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20 JULY 2022 PRELIMINARY FINDINGS INTO CHLORINE TANK INCIDENT AT THE PORT OF AQABA

A number of tanks containing Chlorine were being loaded onto the MV Forest 6 at the port of Aqaba on 27 June 2022.

During the operation, a tank fell and was punctured. The release of Chlorine gas resulted in the **death of 13 and injury of more than 250 people.**

On 3 July 2022, the head of the Aqaba Port incident investigation committee held a press conference announcing initial findings. We are grateful to the **Jordanian Chemical Process Safety Engineers Society** for sharing this information. Their original report can be found on LinkedIn: <https://www.linkedin.com/showcase/jordanian-chemical-process-safety-engineers-society/>

SAFETY ALERT



The investigating committee examined the incident scene, evaluating the condition of lifting equipment and slings. They interviewed over 120 individuals, reviewed container handling procedures and evaluated the competence of employees. They assessed the level of compliance with safety standards and procedures, especially those concerned with the handling of hazardous chemicals.

The immediate reason for the fall of the container was identified as the use of improper lifting slings. The slings in use were designed for a maximum 8.6 tons safe working load; the actual lift (chlorine container) weighed 28.9 tons; i.e. more than 3 times the sling design load. This eventually led to the sling failure. A total of 18 containers were intended for loading onto the freighter. The failure occurred during loading of the fifth container. This was reportedly the second time the operation had taken place.



part of a wire sling under investigation

foreground:
sling
background:
punctured
container



Other contributing factors identified were:

- deficiencies in and noncompliance with safety procedures for handling hazardous chemicals
- poor and informal hazard communication practices
- lack of training and competency
- unavailability of safety officers during hazardous operations
- improper follow-up of daily operations and maintenance reports
- poor leadership and unclear roles and responsibilities



close up of the
punctured
container

The investigation noted that that several concerned personnel stated that they were not aware of the weight nor the content of the containers. A report prepared by the Social Security Corporation about two months before the accident underlined 'weaknesses' in the safety conditions, and that some lifting equipment panels were out of service and required maintenance.

The investigation committee press conference (in Arabic) can be found on the link: <https://lnkd.in/e6cCmaai>



alternate **view** of damaged container



damage to the vessel

These preliminary findings reinforce that an accident is rarely the result of one single factor. We expect to see a presenting cause but there will also be root and contributing causes. It is vital to understand those and to manage safety in a comprehensive and coherent way; in breadth and in depth.

Our thoughts are with all of those who have been affected by this tragedy. By sharing this learning, we intend that anyone undertaking lifting operations will be able to (re-)evaluate their own risks and take any appropriate action necessary for safe lifting.

Disclaimer

The information contained in this document has been compiled with due attention to generally accepted good practice and, where appropriate, regulation. The views expressed by contributors are based on their experience and reflect an intent to share learning to prevent accidents and improve health and safety in cargo handling. Responsibility for health and safety compliance remains with the duty holder.

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