

BLAST CLEANING & FINISHING SYSTEM

Contribution in Economic Development



Mec Shot has been regularly contributing in nation's Economical Development from its initiation. This has been possible with joint efforts of brisk marketing by reaching all corners around the Globe, un-tiring work-force and fore-sight of Management.

Mec Shot has been exporting surface preparation machines with complete in line solutions to various countries. Though Mec Shot is manufacturing capital goods for the customers but repeated orders are boosting the moral of organization. The Records are self indicative, how the growth rate has increased year after year regularly and added the value in Country's economical Growth.

Mec Shot has made contribution in the Economic Development of the Country by way of Direct Marketing through agents and & Joint Ventures in abroad.

It is not only the way Mec Shot is contributing in country's economical growth by exporting but also has contributed by supplying required machines against import and saved the country's exchequer number of time. In this Mec Shot had supplied seven axis Robotic machines for Aviation, Power Generation & Automobile Industries.

Mec Shot had also helped different industries for their technical know how by supporting with the latest Technology developments in the field of Surface preparation Technology.

Director Desk

Mec Shot has been striving from its insertion to provide latest Developments to the related industries. In line to this MEC SHOT is trying to get its R&D approved by DSIR (Department of Scientific and Industrial Research). This will help the industries with the authorized value added data in the field of Surface Preparations by Abrasive/ Shot Blasting.

In line to the Robotic Shot Peening machines we have recently supplied a machine for Aviation industry in India to a ancillary of Boeing.

It was a pride for our organization where we have developed, designed and manufactured first time in India a Micro Blasting machines for our country's defence research to spray Micro Blast and coat Alumina Powder of 5 & 0.5 Micron particle.

Around the Globe industries are helping to resolve the water scarcity which is a threatening warning for the human. Mec Shot is also contributing by helping the Pipe Industries by developing, designing & Manufacturing pipe Surface Preparation machines. Mec Shot recently also supplied airless machine for surface preparation of MS/SS strips and rods.

It is a zeal to receive repeated orders from the old customers in the field of Tyre Manufacturing. This is also an indicator of Customer satisfaction level coordinating with the company's policy.

A.K. Modi
Managing Director

Next....

New Airless Shot Blasting M/c for Agriculture Ploughing Tools

New Air-operated 'Y' Hanger Type Shot Blasting M/c for Valves Body

New Solution for Railway Industry



7 Axis Robotic Shot Peening Machine for Titanium Alloy Beam for Boeing Aircraft

To achieve the repeatability & Accuracy in Shot Peening Technology the System Automation of machine being used plays the vital roll. Mec Shot has recently have manufactured few more 7 Axis Robotic Shot Peening Machines for various applications.

A Robotic machine for shot peening of Titanium Alloy Beam of aviation industry, in which the small components are placed on the pair of trolley supported with the Table manually & clamped and Bigger/lengthier components kept on the idler roller and brought in the reach of the Robot.

A Blast Nozzle mounted on robotic arm completes the pre-programmed operation. The shot peening media get re-cycled in the reclaimer through size & shape classifiers and fed to the continuous blast generator through deflector valve and storage hopper.

Mecshot Shot-Peening Machine operates with the help of dry compressed air for carrying forward the shot, falling from the blast -generator into the Magna Valve, Mixing Tube & Shot Peening Blast Hose. Shot finally issue out of the Shot Peening Lance Nozzle in the form of a stream for the purpose of Shot Peening, which is automatically maneuvered by a Robotic Arm. The shot

lying in the upper pressure vessel will be transferred into the lower pressure vessel. Again after set ON time the lower mushroom valve seals the lower pressure vessel and the upper mushroom valve falls down after the pre set delay Time is over, receives the shot from the Shot Classifier storage hopper. This way the blasting operation is kept continuous.

Job is mounted on two work cars with a Manually Operated Turn Table in centre with pneumatically height adjustment for job end changing. Blast nozzle shall move of the job to peen the required work surface externally by a Robotic Arm as per pre set parameters in PLC.

The fine dusts get trapped over filter cartridge & get cleaned through reverse jet action in dust collector.

The spend media, which is dropped into the Hopper via perforated floor, is reclaimed by Bucket Elevator. The Air Washed Shot transferred in a three level Vibrating Screen Separator. The Upper Sieve extracts the bigger/ oversize particles. The sized shots are further transferred to Shot Shape Classifier by Bucket Elevator. The Shape classified shot get transferred in Upper Pressure Vessel for re-use.



