

Large-scale and industrialized HIP equipment for the densification of additive manufactured parts

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Additive manufacturing technology has significant advantages in fabricating parts with complex shape, but the internal defects, such as residual stress, pores and microcracks, would result in fatal problems under certain circumstances. To meet the requirement of HIP treatment on additive manufactured parts, we studied the thermodynamic behavior of the gas medium under high temperature and high pressure conditions, explored the deformation discipline of the thin-walled parts and the boundary conditions of controlling deformation, and optimized the process of eliminating residual stress. Based on the above work, series of HIP equipment were specially designed for the treatment on additive manufactured parts, which could provide solid support for the development of additive manufacturing technology.

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HIP Process

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