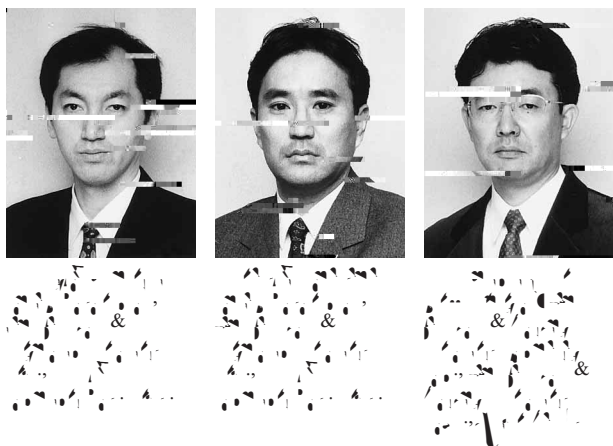
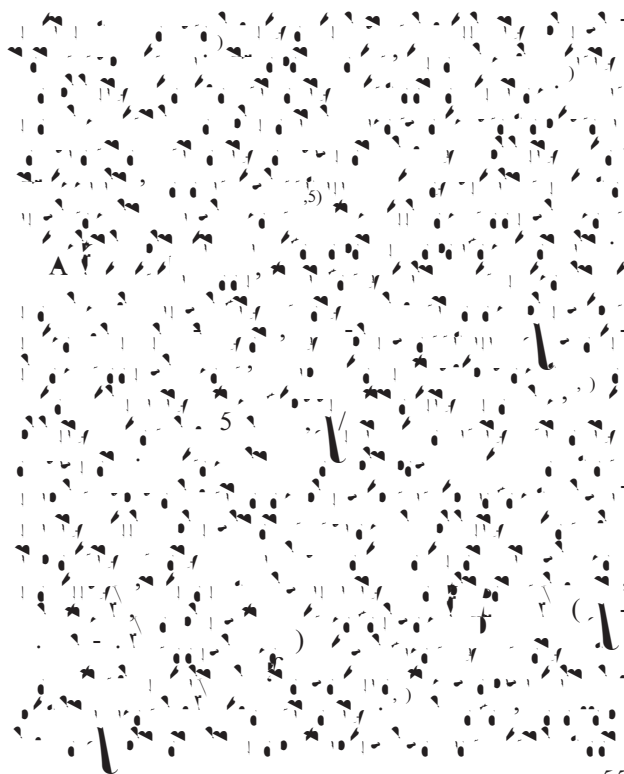
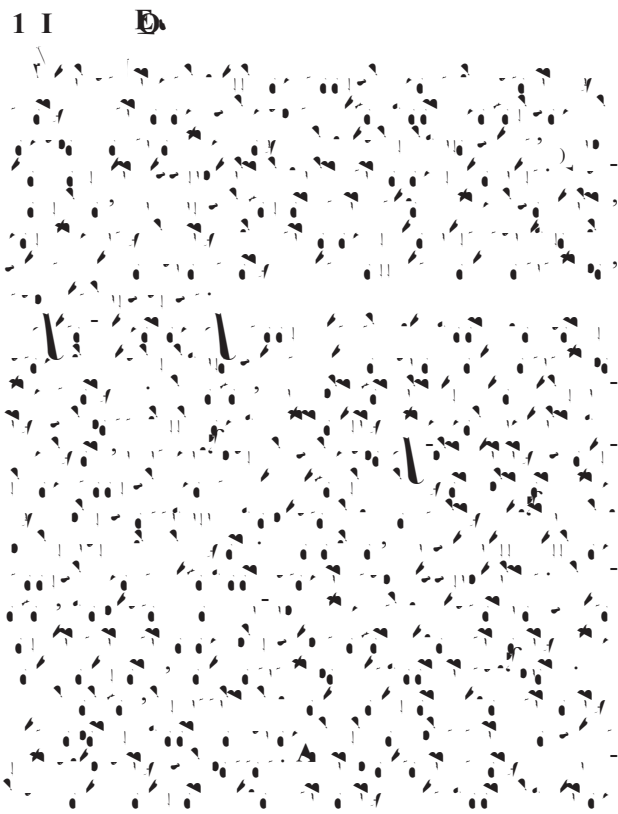


Cr-Alloyed Steel Powders for High-Strength Sintered Parts without Heat Treatment after Sintering*