Tyre Mould Cleaning Machine

After certain number of molding process, these foreign particles need to be removed without affecting the dimensional tolerances and finish of the mold to obtain consistent quality of molded products.

The mold is clamped in horizontal position on the turn table using centering plates & four heavy duty T-slot clamps. The turn table is tilted hydraulically at suitable angle. The work car with turntable and mold is driven inside the cabinet. The turn table is rotated through electric motor with gear box arrangement. A spring is provided for holding the gun arrangement to avoid fatigue of operator. The abrasive is pressurized in a pressure vessel by compressed air and then forced through the nozzle to blast clean the tyre mold.

The used abrasive and dust created during blasting are sucked to reclaimer where usable grit is reclaimed and collected in a storage tank and is transferred to pressure vessel at the bottom of storage tank for recycling and dust is collected inside the fabric bag dust collector whereas clean air is discharged into the atmosphere.



New - Micro Blasting Machine

'MECSHOT' Spray Blasting Equipment to spray Micro Blast and coat Alumina Powder of 5 & 0.5 Micron particle size on SS-440C pins of Hardness 54 Rc and size 8mm dia x 100mm length to achieve the high temperature resistance coatings. Mec Shot has recently developed & manufactures a Micro Blasting Machine First Time in India 5 & 0.5 Micron particle of abrasive media used for surface preparation & simultaneously bonding on substrate at very high pressure.

The machine operates on the suction-induction principle of Dry Abrasive Blasting. The fine particles are drawn from the hopper into the blast guns by partial vacuum created by high velocity air flow and propelled against job. The operator places job on the turn table / fixture inside the cabinet. The blast cleaning of job is accomplished through mechanical/hand holes provided in the front of the cabinet. One Hinge

type Side Door is provided at the side of the cabinet. The door is properly sealed to ensure that dust does not escape.



Airless Shot Peening Machine for Crown Wheel And Pinion

MEC SHOT has been assisting automobile industries in India or abroad by supplying the required shot peening / blasting machines. Recently MEC SHOT has design, developed, manufactured and exported shot peening machine for crown wheel and pinion.

For crown wheel and pinion, to peening becomes more and more important because of some peculiarity of this mechanical component, whose function is to absorb kinetic energy and to smoothen the behavior of the system under dynamic loads.

Crown wheel and pinion for shot peening mounted on 4 pair of satellites fixed on Indexing Turn Table get shot peened by blasting wheels. The rotor of blast wheel assembly unit fires abrasive down the rotating satellites. The spent abrasive from perforated tabletop falls into hopper of the cabinet. The usable abrasive is transferred into the storage hopper by bucket elevator recovery system for re-circulation purpose. The abrasive from the storage hopper are transferred into blast wheel unit through feed funnel. The flow of abrasive to the blast wheel unit is regulated to the required value by Electromagnetic Magna Valves.

The pleated bag type dust collector is collect the dust through side and passes into a settling and equalizing compartment. The clean air passes through the tubes and is exhausted through the blower. At certain interval the tubes are cleaned through reverse pulse jet action remove the accumulated dust from the filter bags.



Airless Shot Blasting Machine for Flat Bar Cleaning

To blast clean MS Flats of various sizes, for removing rust and to achieve superior quality (approx. Sa2 2.5 SIS standards) finish after blast cleaning before coating and painting.

"MEC SHOT" has wide ranges of Tunnel Type Flat Bar Airless Shot Blasting Cleaning Machines to suit the Job Size and required number of Blast Wheels according to Production output required.

The opening of the tunnel & required number of blast wheels depends upon the structure of job for attaining homogeneous finish. Major assemblies of the machine are blast wheels for giving high production output, roller conveyor for job conveying & media recovery consists of bucket elevator, screw conveyors, air wash separator, abrasive storage hopper & pleated bag dust collector for dust collection. The dust emission level from dust collector is less than 20 milligram per cubic meter.

