



# Nitrogen bottle falling from the hoist



## QSE alert

Associated non-conformity code: NC 2016003600

*This document contains public information and it is intended to share the lessons learnt from incidents and risk situations that could be of interest to others in the same sector as Acciona Energía.*

*This document may undergo updates due to the collection and analysis of better information, because of technical advances and the proposed measures etc. For this reason, it is very important to check with Acciona Energía for the latest versions of the issued alerts.*

### SCOPE

- Worldwide  Local. Country:
- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> All Businesses   | <input type="checkbox"/> Construction          | <input checked="" type="checkbox"/> Production |  |
| <input type="checkbox"/> All Technologies | <input checked="" type="checkbox"/> Wind Power | <input type="checkbox"/> Hydraulic             | <input type="checkbox"/> Thermo-electric |
|   | <input type="checkbox"/> Photovoltaic          | <input type="checkbox"/> High voltage          |  |
- Others. Specify

### FACTS

When and where: Acciona Energía Wind Farm, Spain, June 2016.

Task that was being carried out: lifting a load from the nacelle using the hoist

Description: as established by the procedure, the nitrogen bottle was introduced into a certified bag expressly designed for lifting this type of load. The bag was connected to the hook by the established anchor points and the lifting operation was commenced.

When the load was at the maximum elevation of 80 metres, just before taking it into the nacelle, it was loosened and fell to the ground. It was later found that one of the chain links had broken. The hoist and the chain were sent to the manufacturer for an inspection of the affected components.

The full nitrogen bottle weighs approximately 80 kg, which is well below the maximum load for the hoist of 250 kg.

Graphic details



Condition of the load after the fall.



# Nitrogen bottle falling from the hoist



## QSE alert

Associated non-conformity code: NC 2016003600



Affected links in the hoist chain. Counting from the hook, link 6 was broken and link 7 was marked.

## LESSONS LEARNT

- Under no circumstances whatsoever, shall personnel remain within the vertical projection of a hoist with suspended load. As soon as the load is attached to the hook, immediately leave the area of risk.
- Remember that the nacelle vertical projection must be clearly indicated so that it is not invaded by third parties, especially when loads are being lifted by the hoist.
- Ensure that the loads are correctly attached to the hook and that all tools are properly secured inside the bag (without any risk or over-turning or loosening).
- Remember that any lift accessory that has suffered a fall must be taken out of service until it has been inspected by a competent person.
- Pay attention when leaving the Ground to go outside the wind turbine: Previously check that the wind turbine hoist is not being used. If it is in use, wait inside until the load has been completely lifted or lowered.

Furthermore, the following checks must be made every day, prior to using the hoist.

- Ensure that the hook security catch is in good condition.
- Examine the chain or cable for deformations, worn parts and broken wires etc, which raise doubts about its strength that could affect correct hoist operation.
- Ensure that the maximum permitted load for the hoist is not exceeded during use.
- Check for correct operation of the pushbutton unit controls.
- All lifting elements must be certified and all periodic inspections up to date, at least once a year.