

Response to ammonia events - the operator's point of view

The prevention of an "ammonia event" has always been the most important aspect of the activities of Haifa Chemicals, with the understanding that such an event, beyond its direct damage, could pose a real risk to the Company's continued existence.

"Ammonia event" means the ammonia breaks out of the tools it is contained in into the atmosphere and endangers those around.

There are various factors that may lead to an "ammonia event": operational error, mechanical failure, earthquake, war / terrorism event.

The "ammonia event" may occur in various systems that are involved, depending on the development of ammonia import systems over the years:

- A ship with atmospheric ammonia tanks anchoring at the port in the chemical terminal.
- The unloading system from the ship.
- The atmospheric ammonia tank (RIP).
- The ammonia supply system from the ammonia tank to the consumers at Haifa Chemicals North.
- The ammonia storage tanks at Haifa Chemicals North (bullets in the past, cigars today).
- The ammonia road tankers that transport ammonia from Haifa Chemicals North to Haifa Chemicals South.
- Isotanks currently used to import ammonia into the State of Israel.

There is a matrix of ammonia systems and "ammonia event" factors and each scenario in the matrix is given response in two stages:

- A. What should be done in order to minimize as much as possible the chances of the event happening.
- B. What should be done to minimize as much as possible the outcome of the event, if it occurred.

In the course of the lecture, examples will be given for the company's preparations for dealing with the various events, both at the preventive stage (routine maintenance, work according to international standards, compliance with the authorities' instructions, closing systems and reducing inventories) and at the stage of dealing with the event (emergency teams, emergency equipment, training).

In addition, real events that have occurred in the ammonia systems in recent decades will be presented.