



SURFACE PREPARATION

ROLLER CONVEYOR SHOT BLAST MACHINE



CYM MATERIALES S.A.
INDUSTRIAL SOLUTIONS

SHOT BLASTING AND PAINTING FOR PLATES AND PROFILES

CYM Materiales SA manufactures complete lines for the automatic shot blasting and painting for plates and profiles recommended when there is a long manufacturing or storage time of raw material. Its exclusive design allows parts to be processed with high productivity and minimum operating costs.

The shot blasting equipment is complemented with paint booths and in-line drying ovens for shop primer applications in a 100% automatic process, avoiding unnecessary handling and optimizing production times and costs.

The length of the parallel roller conveyors is variable to suit the needs of each customer and can be equipped with a transfer for side loading and unloading, optimizing the efficiency of the system and connecting the line with other processes.

The design and technology of our equipment guarantees the safety of the personnel and the care and hygiene of the installations and the environment.

ADVANTAGES IN THE USE OF AUTOMATIC SHOT BLASTING

- Designed for pre-blasting processes of raw material prior to the manufacture of welded structures.
- Removes scale and rust improving the cutting, drilling and welding processes, also reducing the level of dust in the facilities.
- High volume production with minimum operating cost.
- Automatic shot blasting process does not require specialized labor.
- With correct operation of the equipment, there are no health problems for personnel or damage to the facilities.



FEATURES CONSTRUCTION

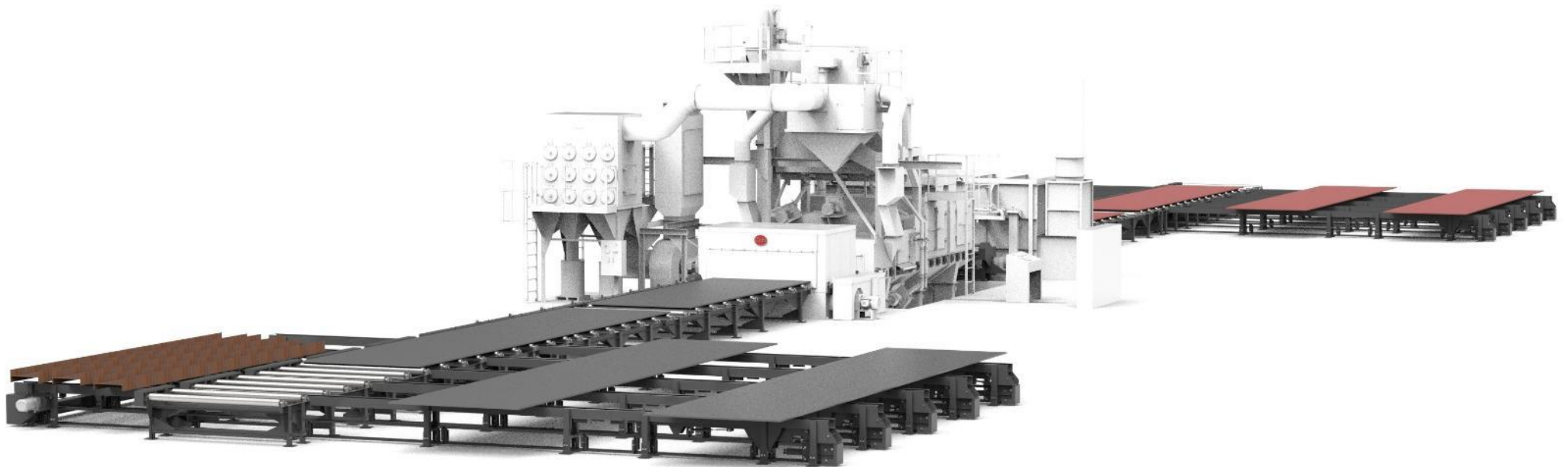


BLAST CABINET

- Manufactured with triple layer of steel.
 - External in mild steel
 - Double internal protection lining
 - MN steel (11-14%) covering 100% of the main cabinet.
 - Additional reinforcement in hot areas with high chrome cast steel plates ($\geq 64Rc$)
- Screw conveyor - Spiral 15b30 boron-steel
- Access door blast cabinet
- Inlet and outlet chambers with sealing curtains to minimize abrasive escape from the blast compartment.

