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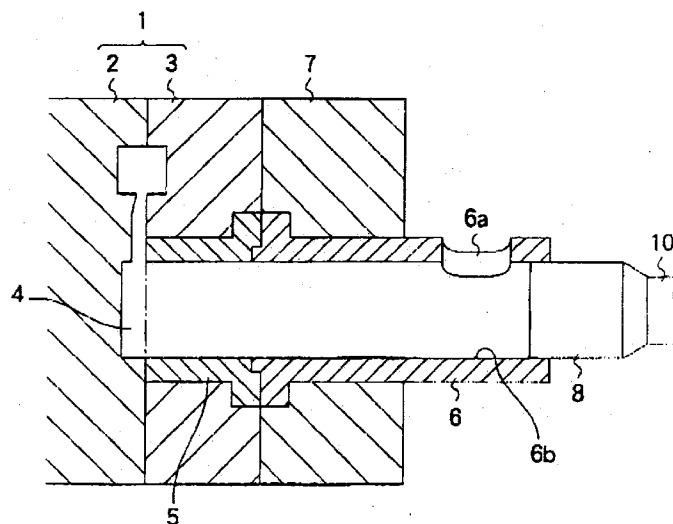
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(54) Heat insulating alloy steel and die casting machine parts

(57) A heat insulating alloy steel contains 0.1 to 5.0 wt.% of C, 3.0 to 7.0 wt.% of Si, 5.0 to 18 wt.% of Ni, 0.5 to 8.0 wt.% of Cr, optionally at least one of less than 2.0 wt.% or less of Mn, 2.0 wt.% or less of Al and 2.0 wt.% of Mo, and the balance essentially of Fe. This heat insulating steel has a matrix metal structure with 30 % or more area ratio of a martensite phase. Further, a die casting machine part such as an injection sleeve or a

pouring port bushing, having a surface making contact with an Al based molten metal, is made of a Fe base alloy containing 0.1 to 1.5 wt.% of C, 5.0 to 40 wt.% of Ni and 0.5 to 10 wt.% of at least one carbide forming element from: Cr, Mo, W, V, Nb, Ta, Ti and Zr. Such machine part comprises a surface layer portion including the surface making contact with the Al based molten metal, formed therein with a high density carbide layer as a dissolution resistance barrier.

FIG. 3**EP 0 798 395 A3**

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