

MEYCO® Equipment

Wet shotcrete check list for MEYCO Suprema

Points to check before starting the shotcrete operation:

1. The hopper screen must be clean and free of obstructions.
2. **Never overfill the hopper.** Only fill to just below screen level.
3. The vibrator should be used to pass the material through the screen, **never** continuously vibrate a full hopper. Never use vibrator needlessly.
4. Always fill water into the water box, **never start without cooling water.**
5. The hydraulic tank must be full of oil.
6. When first filling add a grout mix (cement/water) directly into the reduction pipe to lubricate the hoses.
7. Pump some shotcrete to check for blockages, then connect the spraying hose and the nozzle including the air lines and the injector.
8. Turn the air on and off again to check if the nozzle and injector are clear. The pressure at the gauge must then drop to 0 bar. This shows that air can escape through the nozzle.
9. Turn the air on and dose accelerator using the separate dosing function to fill the air/accelerator line (approx. 30 sec.). **Never start shotcreting without accelerator at the nozzle.**
10. Check the dosing for the correct accelerator percentage.
11. While dosing into the air line close the dosing discharge valve and check the pressure increase at the dosing gauge. The pressure must increase above the air pressure. Then open valve again.
12. Start pumping shotcrete at a low output and observe the pumping pressure. Then slowly increase to the required capacity.
13. Turn the dosing pump spraying function on, and check the dosing pump gauge for correct pressure.
14. Check or fill hopper when required.

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How to free a blockage:

1. While pumping observe
 - a) pumping gauge pressure
 - b) reduction pipes
 - c) conveying hoses

This will indicate where the blockage is. Observe how the pump gauge pressure reaches 200 bar, this indicates the blockage distance from the pump.

2. Reverse pump, then turn the air off and check to see if the air pressure drops to 0 bar. This will show if the blockage is before the injector or in the spraying hose.
3. When the blockage is in the reduction pipe, reverse pump and clear the reduction pipe by removing it. **Never attempt to force** the blockage through the reduction pipe.
4. If the blockage is at the injector drain the air line at the pump and clear the injector or the nozzle. Wash this with water to remove all the accelerator.

Important pumping points to remember:

1. Never put water into the hopper to pump through stiff shotcrete. Always remix in the mixing carts before starting the shotcrete operation.
2. When starting to pump stabilised shotcrete after a long delay start very slowly and increase only while observing the pump gauge pressure. This always applies when pumping stiff shotcrete.
3. Never try to force a blockage by pumping. Any more than three attempts without a change in pressure will only lead to mix segregation leading to more problems inside the hoses and lines.
4. Never reverse pump more than three piston strokes. This will only cause mix segregation and air entraining.

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Points to remember when stopping the shotcrete operation:

1. Stop pumping when the shotcrete is 300 mm below the hopper screen.
2. Reverse pump two strokes to relieve the conveying pipes and hoses.
3. Stop the air flow, remove the air lines, injector, spraying hose and nozzle. Wash these parts to remove the accelerator.
4. Plug off the conveying hose to stop the shotcrete drying out.
5. Stop the shotcrete machine and cover the hopper to prevent water loss through evaporation.
6. With stabilised shotcrete pump the mix every two hours to eliminate segregation or blockages occurring. Observe pumping gauge pressure to check the condition/-pumpability of the mix.