Injection Mold Maker "SEDLOM" in Portugal Improved Mold Making Processes with CAM-TOOL by 20%!!

Company Profile

SEDLOM was founded in 1978 in Marinha Grande, Portugal, and specializes in the design and manufacture of mainly high-precision plastic injection molds. The molds produced are for automotive parts including car lights, packaging, home appliances, electronics, and so on. 90% of their products are exported to Europe and North America. Their motto is to have a commitment to improving their customers' production time, efficiency, and quality. Due to this, they have advanced equipment including “OKUMA” high-spec 5 Axis CNC machine (MU-6300V) to supply their customers with high-quality molds in a short time.

Mold Creating that Requires Tight Surface Accuracy

SEDLOM uses several different types of CAM software depending on the target mold. They especially use CAM-TOOL for cutting hardened steel (52 to 62 HRC) and for creating molds that require a highly accurate Surface Roughness (Ra). One of the most typical examples that require particularly tight surface accuracy is the manufacturing of molds for automobile lights.

In fact, surface accuracy for the automotive light molds they create requires tight surface accuracy. In the case of molds where polishing after milling is allowed, “Ra: 3μ-4μ” of surface accuracy is required, but for molds that do not permit polishing, only milling is required to finish to “Ra: 1.5μ-2μ” of surface accuracy without polishing. To create such precision molds, not only high-end CNC machines and tooling but also high-accurate toolpaths are necessary. CAM-TOOL, with its unique calculation algorithms (Surface Calculation method), is able to generate toolpaths that meet such demands for automotive light mold-making.

An example of a Reflector that requires ”Ra: 1.5μ-2μ” of mold surface accuracy without polishing

