Belt Continuous Boat-less Reduction Furnace for Super Fine and Regular Metal Powders

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Abstract

During regular reduction process, there exists non-uniformity of oxygen content and particle size in reduced powder due to corners in boats and uneven temperature distribution. A Belt Continuous Boat-less Reduction Furnace with even temperature and carbon potential distribution both along width and length directions in the furnace was built to reduce metal powder. A temperature and carbon potential distribution model was built up. Super fine W, Mo, WC, Co, Fe and Cu powders with uniform oxygen content and even particle size were fabricated by this furnace.

Keywords : belt continuous boat-less reduction furnace, temperature and carbon potential distribution, super fine powder