

Tom's Musings – Summer Musings

Some random thoughts while biking this summer.

We all understand that, along with an appropriate grind, wax is a big part of making a ski slick.

However, keeping most of that wax on the bottom of a ski for the entirety of a race is a challenge. Longer length races—as opposed to shorter length races—and colder, more abrasive snow—as opposed to warmer, wetter snow—emphasize this challenge. Here in the north, cold, abrasive snow rules. Whether man made or natural, it is continually ripping wax from a gliding ski. And while correct wax application is certainly a huge deal in regards to strong wax adhesion, maybe, with stonegrinding, I am also contributing to giving that wax a better chance to stay stuck to the ski base.

During the stonegrinding process, when developing a structure for a given snow condition, shape and depth are variables to consider. The complexity of the shape and depth is also a factor to contemplate. In the past, I thought of a structure's shape, depth, and complexity as equivalent aspects manipulated during polyethylene milling to successfully create a better gliding ski for a given snow condition. But maybe it's the complexity, the tooth of the structure—line length, width, bias, frequency, bottom of etched line shape (whether “V” or squared grooved), minute residual detritus in structure pattern—that is the primary contributor, from a stonegrinding perspective, in glide wax retention. Think of sanding the kick zone on a classic ski to hold kick wax. What if this structural complexity, or the particular degree of structural complexity, in addition to enhancing glide in a given snow condition by itself, also adds to wax adhesion?

Often I hear from our employee racers that their skis, following a break-in period, seem to be at their fastest right after grinding. Why? Over time, factors such as the repeated use of a ski on cold abrasive snow, the progressive build up of snow contaminates in the ski base, and the sealing of a polyethylene base due to the constant use of a hot iron during cold wax applications, can cause a ski's structure and complexity to degrade. These are some of the reasons why a ski eventually slows and the effectiveness of waxing can lose steam. Therefore, a fresh grind can often be when skis are at their fastest.

When I'm satisfied with a structure or structures, it is ground onto test skis, waxed, and sent off for on-snow glide testing. This upcoming winter, I will need to find a way, through this on-snow testing, to quantify each structure's potential for wax adhesion. And I have some ideas. But those will be musings for another day.

— Tom Novak, Head Stonegrinder at Finn Sisu