RELAXATION PROCESSES IN AN AMORPHOUS $Co_{68}Fe_4Cr_4Si_{13}B_{11}$ ALLOY IN THE PRE-CRYSTALLIZATION TEMPERATURE INTERVAL

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S u m m a r y

The variations of the structurally dependent characteristics of an amorphous $Co_{68}Fe_4Cr_4Si_{13}B_{11}$ alloy, which had undergone a thermal treatment within the pre-crystallization temperature interval, have been studied. Substantial changes in the behaviors of the mechanical stress relaxation parameter, temperature coefficient of resistance, coercitivity, and residual magnetization of an amorphous ribbon, provided the annealing temperature is within the indicated interval, have been discovered. The phenomena observed have been explained by the existence of two substantially different mechanisms of structural relaxation: the low-temperature local mechanism and the high-temperature diffusion-governed one. The relation for calculating the critical temperature of the relaxation mechanism changeover has been proposed.