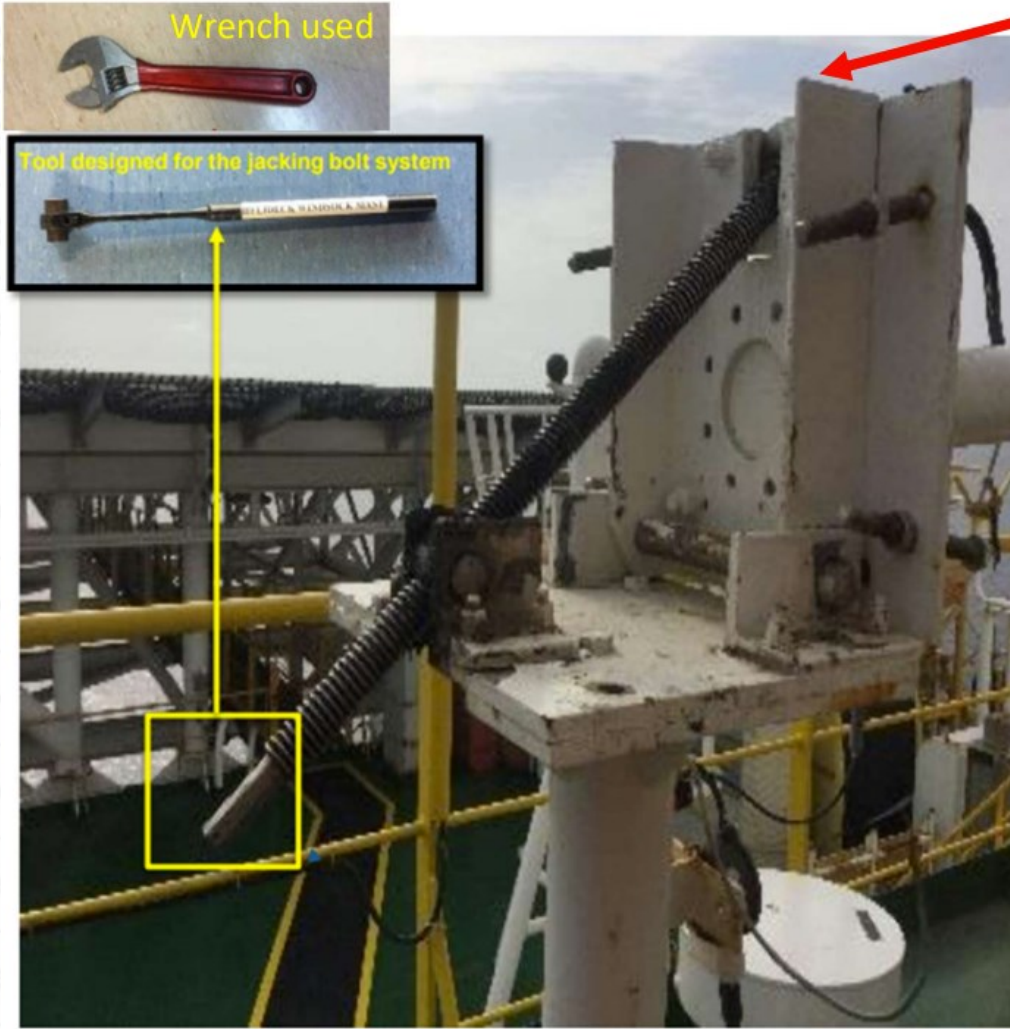
## Good practice:

- Routine activities should be risk assessed.
- Only competent persons should undertake tasks referencing corresponding procedures and work instructions.
- Windssock mast mechanism and similar equipment should be subject to regular inspection and preventive Maintenance.
- Continuous reinforcement of Line of Fire awareness and stopping the job.
- Relevant PPE should be used, and appropriate authorisation should be in place regardless of task location.

# Head Injury Due to Windssock Mast Failure

Failure

**SAFETY ALERT**



Jacking Mechanism Assembly details

Adequate set-up:  
Washer (1 at bottom, 1 at top) + Castle nut + split pin.