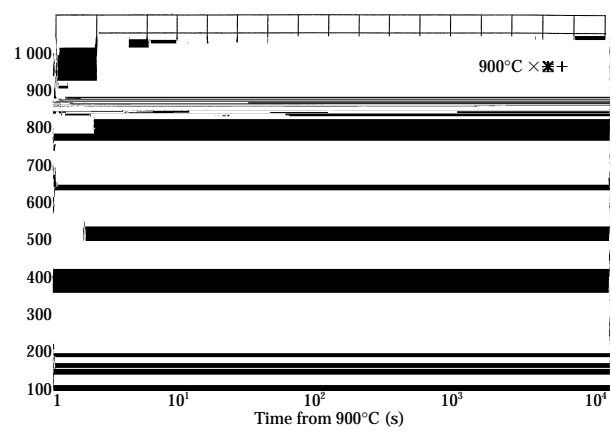
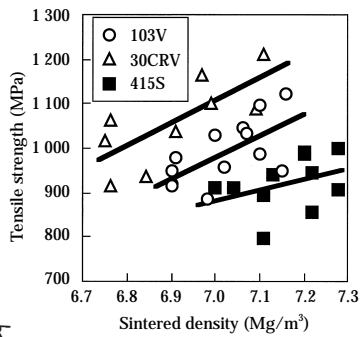
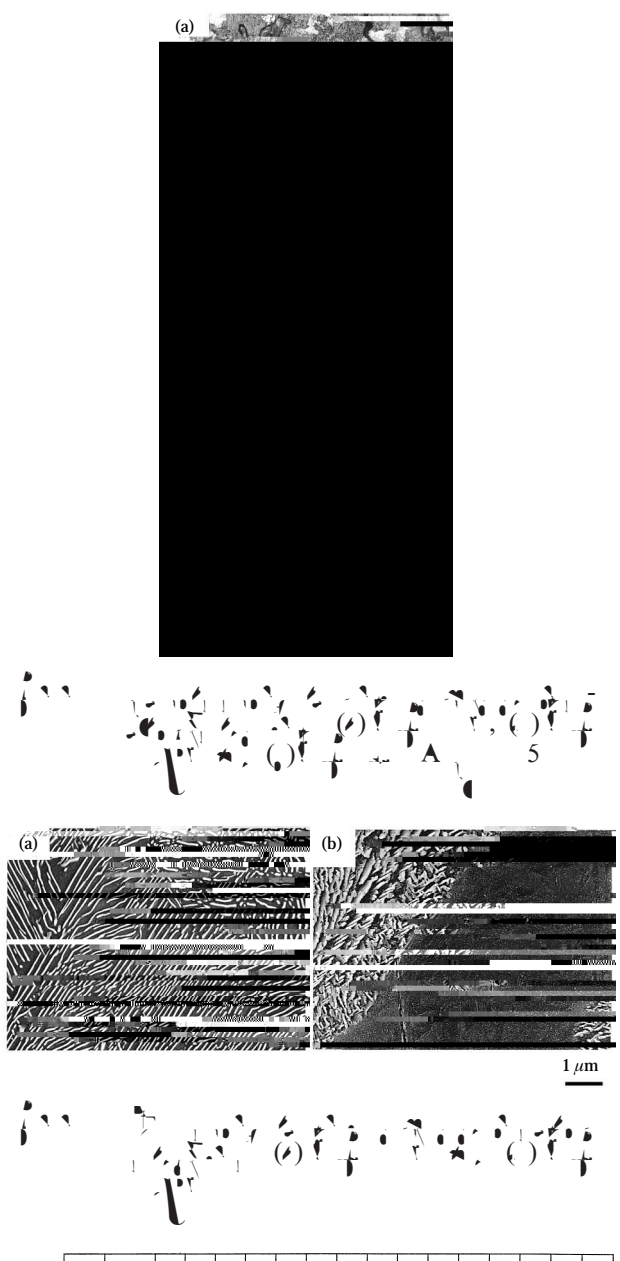


Synopsis:

New alloyed steel powders containing 3 or 1% Cr have been developed for the high strength sintered parts without heat-treatment after sintering. As-sintered compacts made from KIP 30CRV (3Cr-0.3Mo-0.3V) prealloyed steel powder have higher tensile strength of 1150 MPa, rotating bending fatigue strength of 310 MPa and better wear resistance than those made from KIP SIGMALOY 415S (4Ni-1.5Cu-0.5Mo) partially alloyed steel powder. These superior characteristics are attributed to the martensite realized high hardenability of the compacts. In spite of lower tensile strength and hardness, the fatigue strength and wear resistance of the as-sintered compact made from KIP 103V (1Cr-0.3Mo-0.3V) prealloyed steel powder were almost equal to those of KIP 30CRV, because the higher density improved fatigue strength and the fine pearlite had better wear resistance than martensite.



* Kawasaki Steel Giho, 33()





3.3 I7 DV



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