Standard Blast Machine Operating Instructions

Warnings:
1 The operation of this equipment can generate noise levels which can be damaging to the ears. It is essential that the operator, pot tender and all other personnel in the vicinity be made aware of this and that suitable ear defenders are worn

2 Abrasive ricochet and dust levels generated from the blast cleaning operation can be dangerous and all personnel within the area must wear adequate protection

Signs warning of these dangers must be positioned around the perimeter of the blasting operation and measures must be taken to ensure that no one enters the area of the blasting operation without permission and without adequate safety protection equipment. Should anyone enter the area, the pot tender must immediately close down the blasting operation by opening the safety petcock on the valve and/or the blaster must release the lever of the deadman handle

Note: In the interests of safety and efficiency it is necessary that the blaster and pot tender operate some form of signalling or communication system. Under operating conditions where the blaster is not in constant view of the pot tender it is strongly recommended that a helmet communication system be used

1.1 Turn ON the compressed air supply to the blast machine at the compressed air supply outlet valve

1.2 Adjust the drain cock on the moisture separator to give a constant slight bleed of air-water vapour

1.3 Refer to the helmet manufacturer's instructions and turn ON the breathing air supply to the helmet

Warning: It is essential that all connections on the helmet air hoses are secure and under no circumstances must the helmet be used until the air supply has been turned on and found to be entering the helmet in required volume and quality.

1.4 Ensure that the breathing air supply hose is adequately protected to prevent it becoming accidentally trapped, nipped or broken

1.5 Position danger warning signs around the area of the operation and the outside the perimeter of excessive noise levels and abrasive ricochet/dust fall out

1.6 The blasting operator must now don protective clothing, sturdy gauntlets, ear defenders and air fed helmet

1.7 Ensure that all personnel within the vicinity are adequately protected

1.8 CLOSE the safety petcock by turning the handle at right angles to the petcock valve body

1.9 The operator must first check that no one has entered the marked area of the operation and then firmly take a secure hold of the nozzle holder and blast hose, at all times directing the nozzle at the work surface

1.10 CLOSE the deadman handle and compressed air will pass through the nozzle

1.11 RELEASE the deadman handle and the compressed air will cease to pass through the nozzle

Warning:- A back thrust is created by the action of the compressed air passing through the nozzle therefore the operator must ensure he has adopted a safe stance and position and must maintain a firm hold of the nozzle holder/blast hose

TO FILL THE BLAST MACHINE WITH ABRASIVE READY FOR THE BLASTING OPERATION:-

1.12 Open the safety petcock on the remote control valve by turning the handle in line with the petcock body

1.13 Check that the abrasive metering valve is CLOSED

1.14 Ensure that the safety sieve is securely in position

1.15 Load the selected abrasive into the machine through the sieve. This will flow into the machine through the filling orifice in the centre of the concave dish

DO NOT OVERFILL THE VESSEL BEYOND THE POP UP VALVE

1.16 Fit the pot cover to the top of the safety sieve

1.17 CLOSE the safety petcock by turning the handle at right angles to the petcock valve body

N.B. In an emergency the opening of the safety petcock will depressurise the machine

1.18 The operator should then ensure that no one is in the vicinity of the work area (see 1.5 above) and take secure hold of the nozzle holder and blast hose and direct the nozzle at the work surface

1.19 Close the deadman handle and the machine will pressurise and air will pass through the nozzle

1.20 The pot tender should gradually open the abrasive metering valve to introduce abrasive into the airstream. Adjust the valve to maintain the minimum amount of abrasive into the air stream`

1.20.1 **Machines fitted with remote controlled grit valve**.
Pull back the sleeve valve on the deadman handle
Important: To avoid unnecessary wear between the adjusting screw and the piston the abrasive adjustment must only be carried out with the valve in the closed position (i.e sleeve valve forward)

1.20.2 To 'blow down' the work surface with compressed air only, keep the deadman handle closed and move the sleeve valve to the forward position

1.21 **Machines fitted with pressure regulator**.
Adjust the pressure to achieve the optimum finish

1.22 To stop the blasting operation the blaster should release the lever of the deadman handle or the pot tender can open the safety petcock on the remote control valve (NB On the machines fitted with remote controlled grit valves either of these operations also automatically closes the abrasive metering valve)

WARNING : The pot tender must keep clear of the exhaust silencer at all times as the sudden release of pressurisation can be dangerous

N.B. If the blast machine is not to be used for a period of time(meal break, shut down etc) it is advisable that it is empty of abrasive - this will assist in preventing unnecessary blockages due to condensation

N.B To purge the blast machine of any residual quantity of abrasive in the vessel, the choke valve can be slightly closed to introduce more rapid feed of abrasive into the airstream. The rate of abrasive discharge can be increased, if necessary by also adjusting the abrasive metering valve to allow more feed

Warning: These adjustments can create a severe pulsing at the nozzle therefore it is essential that the blaster maintains a very secure hold of the nozzle holder during this operation. Never close the choke valve completely or open the abrasive metering valve fully during this discharge operation

Shut Down Procedure

2.1 Open safety petcock on the remote control valve

2.2 Ensure that the operator has first removed their air fed helmet, then turn OFF compressed air at the compressed air supply outlet valve

2.3 Ensure that all airlines are purged of pressure prior to disconnection of hoses