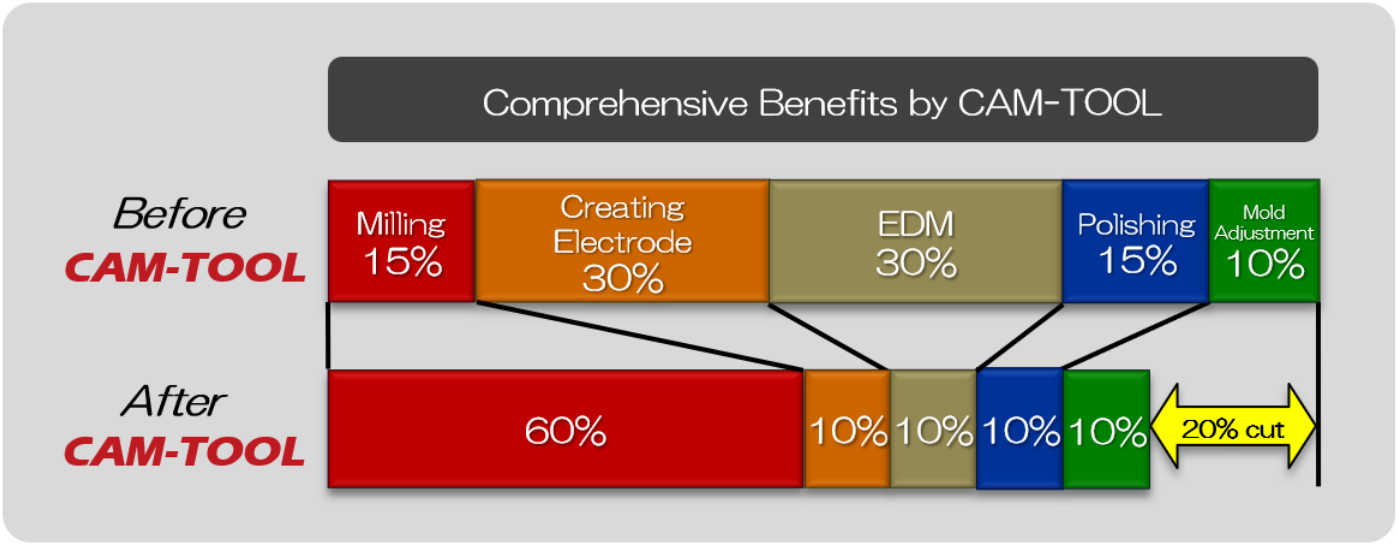
An example of a Light Guide

Benefits by CAM-TOOL

Before SEDLOM started using CAM-TOOL, unstable cutting tool motions caused overcuts and had a negative impact on the surface finish by using other CAM systems. They also wanted to save the number of cutting tools and process time. Then, through an introduction by a friend of Mr. Octávio Jesus, Production Manager, they tried out CAM-TOOL and confirmed that it was able to improve their mold-making with its high-quality toolpaths, which encouraged them to make a decision to go with CAM-TOOL.

Here are comments by Mr. Octávio Jesus, Production Manager.

When CAM-TOOL was first installed, the cutting modes that particularly contributed to our process improvement were "Scanning-line Area", "Z-level Finishing", and "Re-Machining". As a result, we achieved not only mold-making process time savings and surface quality improvement but also increased cutting tool life by 15%. Later, we added "5 Axis machining" function as well, which is also very helpful for us.

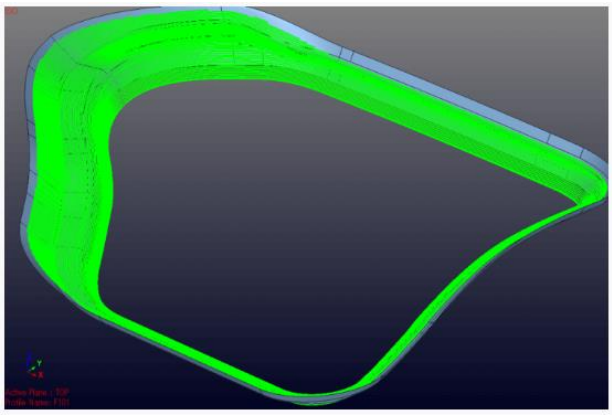


These results are only comprehensive and they actually varied depending on each type of mold geometry.

In addition, mold-making process time savings and surface quality improvement also enabled us to create extra time that can accept more new mold production with higher-level mold-making jobs. This led us further to increase in-house mold production, which was also a big benefit by CAM-TOOL.

CAM-TOOL also offers various cutting modes and functionalities. My favorite cutting mode is "3D Offset Cutting", which is very useful for finishing complex surfaces, and my favorite functionality is "Automatic 5 Axis toolpath conversion". Both are simple and easy to use.

"OKUMA" MU-6300V (5 Axis machine)



"3D Offset Cutting" (This model image is for reference only.)

The accurate and precise toolpaths and various functions of CAM-TOOL have achieved us

to get a lot of benefits by reducing our operating costs due to better surface finish, process time saving, and longer cutting tool life in comparison with using other CAM systems.

We will continue to take on new challenges, not only with injection molds, but also with various products such as die-casting molds, stamping dies, parts, and prototype dies going forward.

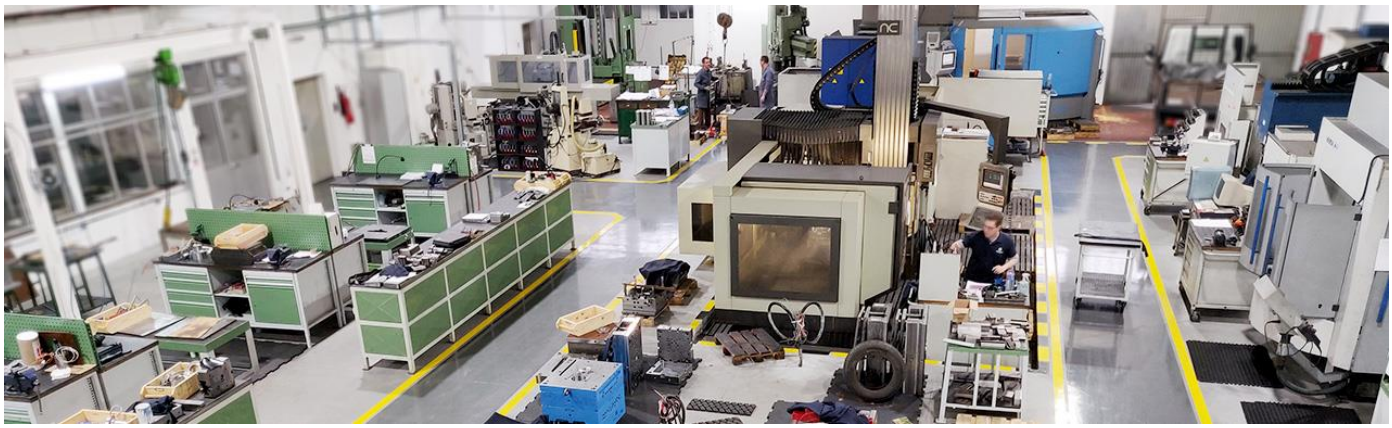
Left: Mr. Cláudio Santos, CAM-TOOL Engineer / Right: Mr. Octávio Jesus, Production Manager

