

MagnaValve™

Blast Cleaning Case Study

MagnaValve reduces maintenance for Australian automotive foundry

The foundry used grit valves and the valves caused many problems including breakdowns and the resulting labour hours spent on maintenance. Since the installation of the MagnaValves, the foundry has not had a single valve breakdown.

—Nathan Dalton
Blastmaster

The maintenance staff at an automotive foundry in Fishermans Bend, Victoria, Australia was frustrated by the numerous breakdowns of the grit valves on their monorail eight wheel shot blast machine. The problems were linked to the mechanical shot control/shut off valves seizing due to metal dust ingress into the moving parts, and shot leakage during shut down. The valve seizures resulted in the blast machines going out of service, often two or three times per week. Each breakdown required a high volume of labor to get the valve operational, plus the lost production time while the machine stood idle. Leaking valves can fill a wheel assembly with shot, making motor restart impossible until the wheel housing is cleaned out either by stripdown or contractor services. The busy foundry needed to run several shifts a day, so this became an expensive problem.

The foundry maintenance team contacted Blastmaster, a MagnaValve distributor in Adelaide, Australia, for a solution. After a successful in-house trial period with the MagnaValve, the team ordered eight of the magnetic valves. Blastmaster designed the first retrofit kit for the valves and the foundry built the remaining retrofit kits. “The customer found the installation easy, straight-forward and non-time consuming,” said Nathan Dalton with Blastmaster.

Seven months after the MagnaValve installation, Blastmaster reported the following outcomes at the foundry:

- Not one breakdown or stoppage
- Highly controllable shot flow rates to each wheel
- Consistent wheel motor loadings ensuring shot intensity is the same day after day
- Precision electronic flow rate adjustment when required
- No flooding of the wheel housing due to shot leakage
- No wear by shot flow is evident
- Electrical interference from the heavy foundry environment has not affected the controller or valve functions in any way

About the MagnaValve

MagnaValves use a strong permanent magnet and electro-magnet design to regulate the flow of steel shot in blast cleaning or shot peening machines. When no power is applied to the MagnaValve, the permanent magnet stops all flow. With power applied, the magnetic field is neutralized and shot is allowed to flow through the valve.

Benefits of the MagnaValve

- Maintenance-free—no moving parts
- Cost savings from the efficient use of media and lower media disposal fees
- Optimizes the load of large horsepower motors thereby reducing energy consumption
- Many control options available to suit your application
- No risk of machine malfunction due to running out of shot during procedure
- Confidence that your product was blast cleaned or peened properly
- Compliance to specifications is readily attainable
- Requires less operator time
- Available in 24 Vdc and 110 Vac models
- Works with most steel media sizes
- Environmentally-responsible—conserves energy and media (less media in landfills)
- Over 26 years of proven performance in the field
- Trusted by OEMs and end-users worldwide
- Available for wheel and air blast machines



The MagnaValve is manufactured by Electronics Inc. For more information on our complete line of MagnaValves, contact us by phone, mail or email:

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