ABRASIVE REMOVAL SYSTEM

- Removes the abrasive deposited on the top of sheet metal and H-profiles.
- Combined abrasive sweeping system consisting of
 - V-sweeper
 - Rotating brush
 - Abrasive blower
- Options for height adjustment of rotating brush positioning
 - Manual
 - Automatic height adjustment by recipe in HMI



ROLLER CONVEYOR

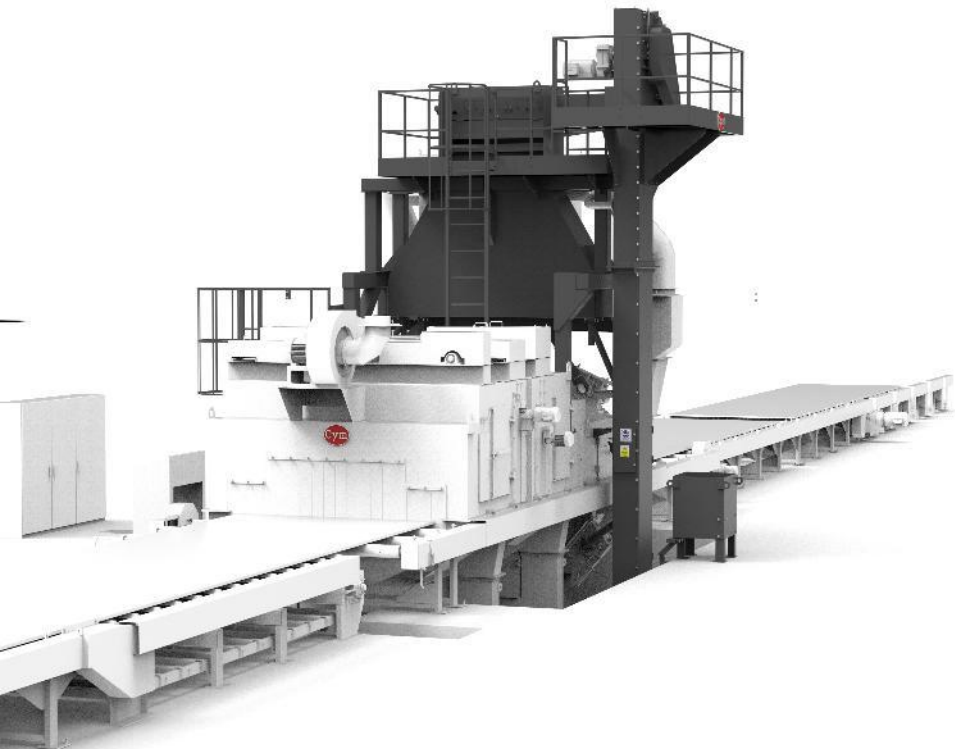
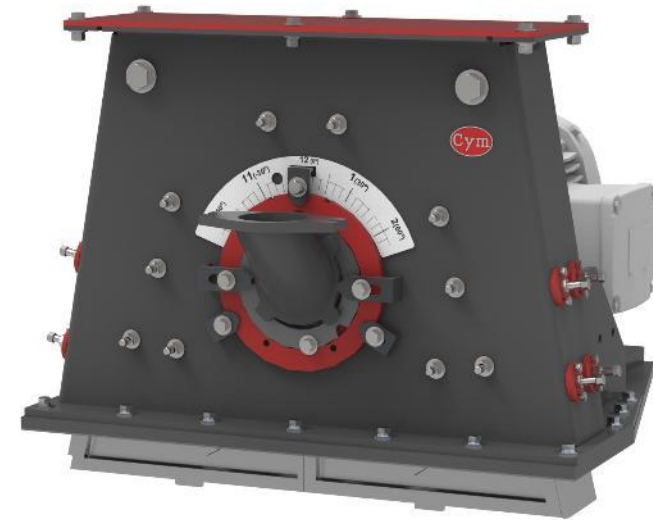
- Parallel roller conveyor
- Distance between rollers
 - Internal roller conveyor 500 mm
 - External roller conveyor 800 mm.
- Conveyor length as required.
- Variable speed of advance of pieces for different qualities of cleaning

TRANSFER TABLES

- Input and output carrier: crossbars and lengths as required
- Load capacity as required.
- Parts lifting system with hydraulic drive.
- Parts dragging mechanism with chain system.

