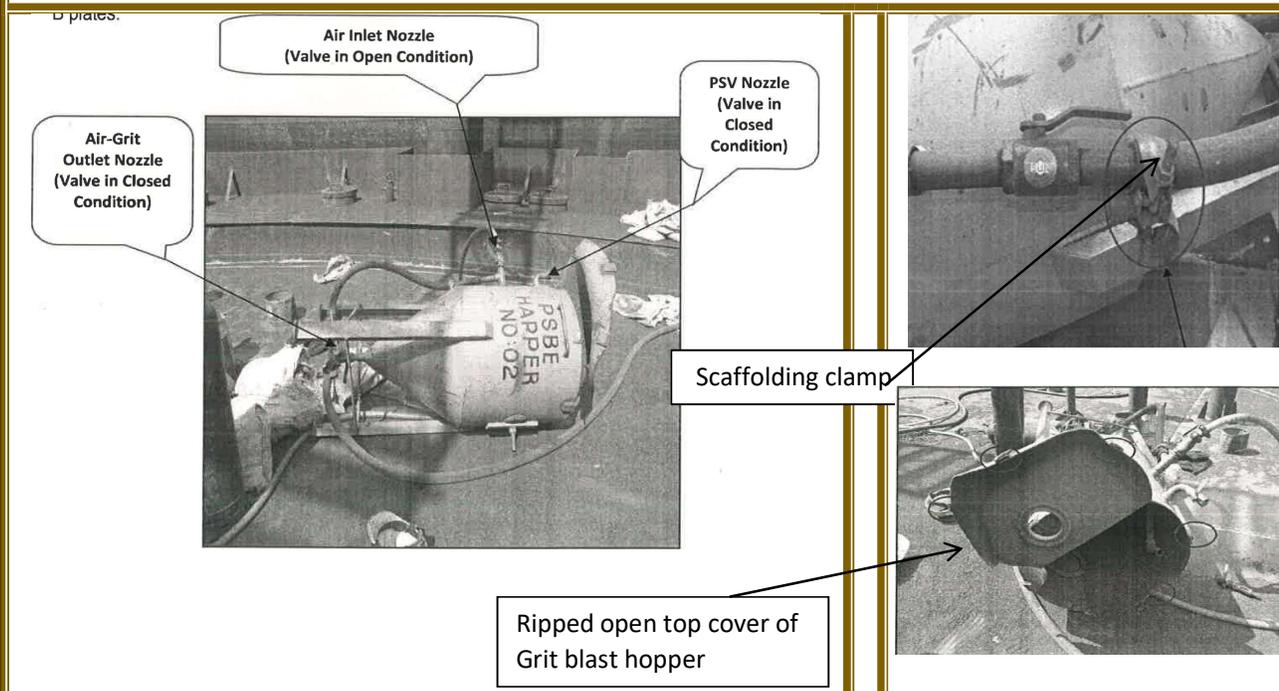


SAFETY ALERT

INCIDENT: The incident took place on the top of external floating roof Tank. During grit blasting & painting of the tank internal shell surface, a contract worker suffered head injury. The incident happened due to ripping open of the top cover of the grit blast hopper. The top cover hit on the back side of the head of the worker. Later, he succumbed to his injury.



OBSERVATIONS:

1. The said hopper was repaired earlier with 8 mm fillet weld on a 5.5 mm thick shell & top cover plate. Higher fillet size weld contributed towards high hardness and is considered as the starting point for the weld failure. The hopper was not fabricated as per standard. Even the name plate indicating details was not available.
2. Safety Relief Valve was not installed on the hopper. The isolating ball valve was kept fully closed.
3. Hoses were connected using scaffolding clamps.
4. Non-standard fittings / connections / valves were used for the air circuit.

ROOT CAUSE: Use of sub-standard Air hopper vessel without proper design & fabrication was the root cause of the incident. In addition, there was no safety interlocks available in the blasting equipment to take care in case of wrong closing or opening a valve. The minimum requirement of installing the Safety Relief Valve was not followed by the contractor during blasting operation .

RECOMMENDATIONS: The hopper used in grit blast operation shall be constructed as per ASME Sec. VIII by a reputed pressure vessel manufacturer. All fittings and hoses used in blasting system shall be of reputed make and a standard one. Records of Drawing, WPS / PQR, weld details, MOC with test certificates, serial number of the vessel, NDT, Hydrotest reports and PSV shall be verified prior to

blasting operation. Pressure gauge shall be installed on the hopper for monitoring the pressure during blasting operation. Vessel shall be repaired if required as per an approved procedure only.

WORTH MENTION:

January 2017: At one of the Indian POL installations, a person who was engaged in grit blasting work of new fire water tank, fell on a stack scaffolding material and died due to head injury. Root Cause: Improper use of PPE, No SOP followed usage of nonstandard equipment. Chocking of the nozzle used for grit blasting. Recommendation: Strict implementation of PPE policy, SOPs to be followed strictly, Use of standard equipment to be ensured.

December 2016: Failure to use grit blasting nozzle: During a routine joint coating activity, a grit blasting operator was performing the planned task of cleaning the weld joint. While trying to reach the joint surface under the pipe, he lost his balance and lost the grip of the hose. The nozzle whipped back, spraying grit towards his face. Although he was wearing the intended face mask, the grit broke the plastic outer lenses, spraying grit in his face. *Click the link below for details*

<http://www.iploca.com/platform/content/element/26002/SA-Failuretousegritblastingnozzle.pdf>

IT REALLY MATTERS

**LISTEN to
Your
workers.**

Do not
“Order him to wear”
Listen from him
“Why is he not wearing?”
Then act on the cause.



This safety alert is based on the Investigation report submitted by industry and published for information purpose only. (March/2019/04)