Surface treatment improves print adhesion for leading dental product manufacturer

As a leading producer of contract dental products Ranir LLC keeps their customers smiling with a steadfast commitment to quality.

ISO 9001:2000 and ISO 13485:2003 certification is part of the reason the company regularly earns awards such as "CVS Store Brands Winner-Supply Chain Support."

Their wide range of products includes floss, whitening products and toothbrushes. Recently Ranir Engineering Manager David Featherston encountered a printing application that required surface treatment.

In this case, toothbrushes purchased from China were to be converted in the company's Grand Rapids Michigan plant. The polypropylene toothbrushes resist ink adhesion so Featherston and its team set-out to specify an integrated printing and surface treatment system.

Ranir selected Printex of Poway, CA for the pad printing application. When Printex Vice President Robert Bowden identified the need for surface treatment he turned to Enercon.

"We enjoy working with Enercon because they are a single-source supplier of multiple atmospheric plasma treatment technologies. Because of this Enercon can match the best and most cost-effective solution for each application," says Bowden.

In this case an Enercon Blown-arc™ air plasma treater was specified. Blown arc air plasma is formed by blowing atmospheric air past two high voltage power electrodes and is sometimes referred to as corona treatment.

The electrical discharge positively charges the ion particles surrounding it. Through direct contact, these particles positively charge the treated area of the object's surface. This makes the surface more receptive to any applied substance such as inks.

Printex integrated Enercon's surface treater into a single turret system. The base unit is Printex's G2-60 pad printer. The turret also features an operator loading station, drying station, auto e-ject station, protective light curtain and the ability to expand the system with a second Printex printer for two-color printing. An Allen Bradley PLC is used to control system operation which prints 25-30 printed brushes per minute.

Featherston says Ranir has been impressed with the equipment from both Printex and Enercon. The operation satisfies Ranir's stringent production and quality control requirements and positions the company for another year of sparkling smiles from their customers.

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