

# SAFETY Alert



10/2016

## GRIT BLASTING OPERATION

**DATE:** December 2016

**ISSUED BY:** QHSE DEPARTMENT

**OBJECT:** FAILURE TO USE GRIT BLASTING NOZZLE

### DESCRIPTION:

During a routine joint coating activity, a grit blasting operator was performing the planned task, cleaning the welded joint. While holding the blasting nozzle, the operator had to crouch, in order to reach the joint surface under the pipe. At one point, he lost his balance, which caused him to lose 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.



### CONSEQUENCES:

- Activity stopped immediately;
- The operator had numerous particles of grit embedded into his face and in his eyes;
- Commencement of Incident Investigation process;
- The operator underwent multiple eye surgeries.

### CAUSES

- Improper positioning: posture was not properly chosen and prepared for, causing loss of balance and grip;
- Dead-man switch was jammed by ice and debris, not being able to shut down the blast immediately;
- The PPE used was compliant, but incomplete: the mask only had the outer lens installed, whilst the inner lens had been removed\*.

\* Blast Helmet lenses:

- **Inner Lens** – this is the most important lens as far as protection is concerned. This is the last line of defence. Known as the crystal lens, it protects the face and eyes from high velocity particles and creates a perfect seal on the helmet so no contaminants or unfiltered air can enter the blaster's breathing area.
- **Outer Lens** – Known as the 'stay-put lens', protects the inner lens. These superior outer lenses provide better clarity of vision which means a better quality of work can be done.



### CORRECTIVE ACTIONS

**Measures adopted in order to prevent the recurrence of a similar incident:**

#### **Operational instructions:**

- ✓ Lifesaving PPE – such as grit blasting hood and mask to have specific control schedule to ensure they are in proper conditions and technically sound. Ensure grit blasting hood have proper high particle protection installed.
- ✓ Always control and check the work area layout, the condition of tools and equipment and the adequacy of the PPE using the dedicated pre-task daily check-list that must be carefully filled in (i.e. protective mask, whip arrestors, emergency switches, etc.). If any safety device is not functioning properly, the work cannot commence; the supervisor must verify the correctness of the compilation of check-list;
- ✓ The personnel must respect the correct and safe postures when grit blasting – always maintain a balanced position and, when having to relocate or switching body position, the blasting machine must be stopped;
- ✓ Verify the functioning of all nozzles used on site and substitution of the ones that are not working properly;
- ✓ All workers involved in grit blasting operations must be medically deemed fit for the task.

#### **Training:**

- ✓ All workers taking part in grit blasting operations must be specifically trained for this task, ensuring that the hazard and controls have been deeply understood;
- ✓ Incident findings and Lessons Learned to be presented to all project personnel;
- ✓ Safety Alert developed regarding the circumstances of this incident to be communicated to all SICIM projects.

#### **Documentation:**

- ✓ Pre-task daily check-list to be reviewed in order to include controls of nozzle and adequacy of PPE.