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**Successful use of plasma technology at Mamur Teknoloji** Long-term stable plastic-glass joints thanks to Openair-Plasma from Plasmatreat

**By switching from primers to Plasmatreat's Openair-Plasma technology, Turkish household appliance manufacturer Mamur Teknoloji Sistemleri has been able to improve the bond strength of plastic-glass joints in gas stoves, optimize its processes, and increase productivity - all while reducing costs.**

Plastic and glass are difficult to bond together. If the two materials are nevertheless to be joined, surface pretreatment is absolutely essential. Chemical substances are usually used as bonding agents. Mamur Teknoloji also used primers for a long time. But the classic method was too cost-intensive, too inflexible and not environmentally friendly enough for the Turkish household appliance manufacturer.

Therefore, Mamur Teknoloji switched to Plasmatreat's Openair-Plasma technology for the production of gas cooktops for bonding plastic pins to the tempered glass plate. Pretreating the non-polar polymers with atmospheric pressure plasma significantly increases the surface energy. This ensures better wettability of the pin surface and also greater stability of the bond between the plastic pin, adhesive and tempered glass plate. Deformation is eliminated and high product quality is ensured.

Plasma treatment takes place with an effective jet width of 10 mm and a speed of 20 mm per second. Thanks to the high processing speeds and optimum integration into the production process, surface treatment with plasma is completed much faster than with primers. This has enabled Mamur Teknoloji to significantly increase productivity compared to the past. Additional work steps such as those required for primer application are no longer necessary. Adhesion is also impressive right down the line. The surfaces to be bonded adhere much better to each other. Tests have shown that the adhesive strength of the plastic-glass bond with plasma technology is 1.6 times higher than after treatment with primers. The long-term stability of the bonded joint was also improved, which has a positive effect on the service life of the gas cooktops.

"Compared to conventional pretreatment methods, plasma offers a number of advantages, such as high quality surface treatment, simple and fast application, cost-efficient production, and process reliability," explains Bariş Oz of Mamur Teknoloji. "Plasma is also clearly ahead in terms of environmental friendliness. It is a clean technology, thanks to which we can dispense with the use of hazardous and environmentally harmful chemicals. This also benefits occupational safety." Plasma technology has proved so successful at Mamur Teknoloji that its use is to be extended to other areas of production. For example, the feasibility of pretreating stainless steel and DKP sheet is currently being tested.

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**About Plasmatreat**

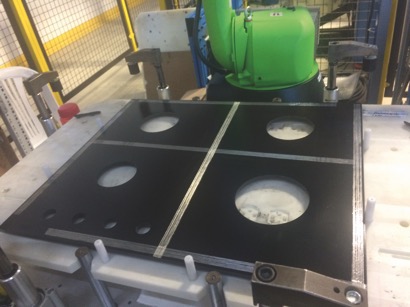
Plasmatreat is an international leader in the development and manufacture of atmospheric plasma systems for the pretreatment of substrate surfaces. Whether plastic, metal, glass or paper - the industrial use of plasma technology modifies the properties of the surface in favor of the process requirements. Subsequent processes include bonding, painting, printing or gasketing.

Openair-Plasma® technology is used in automated and continuous manufacturing processes in almost every industrial sector. Examples include the automotive, electronics, transportation, packaging, consumer goods and textile industry, but the technology, cost and environmental advantages of the plasma technology are used in medical technology and in the renewable energy sector as well.

The Plasmatreat Group has technology centers in Germany, USA, Canada, China, and Japan. With its worldwide sales and service network, the company is represented in more than 30 countries by subsidiaries and sales partners.

For more information, please visit: [www.plasmatreat.com](http://www.plasmatreat.com)

**Image:**



The plasma-treated plastic pins are bonded to the surface of the gas cooktop.

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