Typical Specification
BIG BLASTER® XHV-H High Temperature Air Cannon

Material flow will be maintained/enhanced by the installation of an air cannon system to introduce “blasts” of compressed air into the structure to knock down (or prevent the formation of) bridges, rat holes, and material buildups.

The air cannon system will be composed of ASME-code welded, national-board inspected and certified, CRN-registered pressure vessels each equipped with a piston/valve assembly to control the release of air charges into and out of the pressure vessel. To inhibit corrosion and provide long service life, the pressure vessel will be coated on both its interior and exterior surfaces with epoxy paint.

The piston/valve assembly shall be cast aluminum and shall be flanged to the outside of the pressure vessel. The disk-shaped, cast-aluminum piston will be retained in alignment through an outboard-bearing surface.

To minimize wear, the system shall discharge with a short 5/8-inch (16 mm) piston stroke. A low friction composite bearing will maintain concentric piston travel without lubrication. A return spring will aid in piston seal and closure after discharge.

The cannon’s elastomer-free, aluminum piston-to-aluminum seat seal will provide a service life of 200,000 firings with low maintenance requirements under high temperature conditions.

If service is required, either end of the valve assembly shall be accessible by removing a set of bolts. The piston seat will be removable for service without requiring the replacement of the entire valve assembly.

Discharge of the air cannon system will be controlled by a ½- inch solenoid valves or a 3/8-inch solenoid manifold assembly housed in a dust-tight, weather-tight enclosure.

The supplier of the air cannon system shall provide system engineering for guaranteed effectiveness. Supplier may quote on the guaranteed installation of the air cannon system.

The supplier of the air cannon system shall be IS0 9001 Quality System-certified.

The air cannon system shall be BIG BLASTER® XHV-H High Temperature Air Cannon System as supplied by Martin Engineering.

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Typical Specification
BIG BLASTER® XHV-A Air Cannon

Material flow will be maintained/enhanced by the installation of an air cannon system to introduce "blasts" of compressed air into the structure to knock down (or prevent the formation of) bridges, rat holes, and material buildups.

The air cannon system will be composed of ASME-code welded, national-board inspected and certified, CRN-registered pressure vessels each equipped with a piston/valve assembly to control the release of air charges into and out of the pressure vessel. To inhibit corrosion and provide long service life, the pressure vessel will be coated on both its interior and exterior surfaces with epoxy paint.

The valve assembly shall be cast aluminum and shall be flanged to the outside of the pressure vessel. The disk-shaped high-performance Nylatron® plastic piston will be retained in alignment through an outboard-bearing surface.

To minimize wear, the system shall discharge with a short 5/8-inch (16 mm) piston stroke. A low friction composite bearing will maintain concentric piston travel without lubrication. A return spring will aid in piston seal and closure after discharge.

The cannon's Nylatron® piston-to-aluminum seat seal will provide a service life of two million firings with low maintenance requirements in ambient conditions.

If service is required, either end of the valve assembly shall be accessible wit the by removing a set of bolts. The piston seat will be removable for service without requiring the replacement of the entire valve assembly.

Discharge of the air cannon system will be controlled by a ½-inch solenoid valves or a 3/8-inch solenoid manifold assembly housed in a dust-tight, weather-tight enclosure.

The supplier of the air cannon system shall provide system engineering for guaranteed effectiveness. The supplier may quote on the guaranteed installation of the air cannon system.

The supplier of the air cannon system shall be IS0 9001 Quality System-certified.

The air cannon system shall be BIG BLASTER® XHV-A Air Cannon System as supplied by Martin Engineering.

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TYPICAL SPECIFICATION

XHV Retrofit Assembly For Air Cannons

To improve the performance of installed air cannon systems, an improved piston/valve assembly will be mounted on existing air cannon pressure vessels.

The piston/valve assembly shall be cast aluminum and shall be flanged to the outside of the pressure vessel. The retrofit valve assembly shall be attached to the pressure vessel with eight bolts.

To minimize wear, the system shall discharge with a short 5/8-inch (16 mm) piston stroke. The disk-shaped piston will be retained in alignment through an outboard-bearing surface. A low friction composite bearing will maintain concentric piston travel without lubrication. A return spring will aid in piston seal and closure after discharge.

If service is required, either end of the valve assembly shall be accessible by the removal of eight bolts. The piston seat will be removable for service without replacement of the entire valve assembly.

The supplier may quote on the guaranteed installation of the air cannon retrofit valve assemblies.

The supplier of the air cannon retrofit valve assemblies shall be ISO 9001 Quality System Certified.

The retrofit valve assembly shall be BIG BLASTER® XHV (-A or –H) Valve Assembly, as supplied by Martin Engineering.

(Specify XHV-H for High Temperature Conditions; XHV-A for Ambient Temperatures)

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