



Shotblasting of aluminum profiles previous to anodizing

Cym Materiales SA has developed a line of equipment for **continuous shotblasting of aluminum profiles previous to the anodizing process.**

Shotblasting is a technique of superficial treatment by impact that can achieve an excellent degree of cleaning and simultaneously a correct surface finishing.

The impulsion of the abrasive is done by means of centrifugal turbines, a technique that is the most economic method among the current techniques of surface preparation that does not pollute the environment.

The functioning of the shotblasting turbines is similar to a centrifugal pump. The shotblasting machines for aluminum profiles use multiple turbines positioned in a way that the abrasive reaches all surfaces to be shotblasted homogenously.

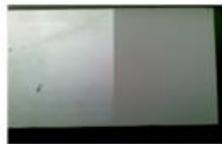


Advantages of the use of the shotblasting process previous to anodizing

- Fast turnover of the initial investment (between 1 and 3 years)
- Recovery of profiles that are out of standard
 - Recovery of second selection materials.
 - Homogenization of surfaces.
 - Elimination of superficial stripes because of a failure of the extrusion mold or defects caused during the handling of the profiles.
 - Elimination of superficial stains.
- Low operative cost
 - 1.5 Kilos of consumption of stainless shot per ton of anodized profile.
 - Depending on the temperature of the bath and the level of concentration of caustic soda used in the process, the time of the alkaline bath can be reduced to 85 %.
 - Less chemical material used (caustic soda and sulfuric acid).
 - Less manpower.
 - Higher lifetime of extrusion mold.
 - The equipment is easy to operate and does not require specialized personnel.
- Ecological Process
 - Decrease of cost of effluents treatment by using less chemical products.
 - Decrease of risk to the personnel because of the handling of less chemical materials dangerous to health.
 - Decrease of damage in facilities or buildings due to vapors produced during the chemical scaling.
- It does not cause structural or corateral damage on the physical structure.
- Possibility of controlling the final roughness of the profile according to the results wished.



Recovery of profiles by defect of "water stains"



Recovery of profiles by defect of "defects caused by handling"



Recovery of profiles by defect of "mold stripes"





General Characteristics of the shotblasting equipment for aluminum profiles.

- Proper distribution of the turbines achieving an excellent shotblasting coverage.
- Possibility of decreasing or increasing the speed of impact of the abrasive in a way that allows to adjust conveniently the roughness obtained in the process.
- Automatic opening and closing of the shot valves to avoid the unnecessary wear of the equipment.
- Intermediate cyclone to perform a correct separation of abrasive/dust avoiding that good abrasive is withdrawn from the equipment unnecessarily.
- Internal covering of working chamber made of cast material of high resistance to wear by abrasion.
- Roller conveyor that allows to process several profiles simultaneously.
- Autoloader of shot to keep the mixture of shot in the system constant.
- Use of Vulkan-Inox GmbH stainless steel shot for not contaminating the profiles with rests of carbon, avoiding a future oxidation.
- Automatic process of shotblasting does not require skilled manpower.
- The dimensions for maximum passage of parts and production speed can be adapted to the requirement of the customer.
- Blast cleaning is a process of non-polluting mechanical scaling therefore it is not necessary to use equipment to regenerate additional waste like effluent treatment plants.

Model	Turbines		Maximum Section		Production
	Quantity	Hp	Width (mm)	Height	Mts/min.
PER 4X2 AL	4	10	400	200	2 a 5
PER 6X2 AL	4	15	600	200	2 a 5



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