

Download Microstructure And Mechanical Properties Of Metallic High Temperature Material

The major metal AM systems and their processing conditions • The contributing factors on anisotropy and heterogeneity of microstructure and mechanical properties in metal AM parts At 850 °C, the γ -fraction at high temperature is larger, reducing the equilibrium γ -fraction from approximately 87% at 780 °C to 73% at 850 °C and 23% at 950 °C, . From comparison of Fig. 2a with Fig. 2b, it is clear that the γ plates are significantly coarser for higher temperatures. Microstructure is the very small scale structure of a material, defined as the structure of a prepared surface of material as revealed by a microscope above 25 \times magnification. The microstructure of a material (such as metals, polymers, ceramics or composites) can strongly influence physical properties such as strength, toughness, ductility ...Microstructure and Mechanical Properties of ASTM A743 CA6NM Steel Welded by FCAW Process 1623 properties. Table 1 presents the CA6NM chemical composition