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(54) Title: POWDER METAL CLUTCH RACES FOR ONE-WAY CLUTCHES AND METHOD OF MANUFACTURE

(57) Abstract: A method of fabricating clutch races for one-way clutch mechanisms includes compacting and sintering a ferrous-based powder metal to near-net shape to produce a core density of between about 6.8 to 7.6 g/cc and a race surface that is near-net shape. The cam surface is cold worked in a manner that locally increases the density at the surface to develop a highly densified layer of essentially fully densified material and with a final surface finish that, after heat treatment, is ready to use in a one-way clutch application without further working. Both the inner and outer clutch races of one-way clutch mechanisms can be formed in this fashion and yield races that exhibit excellent strength, toughness, fatigue strength and wear resistance.

WO 2004/030851 A1