The numbers of flat bars are to be placed in the guides of rotating rollers of in feed conveyor pass through entry vestibule tunnel and then enter into the blasting chamber for blast clean process. Blast wheel stations are arranged strategically around and located on the top of cabinet propels abrasives on the rolling flat bars. The blower arrangement continuously blow- off abrasive accumulated on the top side of the work pieces. After shot blasted homogeneously finished all around air washed work pieces roll out from exit vestibule tunnel on to the out feed conveyor rollers, from where unloaded manually.



Airless Shot Blasting Machine for Tippers & Trailors

Tippers & Trailors Industries are advancing towards development for bulk transportation. Tippers & Trailors are main bulk Road Transportation get affected with variable atmospherical conditions. To protect them these structures are blasted and required roughness is achieved good bonding strength for painting/powder coating.

MEC SHOT has wide range of airless continuous closed loop monorail traveling hanger type shot blasting machine for various applications. One of the recent applications is to blast clean the long tripper Tail Door Assembly; Sides Board Assembly, Sub Frame Assembly, Hard Board Assembly, Floor Assembly etc.

This type machine is designed to suit closed loop monorail structure with suitable numbers of hangers depend on the length of work piece. Each work piece is hung from entry side vestibule, passes through entry vestibule, blast cabinet, exit vestibule & manual blast room, which are properly closed by set of rubber curtains to prevent the shot escape & leakage.

After hanging the work piece, hanger travels at pre decided productivity speed to pass through a blast cabinet However, due to intricate shape of fabrication, some nominal portion is left out, which do not expose. To blast clean such un-blasted portion, manual blast room is provided of length, which encloses complete length of the work piece.

The suitable abrasive recycling system for present requirement is provided to take care of abrasives recovery The abrasive from the storage hopper are transferred into the blast wheel unit through Soundabrator valves, which controls the noise level of blasting wheel within 85 dBA

The pleated type bags compressed air continuous purge cleaning dust collector inlet is connected with the machine.

To operate & control the total plant with high safety of interlocks ergonomically designed control panel with control & power circuit wiring, is located at a work piece loading place, from where operator can view almost all the drives & entry of hangers.

To maintain the main assemblies like blast wheels, elevator head section, rotary screen assembly at high level maintenance platform along with hand railing & safety ladders as well as the operator's movable stand to blast manually the hung work piece are provided at suitable places.

The space occupied by the plant depends upon the length, width & height of the work piece. The economy of the plant solely depends upon the relationship of work productivity i.e. maximum surface preparation areas versus investment & operational cost of the plant.



Airless Shot Blasting Machine for Stone Texturing

Stone Industries are advancing towards development for Sand Stones, Marble Panels, Granite, Cement Paving Blocks to achieve required roughness on one side either for good bonding strength or esthetic look after laying on the Room flooring & Road Side Pavements.

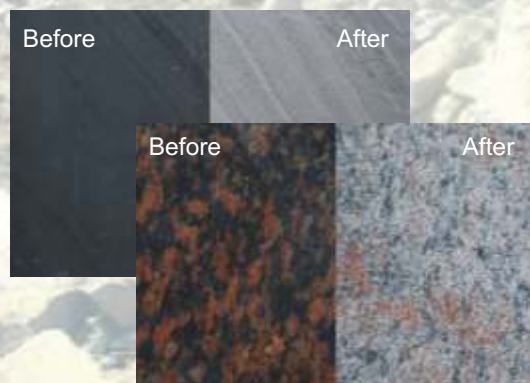
Mec Shot has recently designed, developed, manufactured & successfully installed Airless Shot Blasting Roller Conveyor Machines for different usages like Sand Stones, Marble Panels, Granite and Cement Concrete Interlocking Paving Blocks. Shot Blasting is a mechanical surface preparation process or technique to improve the bonding strength of job by blasting with small balls. Roughness is formed on the surface of the job by the striking tinny spherical balls.

The Sand Stones, Marble Panels, Granite, Cement Paving Blocks are placed on the roller conveyor for automatic blasting. The Sand Stones, Marble Panels, Granite, Cement Paving Blocks pass through inward tunnel and enter into the blasting chamber for surface preparation. The blast wheels are stationed strategically around the cabinet propels shots on the Job. The job moves forward and exit into outlet tunnel after duly blasted & air washed with air blower fans.

The quantity of wheels will depend on the job size & its production rate.

Automatic media replenisher has been provided to prevent starvation of the wheels. A media trap box has been provided to prevent the usable shots going in to the dust collector also to enhance the life of filters in dust collectors.