TURBINES

- Strategically located for better coverage and higher performance of the whole equipment.
- Direct coupling to the turbine engine
 - Power ratings from 10 HP to 40 HP.
- Turbine casing made of MN steel (11-14%).
- Internal casing lining made of high chrome cast steel ($\geq 64Rc$).
- Control box positioning and fixing system, allowing a correct regulation of the hot spot.
- Shot-blast labyrinth seal between motor coupling and casing, allowing the turbines to be mounted in any position.

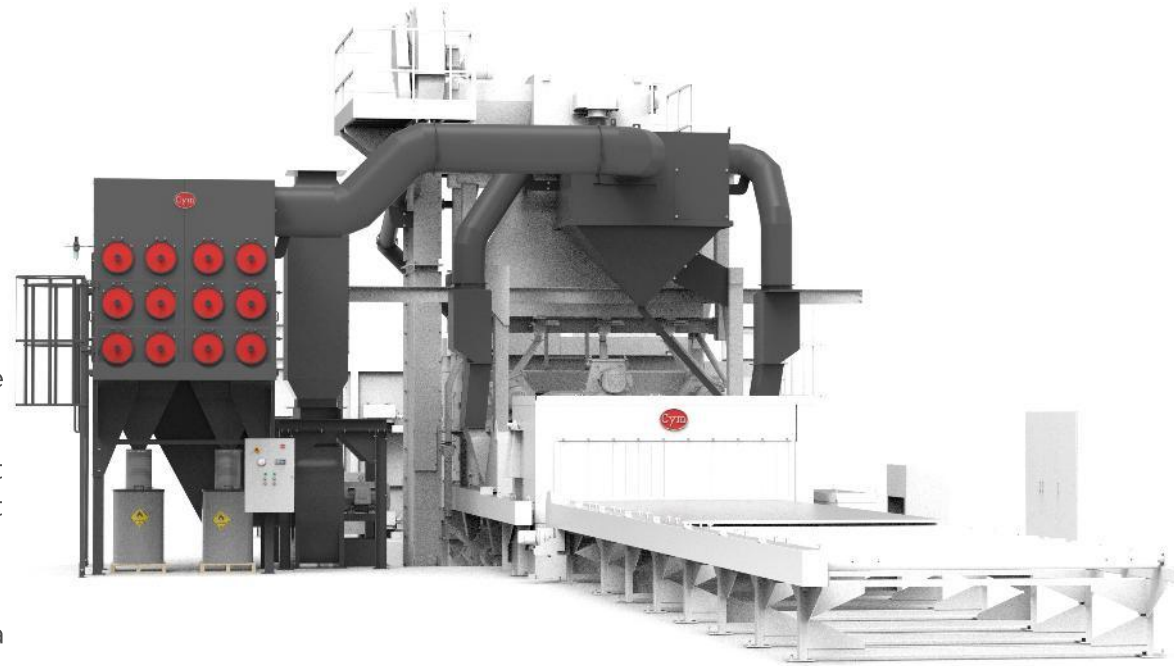


ABRASIVE RECOVERY SYSTEM

- Bucket elevator
- High efficiency Air flow abrasive cleaning
- Upper Screw - Spiral 15b30 boron-steel
- Storage hopper for good abrasive
- Maintenance platform
- Abrasive flow control valves
- Optional
 - Automatic Abrasive Regeneration
 - Automatic abrasive curtain formation adjustment system including sensors and airflow monitoring, all controlled from the HMI

