

High Temperature Vacuum Brazing of Tungsten to Tungsten Alloy with Structural Material

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The paper explores the high-temperature vacuum brazing technique for developing tungsten-to-tungsten alloy joints with a SS316L structural material for divertor targets of fusion reactor. The brazed joints underwent testing to qualify for thermal cycles and employed several characterizations to assess their quality, ensuring suitability for divertor target of the fusion reactor.

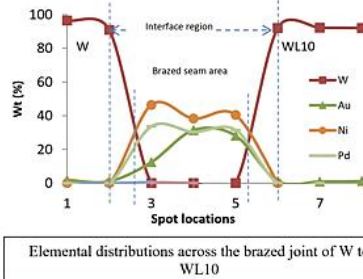
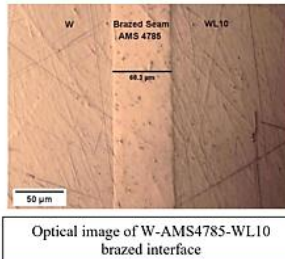
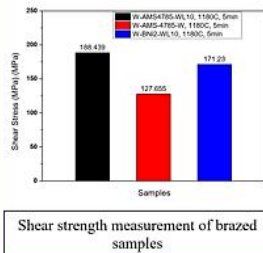
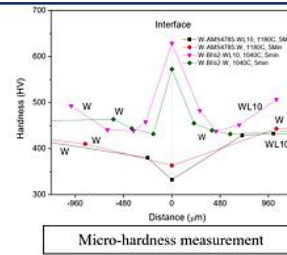
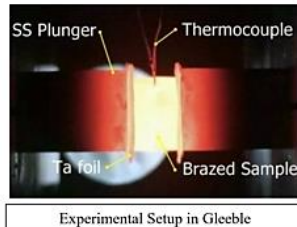
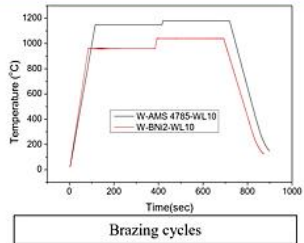


Figure Caption: Brazing cycles of tungsten joints sample, Experimental Setup in Gleeble 3800, Micro-hardness measurement of tungsten to tungsten alloy, Mechanical shear strength measurement of brazed samples, Optical image of W-WL10 brazed interface, Elemental distribution of brazed W-WL10 interface.

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