

HOT WORK TOOL STEEL POWDER FOR ADDITIVE MANUFACTURING AND ADDITIVELY MANUFACTURED HOT WORK TOOL STEEL OBJECT

ABSTRACT

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Provided is hot work tool steel powder for additive manufacturing with which an additively manufactured hot work tool steel object having excellent crack resistance during manufacturing can be manufactured. The hot work tool steel powder for additive manufacturing and the additively manufactured hot work tool steel object comprise: 0.10% to 0.25% both inclusive of C, 10 0.01% to 0.5% both inclusive of Si, 1.5% or less of Mn, 3.0% to 6.0% both inclusive of Cr, 2.0% to 3.5% both inclusive of one or two of Mo and W according to a relational expression ($\text{Mo} + 1/2\text{W}$), 0.3% to 0.7% both inclusive of V, 0% to 0.5% both inclusive of Ni, 0% to 0.25% both inclusive of Cu by mass, and the balance being Fe and unavoidable impurities; and satisfy an equation (1): $\text{C} + \text{Si}/30 + (\text{Mn} + \text{Cr} + \text{Cu})/20 + \text{Ni}/60 + (\text{Mo} + 1/2\text{W})/15 + \text{V}/10 \leq 0.75$.

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FIG. 1