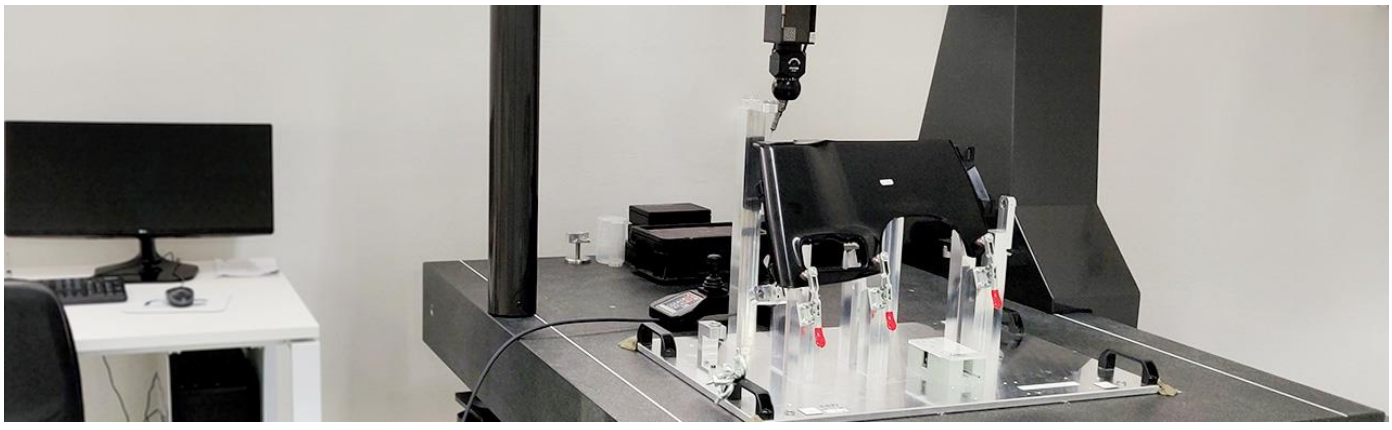
SEDLOM Introduction

SEDLOM is proud to have a team of 40, experienced, qualified, and specialized members. They invest in the constant updating of knowledge and in a strong team spirit.

MISSION

SEDLOM's mission is to produce molds of high quality and reliability, following the demands of their customers. In a continuous quest for excellence, they are committed to a competent and motivated team, using the best materials, equipment, methods, and production processes. They keep seeking to satisfy the expectations of their clients by rigorously fulfilling the requirements of each project. They also keep innovating in providing effective solutions and transparent communication in order to build strong long-term business relationships.





VISION

SEDLOM aims to be recognized for the excellence and reliability of their mold-making.

VALUES

Excellence, Transparency, Commitment, Innovation, Rigor.

Empenhada na melhoria dos tempos de produção, aposta na eficiência e qualidade.
(Commitment to improving production times and pursuing efficiency and quality.)

SEDLOM - Sociedade de Moldes de Precisão, Lda.

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