SolidCAM Reduces Production Times for Mold Production in JKZ Bučovice

The south Moravian company **JKZ Bučovice** is among the **largest service centres focusing on deliveries of tool and special types of steel**. Their production and development takes place at sites of selected partners, such as Kind&Co Edelstahlwerk, Schmiedewerke Gröditz, Industeel from the ArcelorMittal group and SSAB Oxelösund with Toolox materials. The three-shift operation of the company has about 110 employees

Steel-working semi-products can weigh up to 30 tons in its raw state. Photo: Marek Pagáč

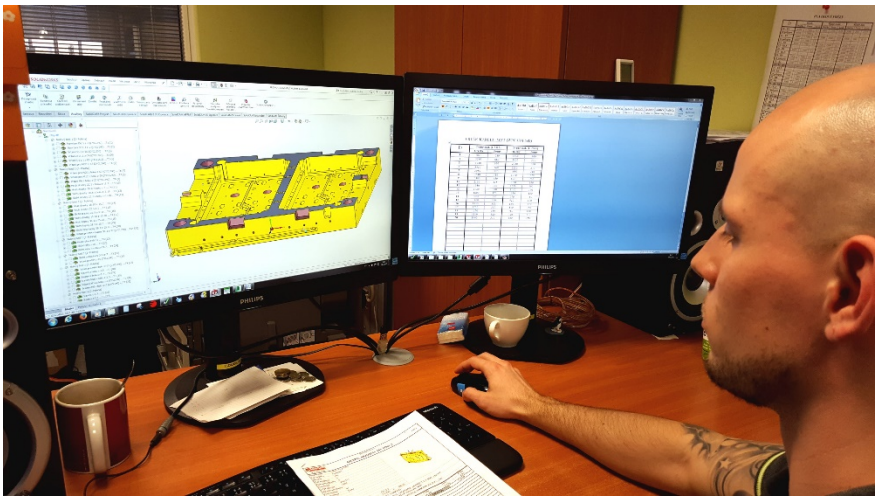
Production Technology

In addition to deliveries of high-quality steel separated according to the customer's requirements, **the company offers three (or more)-axis indexial machining which involves piece manufacturing of mold parts, pressing tools and forging dies**.

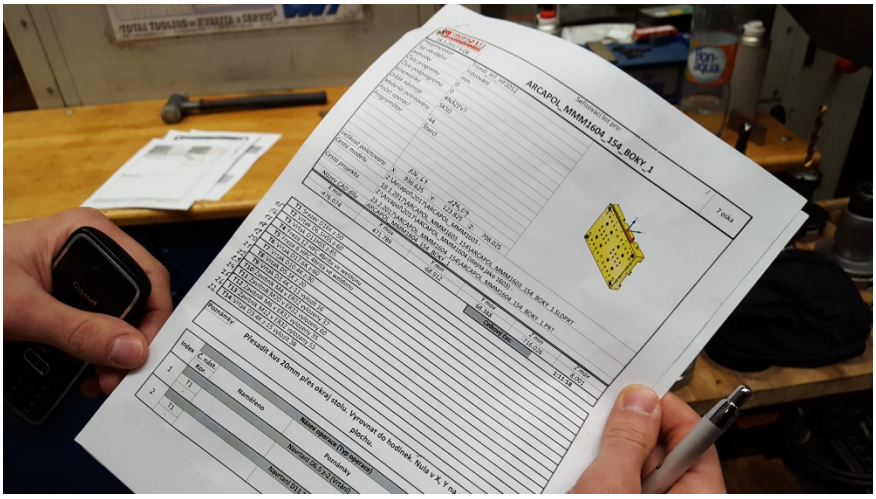
Computer Support for Machining

For production preparation, JKZ Bučovice uses **SolidCAM and SolidWorks** which was purchased 10 years ago through **SolidVision, SolidCAM's reseller in the Czech Republic**. Four programmers who are also technologists use CAD/CAM systems, mostly for preparation of 2-axis and 2.5-axis operation with machine diameter correction.

NC programs are prepared including the technological procedure, which involves selection cutting conditions and machining strategy. **The software is user-friendly, with intuitive controls, strategy selection, time savings and a technological guide for selecting the cutting conditions.**



SolidCAM is used by four programmers in the company. Photo: Marek Pagáč



Setting sheet of a plastic pressing mold is accompanying and indispensable part of the production documentation. Setters position and adjust the semi-product onto the table within the machine's workspace according to the defined data. Photo: Marek Pagáč

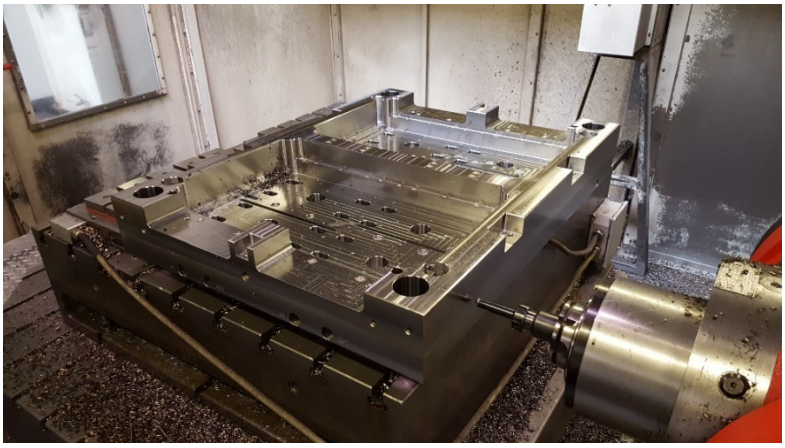
Tools and Machines

The company makes frequent use of cutting tools with replaceable edge plates. Mills used for the machining are of various diameters, starting with 20 mm.

Most production is done on machines made by **Trimill** in Zlín. The machine fleet of JKZ Bučovice includes a 3x vertical centre VC 2314 a VC4525, 4x horizontal centre HC1612, 5x vertical centre VU 3019 and VF4525 and 7x horizontal centre HF2012. All these machining centres are controlled by **Heidenhain** control system.

The machine fleet has two additional CNC machines made by **Makino** – Japan. Semi-product manufacturing is performed via 4x horizontal centres a61nx and a81nx with **Fanuc** control

system. Portuguese 4x horizontal drilling machine Heto Power 2000 is used to drill deep holes.



Manufacturing a part of a plastic pressing mold using Trimill HF2012 seven-axis CNC machine tool. Photo: Marek Pagáč

Modification and Adjustment of Post-Processors

In collaboration with SolidVision, all CNC machines in the company's production had **post-processors created and fine-tuned** for them according to specific needs of individual machines and programmers.

JKZ Bučovice has good practical experience with special modification of the post-processor for the Heto Power 2000 CNC machine tool used to drill deep holes, with diameters ranging from 0.7 mm to 40 mm.

SolidVision was fully responsible for the modification, post-processor fine-tuning and technical support for the Heto Power2000 machine tool with Fagor control system.

SolidVision's technicians have been approaching the post-processor modification with meticulous and forthcoming attitude, just as the CAD/CAM department of the company had wished.

SolidCAM's CAD/CAM Solution is cost-effective

The invested capital used to purchase the SolidCAM CAD/CAM solution turned out to be extremely effective in terms of accelerating the manufacturing process, reducing programming times and downsizing scrap rate. The people at JKZ Bučovice were so satisfied with the results accomplished by using SolidCAM, that they are considering purchasing additional licenses from SolidCAM.