

Introduction

The Symposium on Refractory Metals and Their Industrial Applications, held on 23–24 September 1982 in New Orleans, Louisiana, was sponsored by ASTM Committee B-10 on Reactive and Refractory Metals and Alloys. Although Committee B-10 has for some time written standards used for commercial applications of refractory metals and has sponsored previous symposia on *reactive* metals, this conference was its first devoted to the *refractory* metals (molybdenum, niobium, tantalum, and tungsten). It was energetically supported by suppliers and fabricators and was intended to provide a comprehensive description of these four metals for the industrial user.

Indeed, the symposium was conceived and based on the premise that no publication exists for the industrial user on the various properties and end uses of these metals. While most engineers and designers are familiar with tungsten lamp filaments, the large majority are only vaguely acquainted with the other three metals and their applications. Refractory metal use to date has primarily been in high temperature applications. The uses discussed at this meeting included electrical, electronic, and corrosion-resistant applications at ambient temperatures.

All the refractory metals have certain properties found in no other materials. This volume is directed towards providing a broad base of information in order for engineers and designers to compare the refractory metals with other candidate materials.

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