A Study Behaviour of Thermochemical Treatment of Carburization and Ionic Nitriding in Microwear of P20 steel

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Abstract
The P20 steel mainly used in plastic molds was thermochemical treated. The solid and gas carburization were carried out at 925°C in four different times. The ionic nitriding was performed at 520°C in three different times. It was observed that thermochemical treatment increase the microwear of material studied. The ionic nitriding produces the biggest superficial microhardness. More time used increases the effective thickness layer. The solid carburization produced thickness layer larger than gas carburization.

Keywords: carburizing, ion nitriding, P20, microwear