

History & Summary

Spectra-Mat, Inc. (SMI) is a materials technology company established in 1963 to serve the requirements of the microwave tube industry. SMI continues today as a major supplier of impregnated cathodes and other components for vacuum power devices used in commercial, research and defense applications.

From its foundation of porous material technology SMI formed a materials group in the early 1990's that addressed the following: (1) requirements for controlled expansion matching for thermal management in microelectronic, optoelectronic, LED and concentrated photovoltaic devices; (2) the need for high purity tungsten for ion implantation processing; and (3) non-lead based x-ray attenuation material. The primary materials developed for these applications are tungsten copper, molybdenum copper, and tungsten alloys.

In early 2008, Spectra-Mat, Inc. was acquired by SAES Getters USA, Inc., and became A Member of SAES Getters Group, headquartered in Lainate, Italy. SAES Getters is an innovative and customer oriented company who is a world leader in industrial and scientific applications requiring stringent vacuum conditions or ultra-high pure gases (www.saesgetters.com). The synergy of our companies provides a stronger base for the support of all of our current products as well as new development efforts. Our combined focus will continue to be on providing innovative material solutions for our customers' requirements.

Summary of Products and Applications

Dispenser cathodes for use in:

- Microwave power amplifiers for radar, EW and RF transmitters
- High power klystrons for particle physics
- Argon, krypton and HeNe gas lasers for diagnostics and graphics

Dispenser cathodes for use in x-ray applications:

- Industrial/Wafer inspection
- Well logging
- Medical/Oncology therapy

CTE-Matched thermal management materials and components for high power microelectronics (Opto/CPV/RF/power devices) based on III-V semiconductor compounds:

- Package level (bases, housings and heat sinks)
- Chip level (submounts and carriers)
- Wafer level (up to 150mm diameter, typical thickness 250µm)
- Liquid Cooling (CTE-matched microchannel coolers for microelectronics)

High purity, machinable refractory metals for:

- Wafer processing/ion implantation
- Scientific applications
- Kinetic energy penetrators

X-ray attenuation material used in:

- Medical/Oncology therapy
- Industrial/Wafer Inspection

We specialize in custom requirements, applying our scientific expertise and 45+ years of knowledge as a high technology materials manufacturer to meet our customer's needs. We enjoy having the opportunity to challenge standard practice and advance the state-of-the-art in materials and emitter technology.