Effect of Th_2O_5/Si_3N_4 mixture additives in sintering of waste $MoSi_2$ powders

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For the recycling of waste MoSi2 heating element, we used Th2O5/Si3N4 mixture additive to control the sinterbility of waste MoSi2 powders. The amount of Th2O5/Si3N4 mixture additives added in sintering process at various weight percentage. Also, we try to minimize the amount of additives to fabricate MoSi2 heating element. The waste MoSi2 powders were made from waste MoSi2 heating element crushed by ball-milling machine, and they have been hot pressed at 1800℃, 25Mpa with Th2O5/Si3N4 mixture additives. The sintering density, hardness and surface temperature of MoSi2 heating element were examined.