

Joining Issues for Refractory Alloys

Michael Santella

Oak Ridge National Laboratory, Oak Ridge, TN 37831

The well-known sensitivities of molybdenum, niobium, tantalum, and tungsten alloys to atmospheric contamination dominated early work on their welding behavior. More recently it has been recognized that the intrinsic deformation characteristics of the alloys may also be important to making reliable welds. The historical development of refractory metal welding will be reviewed. Recent work that better defines how alloy properties influence weldability will be emphasized. Opportunities will be outlined for developing a better understanding of weldability and weldment properties. Issues related to brazing and dissimilar joints will also be addressed.

Michael Santella, 1-865-574-4805, santellaml@ornl.gov

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