

Microstructure and phase transformation on milled and unmilled Ti induced by water quenching

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Abstract

Water quenching of unmilled Ti compact has yielded martensitic-type lath and fishbone-type twinned microstructures, with α' , α'' and FCC phases induced. Upon quenching 30 h milled and (0 + 30) h mixed powders at 1200 °C, α_0 , FCC, tetragonal and BCC phases were detected using XRD.