



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATION STATUS CHANGE SUMMARY

Report:	TS USA Motlen Salt Eruption
Recommendation Number:	2024-01-I-TN-R4
Date Issued:	May 30, 2025
Recipient:	HEF Groupe
New Status:	Open – Awaiting Response or Evaluation/Approval of Response
Date of Status Change:	Not Applicable – Initial Status

Recommendation Text:

Include physical, protective barriers as part of the standard design for liquid nitriding processes. These protective barriers shall be intended to isolate employees from molten salt releases.

Board Status Change Decision:

A. Rationale for Recommendation

On May 30, 2024, molten sodium hydroxide and sodium nitrate erupted from an oxidizing salt bath when a part being processed exploded at the TS USA facility in Chattanooga, Tennessee. Unbeknownst to plant personnel water was trapped in the hollow part which rapidly expanded upon contacting the molten material resulting in the explosion. One employee was fatally injured as a result of this incident. \$1.3 million in property damage was reported, and the facility was shut down for approximately eight months.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including those associated with the lack of an effective safety management system specially regarding hazard analysis, operating procedures, and training. Deficiencies in learning from past incidents and corporate engagement in safety were also identified. As a result of these findings, the CSB issued four recommendations to the HEF Groupe. This status change summary addresses CSB Recommendation No. 2024-01-I-TN-R4.