

(2) SiCp/TC11 复合材料的维氏硬度、屈服强度、抗拉强度随着碳化硅颗粒含量的增加而提高。TC11-0.5SiCp 复合材料的硬度达到 4137 MPa, 相比于 TC11 钛合金提高了 25.97%, 屈服强度和抗拉强度为 1077、1107 MPa, 相比于 TC11 钛合金提高了 31.3%、14.1%。TC11-0.5SiCp 复合材料在 500 °C 的高温抗拉强度为 967 MPa, 较 TC11 钛合金提高了 6.9%。

(3) SiCp/TC11 复合材料的主要增强机制为晶粒细化、固溶强化及载荷传递。

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2021 年 1—3 月日本钛锭产量及钛材产销数据统计

日期	钛锭产量/t	国内钛材出货量/t	国外钛材出货量/t	钛材出货量合计/t
2021 年 1 月	578	416	374	790
2021 年 2 月	986	470	371	841
2021 年 3 月	1099	802	882	1684
合计	2663	1688	1627	3315