

Supplementary material

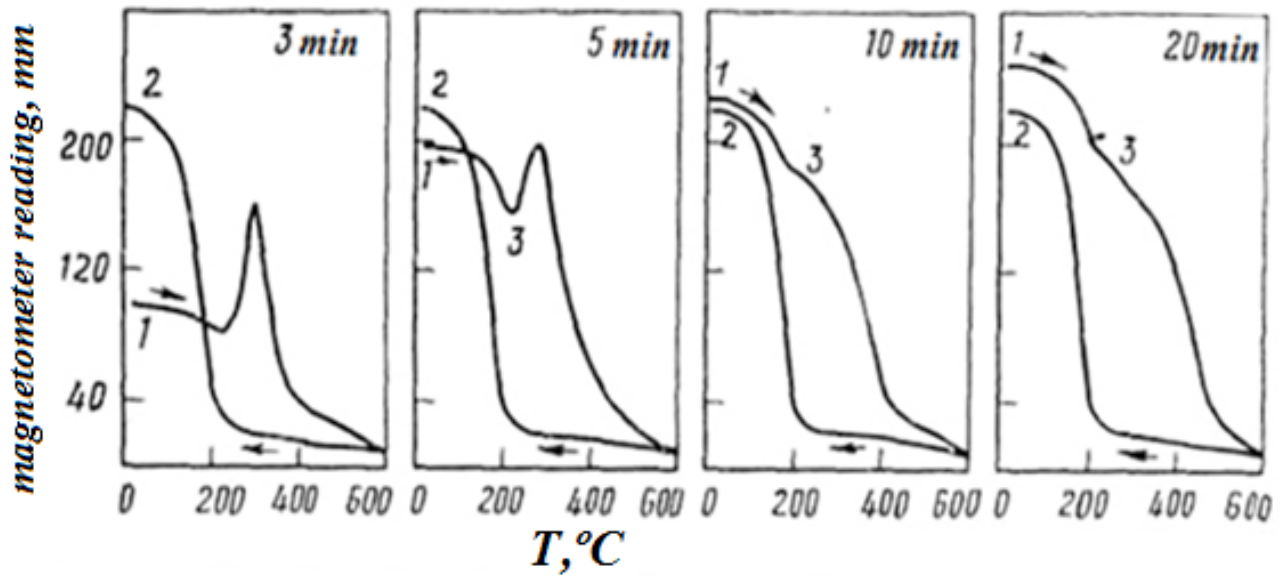


Fig. S1. Thermomagnetic curves of U12A steel after isothermal tempering at 250°C.

