

Bristle Blaster®

# Patented Technology for Surface Preparation



**MONTI**

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# Bristle Blaster® - patented technology for surface preparation



## Bristle Blaster®

For the surface preparation in the pipeline and plant construction MONTI - Werkzeuge GmbH with headquarter in Hennef, Germany has developed the Bristle Blasting-process. Here, the handheld pneumatically or electrically operated device Bristle Blaster® is used. The process achieves a level of cleanliness comparable to Sa 2½ and a rough surface profile that provides for a better adhesion of the coating, similar to a surface treated by gritblasting. Further, with the use of the Bristle Blaster® no abrasive material, no complicated technical equipment or encasing of the working area is required. Hence, repair work particularly of small-sized areas can be accomplished substantially more economically including welded joints, especially in areas where it is not allowed to blast.

Rust spots and damages in coatings, for example, can be fixed fast and without bigger effort. The technical equipment necessary consists of merely the drive unit and a suitable air pressure or electrical power supply.

## Function

The hand-held drive unit drives the polyamide Bristle Blaster® belt which is equipped with special wires. The U-shaped anchored bristles are sharpened and bent against the rotation direction in a precisely defined manner. During the rotation of the belt the wire bristles are tensioned by an accelerator bar, by which they impact in the area behind the accelerator bar with about a four times higher kinetic energy on the surface. With the impact of the bristles corrosion or coating is removed and a tiny deepening is hit in the surface. Also resistant coatings as well as scale, temper colors or other oxidation products which are difficult to strip with a grinding tool can be removed effectively and thoroughly. The special construction of the belt causes the wire tips to immediately bounce back after the impact by which a rough surface characterized by a variety of microcraters emerges. The cleanliness level as well as the roughness depth and tensile strength that results from this are comparable with a surface prepared by blasting.



Furthermore, studies conducted by the Marquette University in Milwaukee / USA show that a material compression is generated along the Bristle Blaster® treated surface which in turn increases the resistance towards cracks, fatigue and stress corrosion. The resulting roughness depth is depending on the condition and grade of the material to be worked on and is – the correct application provided – with mostly in the pipe and plant construction used steel types at about 65 – 90µm R<sub>z</sub>, on high grade steel at about 25µm R<sub>z</sub> – 35µm R<sub>z</sub>. While working on the surface the carrier material, i.e. the steel surface itself is spared. The wire tips impact nearly vertically on the surface and at the same time „blasting“ rust or coating off. From the steel itself hardly any material is stripped. Since there is none as with grinding tools generated frictional heat, the surface also does not get hot. Due to the fact that the bristle tips hit the surface individually and selectively, unlike sanding, it doesn't come to a rubbing of rust particles or smearing of coatings on the surface.

**BLASTING  
WITHOUT  
GRIT**  
BRISTLE BLASTER®

### Fields of Application in the Pipe and Plant construction

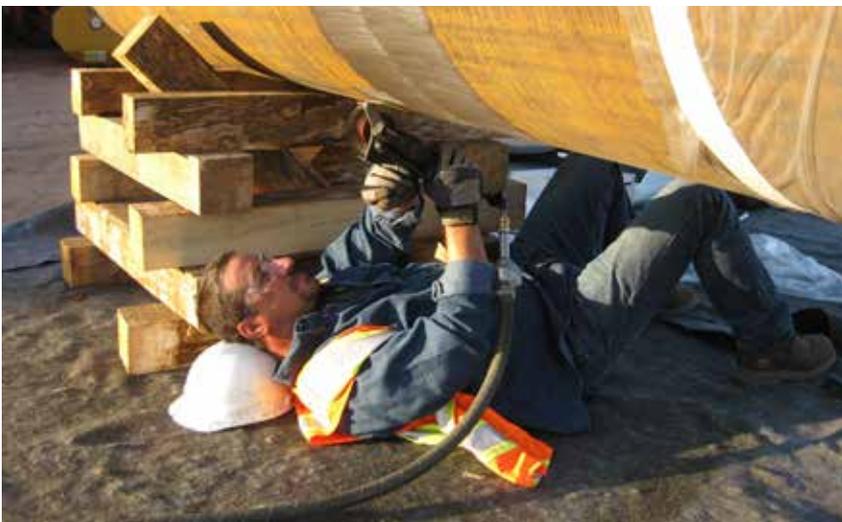
The by many companies approved Bristle Blaster® is used for general repair work and maintenance repair (spot-repair) of rust and damaged spots on pipelines of every kind. In addition, all admitted coatings as well as post-factory coatings can be removed by Bristle Blasting. Particularly in the station construction as well as in urban areas, the Bristle Blaster® is for the weld treatment of immense significance, because here most of the time blasting is very difficult or not possible at all. Furthermore, it offers an economical alternative to the increasing number of conservation areas as blasting is mostly no longer permitted. The handiness of the 1.2 kg/ 2.65 lbs weighting drive unit Bristle Blaster® Pneumatic, as well as the fact that you can spare on complex apparatuses to the



must be caught effortful and be disposed, makes Bristle Blasting also in other industries a preferentially used procedure for the surface preparation. The Bristle Blaster® Pneumatic can also be used for work in zone 1 – potentially explosive areas – such as applying it on operating gas pipelines. The device is ATEX approved for use in zone 1 due to inflammable gases, steams and fog (category 2 devices after ATEX 94/9/EC) according to Ex II 2Gc IIA T4 X.

### About MONTI

MONTI - Werkzeuge GmbH was founded in 1987 by Werner Montabaur and has been from the very beginning, dedicated in the professional surface treatment. With the patented Bristle Blaster® technology the jump into the heavy corrosion prevention has succeeded. Today the Bristle Blaster® is distributed by a worldwide network of importers and traders in over 80 countries. For further information about the Bristle Blaster® as well as inquiries for product presentations and trainings please contact us at [info@monti.de](mailto:info@monti.de) | T: +49 (0) 2242 9090 630. From the US please contact our cooperate office at [info@monti-tools.com](mailto:info@monti-tools.com) | T: +1 832 623 79 70



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