

LESSONS LEARNED AND RECOMMENDATIONS

Unloading reactors by means of inert entry involves major safety risks, which cannot be sufficiently controlled. With a view to improving the safety of reactor unloading, the Dutch Safety Board has drawn up a number of lessons learned and recommendations.

Lessons for the sector

Cease unloading reactors by means of inert entry

The measures that are put in place to control the risks involved in inert entry into reactors consist largely of work instructions. These are effective as long as they are properly complied with. In practice, however, the work instructions are not always complied with, either intentionally or unintentionally, and therefore provide insufficient safeguards as regards the safety of employees. The fact that it is impossible (or virtually impossible) to further limit the safety risks by means of other kinds of measures means that working inside a reactor under inert conditions is inherently unsafe. The sector must therefore cease using this method.

Develop new and safer methods for unloading reactors

In order to make the unloading of reactors safer, the sector should continue to develop new working methods. To achieve this, clients and contractors need one another. A contractor has the know-how needed for removing, storing, and disposing of catalyst, but it needs both the time and scope for developing and testing new working methods. When calling for tenders for unloading a reactor, a client can stipulate requirements and give contractors scope for applying new working methods.

Share information about accidents and near-accidents within the sector

In order to ensure a safe working environment, it is important to learn from accidents and near-accidents. Currently, parties share only limited information within the sector about accidents and near-accidents that occur during the unloading of a reactor. This deprives other companies of the opportunity to learn from other occurrences and to adapt their working methods accordingly. The parties in the sector must share information about incidents more effectively in order to promote awareness of the risks involved in the work.

Recommendations

To T.I.M.E. Service Catalyst Handling:

1. Cease unloading reactors by means of inert entry.

To both Zeeland Refinery and T.I.M.E. Service Catalyst Handling:

2. Share the above lessons with colleagues within the industry so as to encourage them to cease using inert entry and to develop safer methods for unloading reactors. In doing so, make use of the relevant national and international associations, such as Vemobin, SIR, and ECMA.
3. Take the lead in the further development of new and safer methods for unloading reactors.

To the Dutch State Secretary for Social Affairs and Employment:

4. Ensure that the sector ceases unloading reactors by means of inert entry.