

# News Releases

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## USF Abrasive Developments

### Polyurethane Fixtures and Masks Streamline Precision Surface Treatment Operations

A major speciality of USF Abrasive Developments, part of the USF Surface Preparation Group, is the design and manufacture of special polyurethane fixtures and masks for use during the surface treatment of complex components. The use of this relatively low-cost tooling can achieve substantial time savings and increase productivity.

The technology was developed originally in conjunction with a number of global aeroengine manufacturers for use during controlled shot peening and precision surface etching operations on fan compressor and turbine blades manufactured from titanium, special steels and exotic alloys.

Components readily locate in and are retained by the fixtures, whilst the masks protect those areas that do not require processing. In many cases, polyurethane tooling can serve the dual purpose of both a fixture and mask in one unit.

Over the last few years, the technology has been extended for a wide variety of other surface treatment applications in, for example, nuclear engineering and surgical implant manufacture. It can be used for both dry and wet abrasive blasting and peening, as well as during vibro-finishing and "super-finishing" operations.

USF Abrasive Developments offers a "standard" range of polyurethane fixtures and masks for fan and compressor blades and other relevant components employed in most modern aeroengines. This is continually being expanded to meet the ever increasing complexities of component design and masking requirements. Bespoke designs for most components can be produced within just a few days.

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