DUST COLLECTOR

- Manufactured with mild steel – 3,2 mm thick
- Cartridge media cleaning: reverse Pulse jet
- Easy replacement of cartridges
- Emission: $\leq 1 \text{ mg/m}^3$
- Efficiency $\geq 0.5 \text{ micron} / 99.9\%$
- 200L dust accumulation drum with lid transition to drum with sleeve filter
- Intermediate gravitational separator located between blast cabinet and dust collector allows for increasing the air flow inside the cabinet without risk of carrying good abrasive to the dust collector drum
- Optional
 - Silencer and Mineral wool cover kit to reduce noise $\leq 85\text{dBA}$ a 1.52m
 - Maintenance platform



ELECTRIC COMPONENT

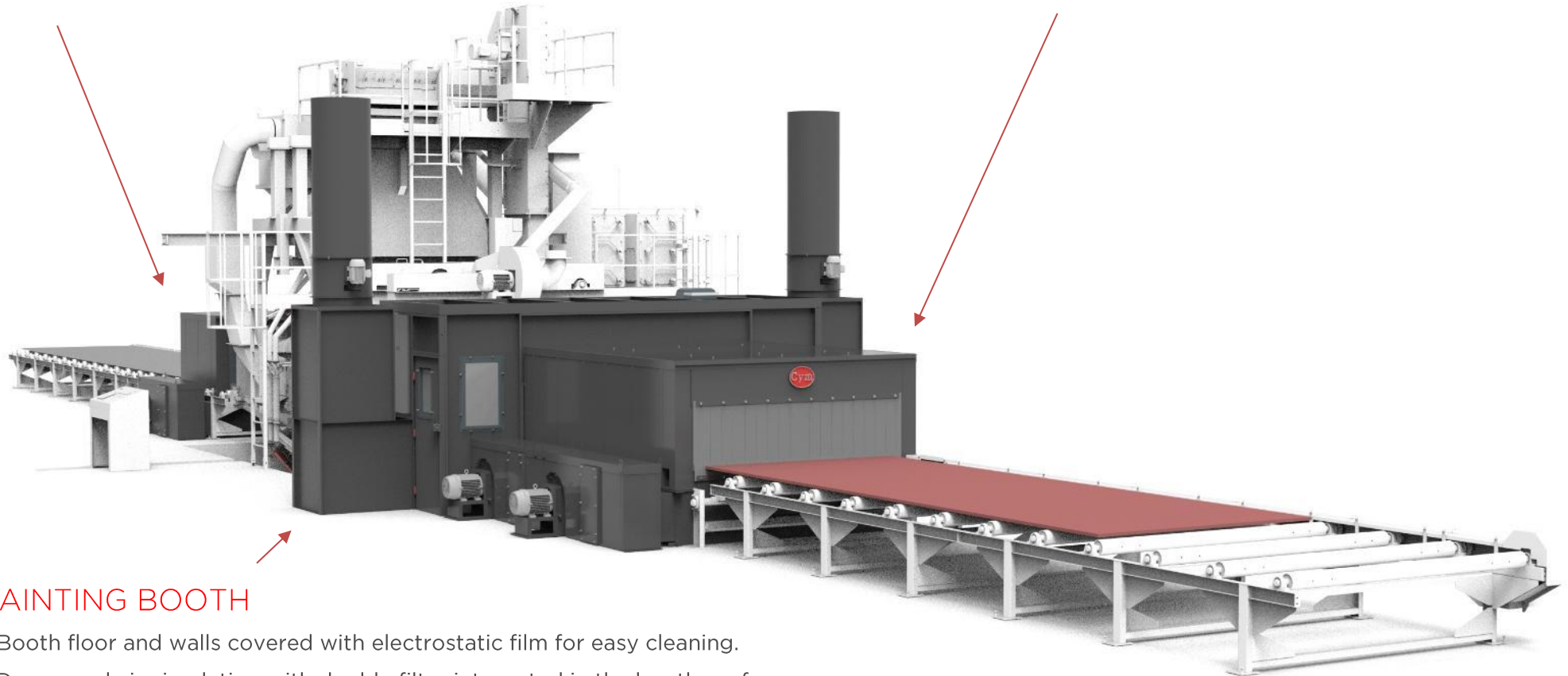
- Control panel for operation control
- Components and motors: according to customer requirement IEC, Nema, UL, etc.
- PLC control: Siemens
- Emergency stop button: included.
- Wire cables to connect control panel and motors.
- Optional
 - Movement sensor motors
 - Cooling
 - Soft Start motors.

