NexGen Bushing Class Product Specifications

Product Specifications
-Next Generation HD Bar.
-Moderate whip (flex).
-Dual bushing design inside each collar.
-Dual snap ring design inside each collar.
-Bright zinc coating throughout the bar. Bright zinc absorbs into the steel reducing the risk of chipping.
-single piece collar contruction - only barbell company in the world to use this method.
-high performance gel lubricant inside each collar. No more leaking hydraulic fluid.
-Perfect knurling with distinct entry and exit point. No cheese graters here! No fade in and out.
-Knurl points set for Olympic Weightlifting.
-Perfectly weighted, extremely strict weight and dimension tolerances.

Material Strength
166,000 PSI Tensile Strength. This is a "true" number direct from the steel mills material certification sheet. There are three definitions of tensile strength; yield, ultimate and breaking. Barbell material is tested by yield strength. Yield is defined as the stress at which material strain changes from elastic deformation, where recovery occurs, to plastic deformation, causing it to deform permanently. The higher the yield strength the more rigid the material is because it took greater pressure to permanently deform the material. Therefore having outrageous yield strength defeats the intended use of the material, which is to provide whip (or flexibility) in olympic lifting movements. We choose our tensile strength based on the materials performance not for a slick sales pitch. The material we use is one of the strongest cold rolled steels available but we avoid specific types of processing that can further increase the tensile strength. The tensile strength obviously provides more than enough strength but the key to the material is its flexible. This is why we feel we have the perfect barbell. Any yields higher starts to get into rigid material which become useless in the world of olympic weightlifting.

Material Testing
Static Test - We take each bar and support it on the ends in v-blocks. We apply 2500 lbs of pressure in the center of the bar and deflect it 6 inches. They consistently return to true center within .004/.006 inches.

Dynamic Testing

It is very hard to dynamic test a barbell in a way that mimics the actual use. The only true way a bar is dynamically tested is by the bar being used for its purpose, olympic weightlifting. To date we have tried to bend the bar and have not been able to do so. We have yet to have any bars returned because of bending.