

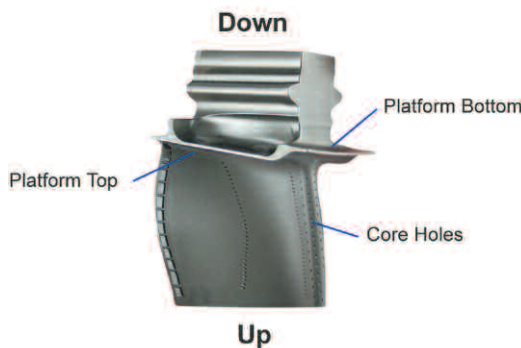
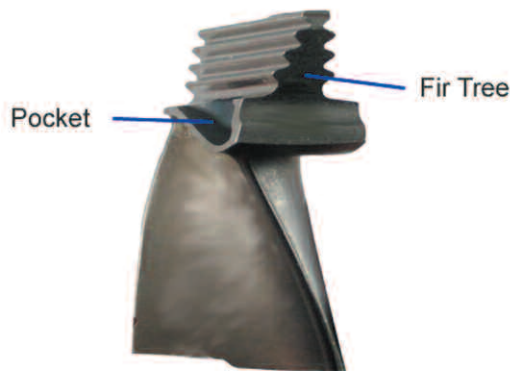


# Anatomy of a Turbine Blade Mask

We look at upside-down drawings and describe the top of the blade platform when it's really the bottom. This is what it's like to work with turbine blade masking. We work primarily on the "bottom" section of the blade when it's held upside-down in the shot peening machine. The upside-down world of turbine blade masking for shot peening requires communication between the blade manufacturer, the shot peening provider, and a masking company like ours, Maxol Studios, LLC. The following is a description of some of the elements and their names. We start with general turbine blade geometry and then move to the parts of a mask.



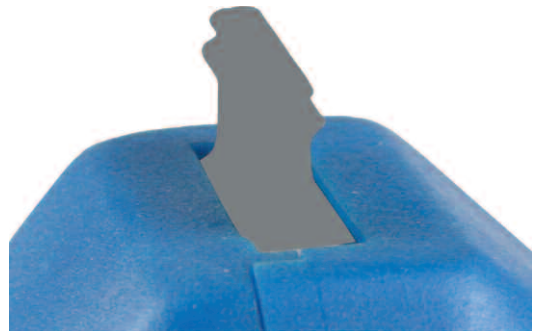
**Boot:** The rubber mask designed to hold the blade in the shot peening machines, turret, carrier or satellite. The boot holds the exposed fir tree of the blade in the focal point center of the shot peen blast, while protecting the actual blade.



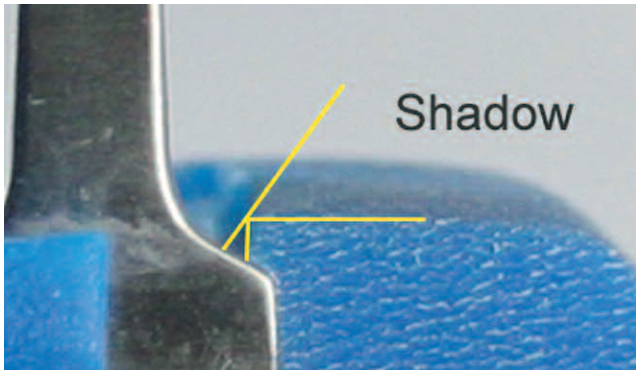
Blade



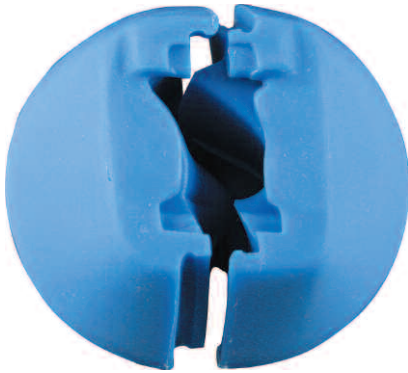
**Registration Dams:** Provide general alignment of two-part boots and, most importantly, stop shot from penetrating into the mask.



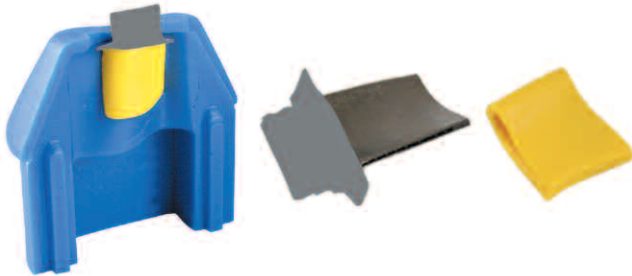
**Well:** Wells are created to add life to a boot. By lowering the bottom of the blade platform into the boot, more boot material is allowed to abrade before an over-spray condition will occur.



**Shadow:** Measure of the depth of the well. If the depth of the well is too high, an under-spray condition will occur due to the shot's inability to get into the corners.



**Parting Line:** Where two boot parts meet. Typically along the center plane of the boot. Usually quite undulated to follow the complex surfaces of a turbine blade.



**Core Sleeve:** A thin flexible and reusable rubber glove that covers all the blade with no seams for shot to penetrate. The glove protects the blades inner cores.



**Self-Locking Registration:** A molded in detail that mechanically holds two parts together. Usually in the form of a "snap".



**Compression Clip:** A mechanical device that applies compressive force along a parting line. The clip is pressed into the masking boot holding the blade tightly in place.

**Skeleton:** A molded rigid plastic inner structure that holds the flexible rubber mask elements in place.



By defining and naming some of the elements that make up a shot peen turbine blade mask, Maxol Studios, LLC, hopes to create an open dialogue about mask anatomy and invites

comments, additions, and or corrections. You can contact Maxol Studios LLC by email via [mark@maxolstudios.com](mailto:mark@maxolstudios.com) or by visiting the website at [www.maxolstudios.com](http://www.maxolstudios.com). ●

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