Heavy & high volume dust generated during blasting operation and air washing system is sucked into dust collectors where the dust get trapped in our around the specific designed filters (depends upon the type of dust collectors), keeping the environmental eco-friendly.



Pipe/ Pipe Mould Cleaning Machine

MECSHOT has recently manufacture External / Internal Pipe / Pipe Mould cleaning & Surface Preparation automatic machine. Pipe / Pipe Moulds rotate on the welding rotators and nozzles reciprocate on lead screw for external and boom carries nozzles for internal cleaning.

The blast cleaning system works on pressure feed system. The air abrasive mixture passes through the Blast Hose and finally issues out of the forward traversing Blast Nozzle at a pre-set speed, mounted on a Boom itself, at a high velocity to strike the rotating work surface.

A Blasting Cabinet has been provided where one end of pipe enters whenever a new pipe is loaded on Weld Rotators and nozzle from another end of pipe. As per the diameter of Pipe, Rubber Vestibules have been provided to prevent the spillage of the abrasive during entry or retrieving of Boom. The abrasive falls in the lower hopper of

the cabinet from where it is conveyed by Screw Conveyor or Rubber Convey belt through the Flap Plate Valve. The screw / belts feed abrasive in Boot of Bucket Elevator.

The centering of Boom is done by clockwise/ anticlockwise rotating the Hand Wheel of Centering Mechanism and in relation with similar centering manual/electro-mechanical on Trolley.

The Pulse jet Filter Bag Dust Collector is self-cleaning system. All filter bags are automatically cleaned with the aid of Timer through which Solenoid Valve are activated. The compressed air valves opens and certain volume of compressed air is blown into the filter bags to keep bags clean and thus the clean air is discharged into the atmosphere.



TURNKEY PROJECTS DONE BY "MEC SHOT"

MEC SHOT has recently design, developed & manufactured a Huge 4 Wheel Airless 'Y' Hanger type Shot Blasting M/c for Railway Bogie Frames & Accessories. The Job are hanged on hanger which provide on beams and motorized trolley to take the job inside the cabinet. The job enters the blast cabinet where it is blasted inside the blast cabinet by 4 powerful upward and downward positioned blast wheels enabling to cover the entire turning circle of components.



MEC SHOT has recently design, developed & manufactured a Hi-Speed special purpose heavy machine to blast clean Truck Frame Rails & Channels of high strength steel in a single pass only by high powered 6 wheels each 50 HP with high massive abrasive flow control with six numbers of MAGNA valves



MEC SHOT provided certain mechanical and electrical safety features are incorporated like robust & big maintenance platform along with safety railings, zero speed sensors, heavy duty silencers to control the noise level, compact but highly efficient cartridge type dust collector.

MEC SHOT has recently design, developed & manufactured a Huge 6 Wheel Airless Shot Blasting M/c for Railway Bogie Frames & Accessories. The Job are loaded on motorized Trolley to take the job inside the cabinet. The job enters and get blasted inside the blast cabinet by 4 powerful upward and downward positioned blast wheels enabling to cover the entire components. Additional manual Blast Room System has also been provided for manual touch up of in accessible structural area.



MEC SHOT has recently designed, manufactured, supplied, erected & commissioned Six Impellers Turbines Airless Type Shot Blasting plant for large sized 3.2 meters long x 5.3 meters wide x 3.2 meters height casting of heavy weight approximate 20 tons each with 36 varieties. Single piece large sized heavy weight Spheroidal Gray Iron casting for industrial use is covered with high contents of casting sand and all other impurities which are required to be removed before machining. After blasting the cleaned surface is prepared for machining & coating.



TURNKEY PROJECTS DONE BY "MEC SHOT"

MEC SHOT has recently designed, manufactured, supplied & commissioned a Turnkey project at KGF (Mysore). Mechanical Recovery Blast Room System & Semi Downdraft Paint Spray Booth with heavy structural conveyor system with Electro-Mechanical Drive for Multiple Electric Rail Bogies Structures (METRO). Environmental hazard safety systems have been provided to make the system Eco-Friendly.



In a green field project MEC SHOT has recently designed, manufactured, supplied & commissioned a Turnkey project for Cryogenic Pressure Vessels.

