

Pipe Internal Wheel Blast System

Work Size from 0.7m to 3m Diameter x 12m Long

Steel pipe internal surface blasting is becoming an important requirement before coating works. High performance painting system is applied and requires the blasted surface to achieve a minimum cleanliness of SA2.5 Std. Shown below is a typical system specially designed & constructed on turnkey basis for pipe manufacturers



Equipment is designed to blast the pipe at at least 2 sq m per minute to the standard required in dust free condition

Weblast has successfully commissioned the blasting of internal steel pipe in an automated line several years back with compressed air nozzles blasting method. A further step forward is to change the air blast system to wheel blast that is 10 times quicker in production. A faster production speed is needed by the pipe manufacturers to synchronize their production line operation that involves the spiral pipe production, hydro-static test, external surface blasting & then comes the internal surface cleaning.



Blast wheel enters the pipe with the pipe being rotated where a high volume supply of abrasive is fed into it. Blasting is achieved with controlled movement of the variable blast stream covering the full pipe internal length. Spent abrasive is recycled with a system of blow-off action, captured and returned for recovery through a combination of conveyor belt, screw conveyor, bucket elevator, separator and a holding tank.



The system is never complete without a dust collector system installed, ensuring a clean working environment.



Reference Project for

Pipe Internal Surface Blasting



74" Pipe Internal Compressed Air Blast Facility, consisting of,

1. One double chamber 600lbs blast pot
2. One abrasive silo storage tank
3. One recovery bucket elevator & separator unit
4. One cross screw abrasive transfer conveyor
5. One pit level recovery belt conveyor
6. Two retracable pipe end dust & abrasive enclosures
7. One 11mL blast lance drive for two blast nozzles
8. One set 13mL floor track for lance boogie travel
9. One of electrical, pneumatic & hydraulic control system

Seen on picture is the blast pot in green, the bucket elevator/separator/silo, the floor track mounted with the boogie trolley lance.



External surface of pipe has already been blasted clean by the earlier process. Internal blasting is being carried out after the external blasting.

Seen on the picture is the end enclosure closing up the end of pipe, hence preventing abrasive and dust leak. The pipe is supported by two sets of rubber rolls rotator that keep the pipe rotating in place for the internal blasting. Beside the rotator is a set of hydraulic unloading arm in retracted position. The pipe is lifted upwards by the loading arm when the process is completed.

The completed view of pipe undergoing internal blast cleaning.

The end enclosure is mounted with ductings for exhaust of dust to the main dust collector unit.



Abrasive recovery, storage & supply to the blasting process.

Seen here are the blast pot & elevator system.

