

MACHINING OF MOLYBDENUM

Application

Molybdenum parts are particularly indicated for applications in which the resistance at high temperature is required. Molybdenum can resist to the stress induced by very high temperatures without leading to significant expansion: this characteristic makes this material very useful for filaments, electrical parts, thermal shielding components, and further related applications.

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1 References

Reference Customers for this products are:

- Thales ALENIA Spazio
- GALILEO AVIONICA

2 CECOM activities

CECOM carried out the following activities:

- Purchase of raw materials
- Manufacturing of components
- Cleaning

2.1 Material and machining techniques

The machining of Molybdenum presents some difficulties, mainly related to the very high temperature reached by the cutting edges of the tool during the machining.

Thanks to more than 20 years of experience in the machining of this material, CECOM developed suitable technical solutions, in order to optimize the results, also guaranteeing a correct selection and usage of machining tools. At this purpose the following items were optimized and selected along the years:

- Machining tools (material and geometry of the tools)
- Cooling and lubricant system of parts during the machining
- Machining parameters

All technical solutions related to the machining of each specific component are studied, checked, and stored in our *tool-room*. In order to guarantee the repeatability of processes and performances, all tasks related to the machining are always stored in CECOM Quality System.

2.2 Reference pictures

Some Molybdenum parts produced by CECOM are shown in the following pictures.

