

**INTERNAL PIPE BLASTING ANCILLARY EQUIPMENT**

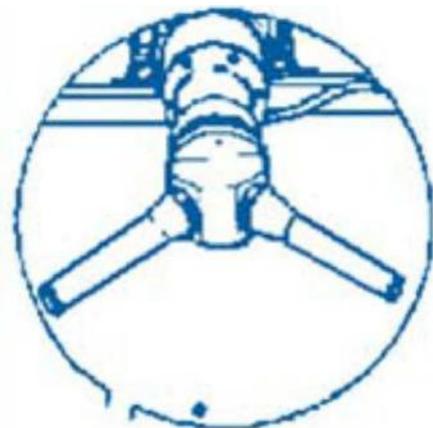
**Application sectors**

01.00	Carpentry, Boiler builders, Shipbuilding	✓
02.00	Rail industry, Production and Maintenance	✓
03.00	Foundry, Steel industry, Mining, Oil industry	✓
04.00	Inox manufacturing and furnishing	
05.00	Aviation industry	
06.00	Thermal treatment, Filling steel, Mechanics	✓
07.00	Car and motoring industry	
08.00	Internal and external pipes and cylinders sandblasting	
09.00	Plastic, Rubber and Galvanic	
10.00	Painting company and plants	✓
11.00	Glass industry	
12.00	Building and Road construction	✓
13.00	Nuclear energy	✓
14.00	Weapons industry	✓
15.00	Electromechanics and Electronics	✓

**Pictures**



The company **Promeeco Engineering Srl** is able to propose various solutions of mechanical pickling problems using the internal shot blasting of pipes. These solutions can be also various and different, accordingly with the type of applications and the productivity. Mainly this application is done by a rotating nozzle that proceeds along the axles of the pipe with a speed opportunely chosen according to the thickness of the rust, which have to be removed, and the pipe diameters.



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**Technical details**

**Abrasive recovery**

The most efficient system for the abrasive recovery is to use an air flux along the pipe, having a sufficient speed to convey the abrasive and debris. With this system, it is possible to treat the pipes in a horizontal position or even in place. Obviously, this is possible depending on the diameter of the pipe and it is possible to reach diameters of about 150 mm without auxiliary devices. To extend this operation to bigger diameters 3 systems can be adopted:

- 1) recovery can be made by gravity
- 2) a supplementary air flux can be used
- 3) where the diameter of the pipe is over 450 mm, it can be use the closed circuit sandblasting, introducing a particular sandblasting gun, whose seal with the surface to be treated is due to a circular brush.

**Diameter of pipes**

The diameter of the pipes, as above mentioned, influences the type of equipment to use.

**Degree of rust**

This factor doesn't influence so much the choice of the installation but the choice of the nozzle and the abrasive, and also the working angle of the nozzle.

**Available techniques**

To have a satisfactory surface mechanical pickling of pipes and to overcome the size limitations above mentioned, we have developed different working techniques. In the table here under we resume the various methodologies of shot blasting and abrasive recovery in function of the diameter and form of the pipes.

Technique	Pipe diameter	Pipe shape	Abrasive recovery
Blow-through	Up to 76 mm	Straight or curved	Normally pneumatic by vacuum, the littlest pipes require the blowing by compressed air
Pass-through	From 38 to 137 mm	Straight or curved	Normally pneumatic by vacuum
Orbital head	From 76 to 150 mm	Straight	Pneumatic by vacuum
Rotary head	From 150 to 610 mm	Straight or lightly curved but only for biggest diameters	Pneumatic by vacuum, or by gravity with inclined pipe
Special rotary head	From 610 to 915 mm	Straight	Pneumatic by vacuum
Rigid nozzle	From 50 to 915 mm	Straight	Pneumatic by vacuum
Closed circuit head	Over 457 mm	Straight for inferior diameters, indifferent for biggest diameters	Through head in closed circuit machines with brush PR 2 - PR 3