PRE-HEATER

- Used for remove residual moisture prior to the entry of the blasting equipment.
- Double air flow.
- Air circulation range 20°- 60° C.
- Conveyor for pre-heater chamber to blast equipment.

DRYING CHAMBER & SLAT CONVEYOR

- Used for solvent curing and evaporation downstream of the paint booth.
- Double air flow.
- Air circulation range 20°- 60° C.
- Cross slat conveyor



PAINTING BOOTH

- Booth floor and walls covered with electrostatic film for easy cleaning.
- Downward air circulation with double filter integrated in the booth roof.
- Double cascade filtration (pleated dry filters) and Paint-stop filters (fibreglass).
- Automatic nozzle movement.
- Sensor for positioning and size detection of plates and profiles.

TECHNICAL DATA - STEEL PLATES & BEAMS SHOTBLASTING SYSTEM - CH-H

Model	Blast Wheel		Maximum passage section of pieces		Parts to be processed				Model Working speed Mts. / min (**)
	Qty.	HP	Height	Width	Profile	Structur es	Plates	Pipes & Spool	
CH 1.6 H	4	10 to 40	5 ft 1600 mm	24" 600 mm	X	-	X	-	1 to 20 ft/m 0.3 to 6 m/min
CH 2.5 H	6		8 ft 2500 mm						
CH 3 H	8		10 ft 3000 mm						

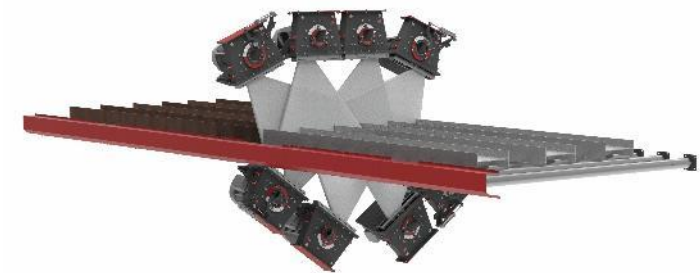
Note:

(*) The maximum parts pass size section and the production speed can be adapted to the customer precise requirement.

(**) The production can vary depending on the degree of rust, mill scale, and or other contaminants present

RELEVANT FEATURES

- Plates, beams, angles, round and square tubes can be processed.
- Equipped with rotating brushes and blowers to remove excessive abrasive
- Optional manual or automatic height adjustment with HMI sensor.
- Ideally operate with steel shot for easier remover of accumulation
- Can be complemented and interfaced with automatic painting and drying oven equipment for shop primer applications.



OTHER SHOT BLASTING EQUIPMENT USED IN THE STEEL INDUSTRY

SHOT BLASTING AND PAINTING PLATES - CH-V LINE

- Specially designed to process steel plates in vertical position, they allow to work with angular abrasives generating high roughness with excellent anchorage profile.
- The shot blasting equipment is complemented with automatic painting booths and drying chamber for shop-primer applications.
- Lower investment and operating cost than horizontal pass-through CH-H equipment.
- No possibility of abrasive build-up on the plates, no need for rotating brushes and abrasive blowers.



SHOT BLASTER – PER & EST LINE

- Process all types of raw materials and welded structures.
- Recommended for processes requiring flexibility of operation, they allow a quick set-up for processing different sizes and types of parts.
- Depending on the model, the machines are equipped with 4 to 16 shot blast turbines.
- The parts can be conveyed by parallel roller bed or overhead conveyors.

BLAST ROOMS

- Flexible blasting process allows to process all kinds of pieces that, due to their size or complexity, cannot be processed in automatic shot blasting machines.
- One or more operators are inside the blast room during the blasting process using pressure blast pot to project the abrasive.
- In combination with nozzle manipulators installed in the blast room, surfaces can be automatically processed.



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