

## COST-EFFECTIVE AND ENVIRONMENTALLY FRIENDLY COATING SOLUTIONS FOR SAW BLADES

### A Major Tool Manufacturing Company

The teeth of a cutting blade have to do the cutting, but the rest of the body needs to provide low friction to improve the cutting process while withstanding abrasion, high temperatures, scratches, etc. PTFE provides a low coefficient of friction; however, it is costly and contains VOC, which is not as environmentally friendly as the Client would like.

### CHALLENGE

The challenge for PreScouter was to identify alternative materials or designs that would provide the same performance (anti-friction, non-stickiness, maximum operating temperature, continuous process, applied in a thin layer) without having VOC along with being able to be applied at a lower cost than PTFE.

### APPROACH

PreScouter performed a stage-gated approach divided into 3 steps:

1. Scouting for solutions: PreScouter searched for designs, technologies, and materials in publicly available sources such as material databases, white papers, and patents, looking for similar alternatives as well as out-of-the-box ideas.
2. Consulting with Subject Matter Experts: PreScouter engaged with a formulation specialist, a tool performance specialist, and a tribology expert to validate the team's findings and add any other viable options.
3. Outreach: PreScouter contacted the most promising solution providers to get non publicly available information and start relationships for further production.

### OUTCOME

PreScouter provided 4 prioritized solutions for the Client to move forward with. Those solutions would achieve the 2 main objectives of cost effectiveness and environmental friendliness while also complying with all other requirements.



**Impact of PreScouter's Work: The Client was able to immediately begin implementing 2 of the 4 solution options provided by PreScouter.**