A huge designed structure fabricated with keeping all safety factors for operating systems and operator and maintenance staff.

MEC SHOT has recently designed, manufactured, supplied & commissioned a Turnkey project Blast Room System with Automatic Mechanical Recovery & Semi-downdraft Paint Booth System at Tamilnadu for Heavy Dust Collectors Structures. Monorail Cross Travel Hoist have been provided for easy transportation of job. Hydraulically operated Scissor Lifts have been provided to operator's ease out to cover the large structures of export oriented dust collectors.



MEC SHOT has recently designed, manufactured, exported & successfully commissioned a Turnkey project at IRAN . Semi Downdraft Paint Spray Booth and Special Air-operated Syphon System Shot Blasting M/c with all accessories for Valves used in Natural Oil & Gas pipeline projects

MECSHOT Modernized Research & Development Center / Technology Center

MEC SHOT has a multipurpose development center to maintain international trends of automation and manufacturing excellence. Dedicated R & D Facility is available in all three Units (I, II & III). The exclusive R & D center has machines that are technologically advanced for better quality, reliability and productivity. This helps cater to the sophisticated aerospace, automobile and defense applications. Equipped with a series of machines, the R & D center examines and provides best solution for processes and parameters of a defined task.

Customer samples are processed and profound experiments are conducted to establish service life of components, parts and materials resulting in improved performance and productivity. Efforts are made to develop new application products, processes, and consumables in surface treatment, abrasive blasting and shot peening technology.

Furthermore our Research & Development Centre has developed with new concepts and innovative approach with various testing machine for checking various results & technology development, all equipments including: Spectrometer, CMM Meter Machine, Digital Harness Tester, Universal Testing Machine, Ultrasonic Flaw Detector, Ultrasonic Thickness Gauge for the inspection & testing of incoming raw material & finished goods produce there on. Apart from all we have also set up our own WET ANALYSIS LABORATORY to cross-check the spectrometer results for the incoming raw material, so that we can give better tolerances. Every component manufacture is test then used in machine that shows our company's quality management policy

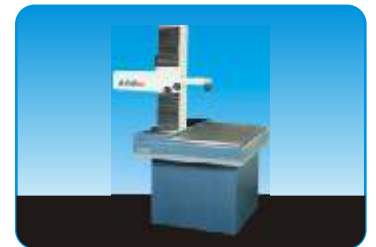
as we are certified with 'CE' marking / ISO certification.

Our Research also foster in the field of environment & pollution control by using total comprised solution for pollution control system & various risk assessment equipments. Mec shot developed the proven pollution control technologies with their technology development centre by using resource and flexibility to develop new technologies to keep pace with the requirement and environment safety.



Spectro
Meter

CMM
Machine



Welding
Penetration
Meter

Universal
Testing
Machine



R&D Lab



Chemical Lab

5th Shot Peening & Blast Cleaning Workshop

Mec Shot a premier company in the field of Surface Preparation has been imparting related Developments to Indian Industries by conducting Workshop at different location in India and as near to different industries user. You would be glad to know that MEC SHOT Blasting Equipments Pvt. Ltd., Jodhpur is organizing its **5th Work Shop on "Shot Peening & Blast Cleaning Technology-2010" from 19 & 20th Nov., 2010.** This year organizers are delighted to conduct the programme at Faridabad.



At: Faridabad
Date: 19 & 20th Nov., 2010

For Registration Please see: www.mecshot.net

Limited Seats



HR - NEWS

Drive more **performance**, Less **negative stress**

Another interesting point that the six areas that impact employee engagement are related, meaning that if we focus on fixing one, it will positively impact the others. With that in mind, I encourage you to approach the challenge by initially focusing on the application of just one or a few of the tips below. As you attack these dimensions of the challenge, you will find that the positive cascade effect will bring results in some or all of the other dimensions as well.

Upcoming Exhibitions

MAHATech
A Mega Business Event

MAHATech - 2010

Date: 02 - 05th December, 2010

Venue: New Agricultural College
Ground, Shivajinagar, Pune

INDIA STONEMART 2011
JANUARY 20 - 23, 2011, JAIPUR (RAJASTHAN) INDIA

India Stone Mart - 2011

Date: 20 - 23th January, 2011

Venue: Export Promotion Industrial Park,
Jaipur, Rajasthan



Where Technologies Innovate

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