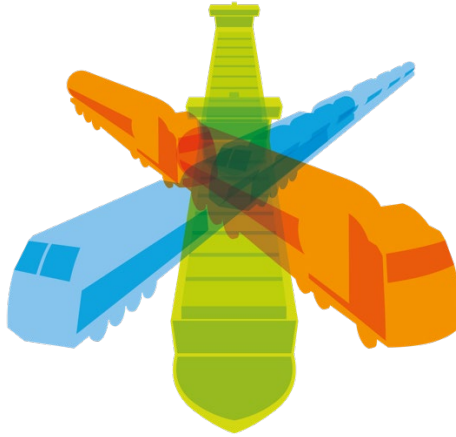




Leakages

Procedure

A leakage is a situation in which product is spilled. This may occur during or after loading or unloading. There are various causes, although in most cases human error is involved. We aim to prevent this as much as possible.

Common causes of leakages include:

- Incorrect or damaged gaskets.
- Incorrect positioning of gaskets in manholes, the pump or outlet.



- Stopping the product supply too late.
- The loading arm or loading spout is not positioned correctly in the manhole.



- The loading bellows or loading hose is not completely empty, causing product to spill when changing or disconnecting it.
- The outlet, bottom valves, manhole covers or fluidising floor are not closed correctly.
- The sampling valve is not closed.
- The vent valve is open during pressure build-up.
- A dust bag was not connected during pneumatic transfer.
- The air line was left open.
- The hose was not connected correctly.
- The hose was not emptied after unloading.
- Blanking caps were not fitted to the hoses after unloading.
- Clamps and blanking caps were not checked and/or tightened after loading.

How can leakages be prevented?

- Take your time. A driver who takes time to perform a thorough inspection greatly reduces the risk of mistakes and remains able to think clearly.
- Use a consistent routine for every job so that nothing is overlooked.
- Check couplings and hoses for cleanliness, gasket condition and damage.
- Check the container for leakages and damage while mounting it.
- Always inspect the load unit for damage and leakages during coupling and uncoupling.



Cleaning

- When preparing for cleaning, check that all gaskets are present, correctly positioned and undamaged. Replace gaskets whenever there is any doubt.



- After cleaning, ensure that all access points to the load unit are properly closed and sealed.

Loading

- Ensure that product can enter and air can escape.
- Check that all possible access points not used for loading are closed. Use the correct tools.
- If necessary, perform a pressure test in consultation with your planner.
- For tank containers, pay particular attention to closing the air line on top of the tank.
- When loading a single-compartment tank with several manhole covers, always check after loading that the unused manhole covers are properly closed.
- Compare the tank capacity with the quantity of product to be loaded.



Unloading

- Ensure that product can exit and air can enter.
- Ensure sufficient working space.
- Before starting the unloading process, calmly review all steps in your mind. This also helps you remain composed.
- Make sure that the customer is also ready for unloading. Ask if necessary.
- Determine the maximum permitted unloading pressure. The customer specifies this; ask if necessary.
- Determine the MAWP (Maximum Allowed Working Pressure) of the load unit.
- Prevent pressure build-up while switching on the compressor, as you will not be able to intervene immediately.
- Remain in the immediate vicinity of the load unit throughout the unloading process.
- Monitor the pressure gauge. If the pressure does not rise, there may be a leakage or the gauge may be defective.
- Listen and inspect along the side of the load unit during pressure build-up, as leakages are often easier to detect there.



In the event of a leakage:

- Immediately switch off the compressor or stop the customer's air supply.
- Release all pressure completely from the container before repairing the leakage. A gasket may be damaged or out of position.
- *Never attempt to tighten anything while the system remains pressurised. If a component breaks, this is life-threatening.*



- Never open the discharge valve fully without caution. Open it gradually and check all hose and coupling connections for leakages.
- Always report a leakage to your planner and the site coordinator. Take a photo so that your planner can assess the situation visually.
- Always clean up spilled product in consultation with the site. Also clean the equipment so that nothing can spill while driving.
- Place a bucket under the outlet when disconnecting the hose and discharge elbow.
- For a liquid leakage that cannot be stopped, place a bucket beneath the leak.



A leakage is disruptive, time-consuming and may endanger safety. It is harmful to the environment, may damage the product and can harm the company's reputation. Always inspect your equipment. Although this also takes time, it does not outweigh the consequences of a leakage.



A good driver always checks the equipment before starting work. Take responsibility for inspections, reporting leakages and cleaning up.