

Design of the cutting process for microprism



Student	Raphael Kohler & Kokilan Rajaratnam
Expert	Marcel Estermann
Lecturer	Sven Blaser
Client	Greenled OY, Reima Ollila
Field of study	Mechanical Engineering, Construction & Production Engineering
Year of graduation	2023
Initial situation	<p>GreenLED is a Finnish company that offers intelligent lighting solutions and assembles the products itself.</p> <p>There are three different types of lamp products that need microprisms. Microprisms can help redirect and diffuse light. They are cut at the factory and built directly into the lamp products.</p>
Task / Goal	<p>The main goal is to make the cutting process more accurate, reliable and efficient. This means that optimisations have to be designed and manufactured. The constraint was that the table, the circular saw and the clamping table remain unchanged.</p>
Results and Benefits	<p>The cutting process has become more reliable and efficient. Repeatability and product quality were greatly improved. A new jig with a stop and clamp system was manufactured and other process improvements were made. Cost efficiency was increased by 66% compared to the old process.</p>