



# SIGNAL<sup>®</sup>

## OPERATIONAL ALERT



**Operational Alerts** inform Signal Mutual Members of serious incidents within the Mutual that resulted in permanent disability, death, or a significant near miss. If you have similar operations, please share this Operational Alert and have a safety discussion with operation managers, supervisors, equipment operators, and all affected employees. It is imperative that management review their operational controls at all levels to mitigate similar hazardous conditions and/or acts.

### INCIDENT: ABRASIVE BLASTING

#### SUMMARY OF RECENT INCIDENT

Across the Mutual, from January 2019 thru June, 2021 there have been over 130 serious accidents, associated with **Abrasive Blasting**.

One of the most potentially dangerous operations in the maritime industry is ABRASIVE BLASTING. Abrasive blasting can expose the blaster and other workers in the area to serious risks from contact with high pressure particles and dust, and in some cases, uncontrolled high-pressure hoses. Injuries are typically serious and include but are not limited to: fatalities, loss of body parts, loss of eyesight, infections from debris embedded the skin, lung damage due to toxic air contaminants, as well as slips and falls..



#### RECENT INCIDENTS

1. Blaster struck in arm while sandblasting, resulting in severe laceration.
2. Helper replacing washer, sand blast hose blew, sprayed, injuring hand.
3. Blaster slipped and fell while sandblasting and injured tailbone.
4. Blaster's hand slipped gripping blasting nozzle, resulting in a hand sprain.
5. Worker pulled sand blasting hose hitting elbow on pole.
6. Blaster slipped while blasting, struck elbow on angle iron.
7. Worker accidentally blasted in buttocks by another worker.
8. Blaster received steel shot in eye while blasting at angle.
9. Work Lead picked up dead-man by trigger and blasted arm/abdomen.
10. Painter shoveling sandblast grit into buckets felt pull in lower back, sprained back.
11. Blast Foreman tending blast pot, tripped & fell on his knee, spraining knee.



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12. Blaster received blast debris in eye during blasting shift.
13. Worker sprained arm while climbing ladder using one hand and carrying blast gear in the other.
14. Blaster felt debris in eyes after bristle blasting hull.
15. Supervisor noticed severe rash over back after blasting.
16. Blaster exposed to liquid that came through breathing airline while sandblasting.
17. Worker lost control of hose and blasted finger.
18. Driver overexerted himself and sprained back while organizing/moving sandblast hoses.
19. Worker lost footing on ladder and fell while blasting.
20. Painter sprained shoulder while working on blasting pot.
21. Blaster passed out from exposure to carbon monoxide while blasting.
22. Worker tripped and twisted ankle while pulling on blast lines.
23. Worker moving bull hose received cut to leg after blasting media contacted thigh.
24. Worker fell back and suffered concussion after being pushed by blasting hose while kneeling.
25. Blaster was donning blast hood when grit got into left eye.



***Safety. Live It. Share It.***

### CONSIDERATIONS / PRECAUTIONS

- Know and follow the instructions in the equipment owner's manual. All equipment should undergo regular preventive maintenance, and equipment should be inspected and tested before use. Specifically inspect for hose and control damage.
- Ensure operators and blast pot tenders are trained in the proper use and inspection of the equipment, demonstrate competency and have an established communication procedure.
- All parts, including hoses and connections, should be inspected. All hose connections must be secured, and nozzles checked before turning on equipment and commencing blast operations.
- Employees must wear appropriate PPE including NIOSH-approved respirators to protect employees from dust produced during abrasive blasting operations, hearing protection, eye and face protection, foot protection, and gloves.
- If working at height, ensure fall protection is implemented and inspect the harness for abrasion before each use.
- Static electricity can be generated by abrasive blasting equipment, the surfaces being blasted, and exhaust ventilation systems (fans and ductwork). Static electricity can shock employees and cause fires and explosions by igniting flammable/combustible atmospheres or materials.
- Access to the area should be controlled to prevent unauthorized personnel from getting into harms-way.



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- A Job Safety Analysis (JSA) and Job Briefing should be held before work begins and each briefing
- should include a reminder about the hazards of abrasive blasting.
- Blast hoses should be secured when not in use, ensure they are not pointed at others in the work area.
- Never tamper with the dead-man trigger to reduce the need to keep pressure on while in use, it must never be tampered with (i.e. wedged, tied or taped, etc.).
- Check the size of the nozzles to ensure that they are correct to go with the pressure and
- flow (ensure they aren't cross-threaded).
- Ensure the system is properly depressurized when finished with the operation.

Whenever uncertainty, confusion, doubt exists, use:

**S.T.A.R**  
(**Stop-Think-Act-Review**)

### ADDITIONAL INFORMATION

- The seriousness of high-pressure injection injuries is generally underestimated. The potential for serious injury should be considered with any device that produces greater than 100 pounds per square inch (PSI) of pressure.
- Air pressure used during blasting is typically high, at 100 pounds per square inch (PSI), and nozzle velocities can approach 650 - 1,700 feet per second.
- If you are hurt while abrasive blasting, get immediate medical help.
- Persons who have high-pressure wounds are urged to get medical attention as soon as possible. A medical professional might X-Ray the injured area, provide medical treatment, or make a referral to a specialist.

Remember, the next person harmed could be you or someone's  
***Mother, Father, Daughter or Son.***

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