



THE LOGIC OF A TECHNICAL INNOVATION

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ABSTRACT

For many years, the universal auxiliary tool used in one of the decisive production machines of the production plant, a surface grinder has been used to fix the parts of different diameters and lengths using the force-locking principle. The handling and size of the tool did not bother the user, but a careful technological review brought substantial comments, which ended with the redesign of the auxiliary tool. The fundamental difference of the new tool is the modification of the fastening principle, which significantly improved handling and space utilization, and as a result, the same machine, with the same personnel, could achieve one and a half times the capacity. The essence of the principle is the replacement of the force-locking joint with a shape-locking joint and the resulting area gain and simplification of handling without any substantial change in the cutting conditions brought about a revolutionary improvement in efficiency.

As a special benefit, the service life of the new auxiliary tool has also increased due to the transformation of the geometry that excludes human error. Strictly speaking, it didn't even cost the production plant any extra.

Keywords: auxiliary tool, force clamp, shape clamp, surface grinder