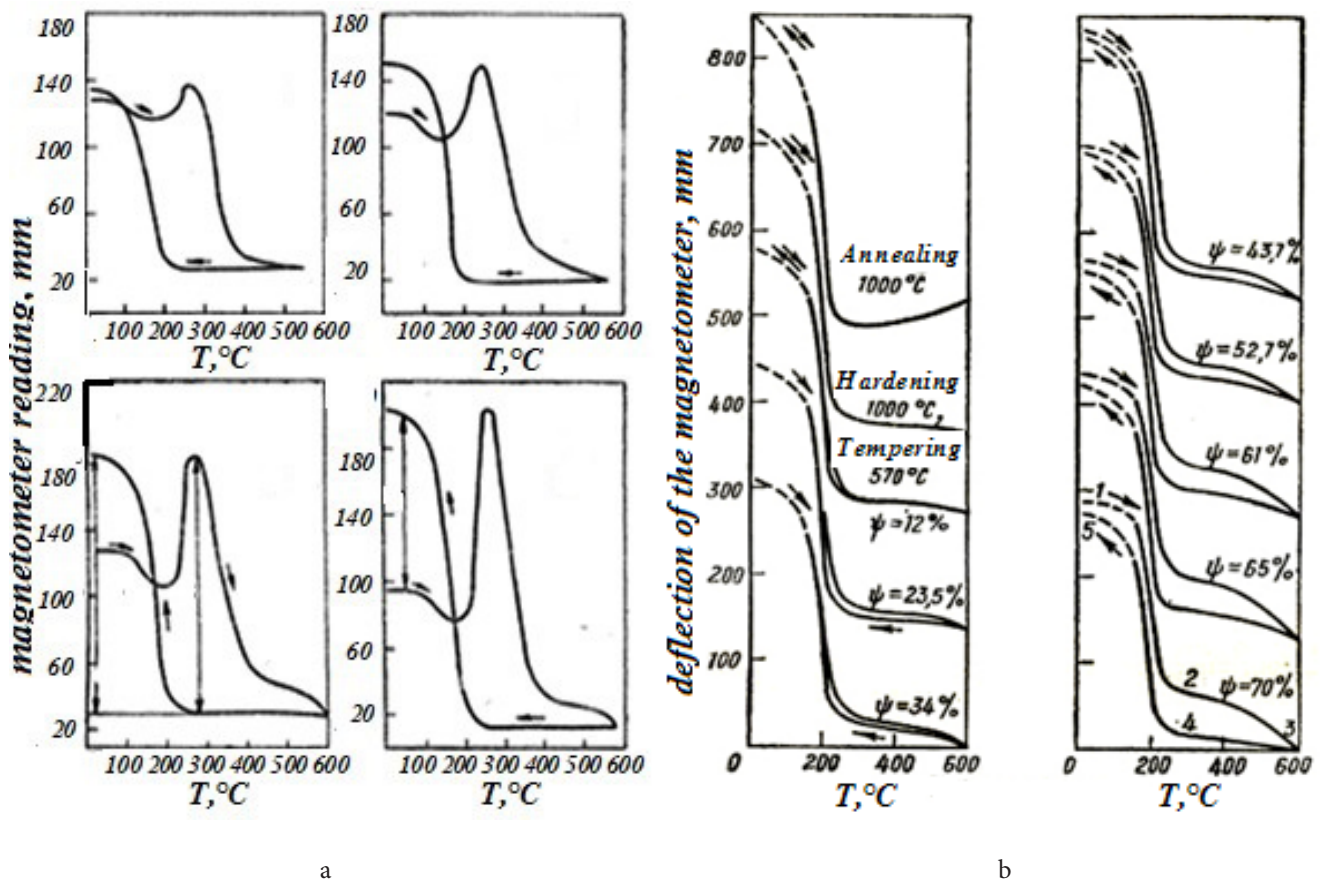
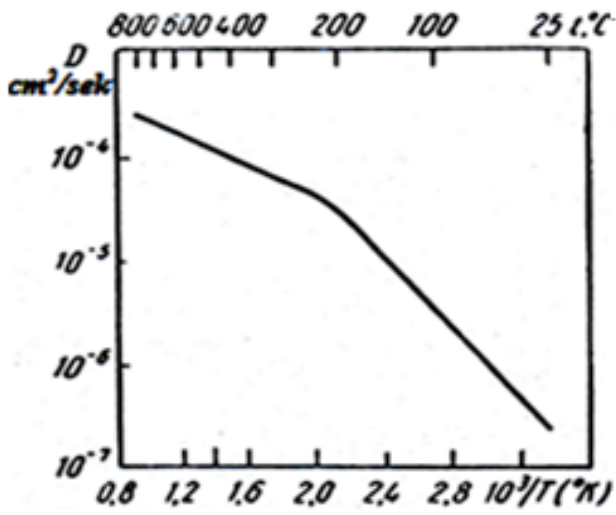
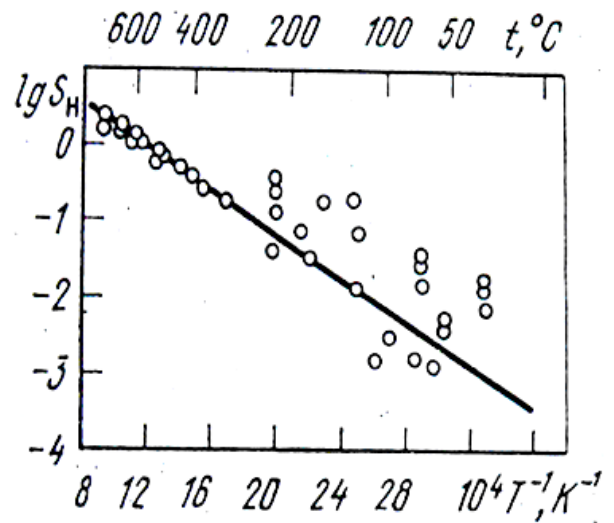


Fig. S2. Thermomagnetic heating curves of quenched iron-carbon alloys with different carbon content (%): 0.5 (top left); 0.84 (top right); 1.0 (bottom left); 1.23 (bottom right) (a); thermomagnetic curves of cold-worked steel U10A. Preliminary heat treatment — hardening from 1000°C + tempering 570°C. Deforming by drawing (b).

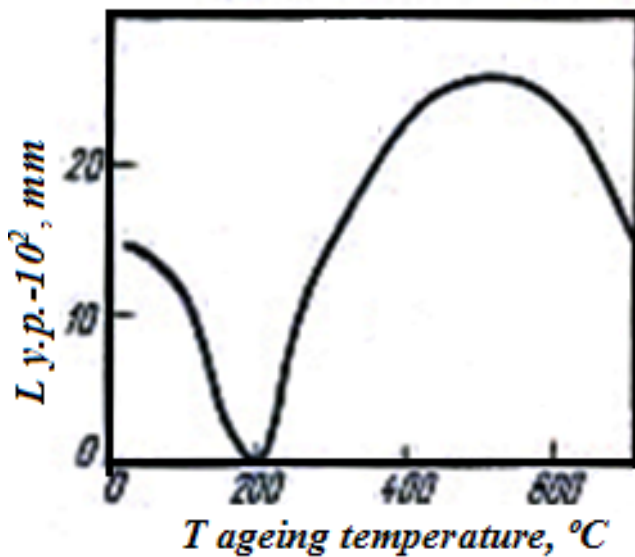


a

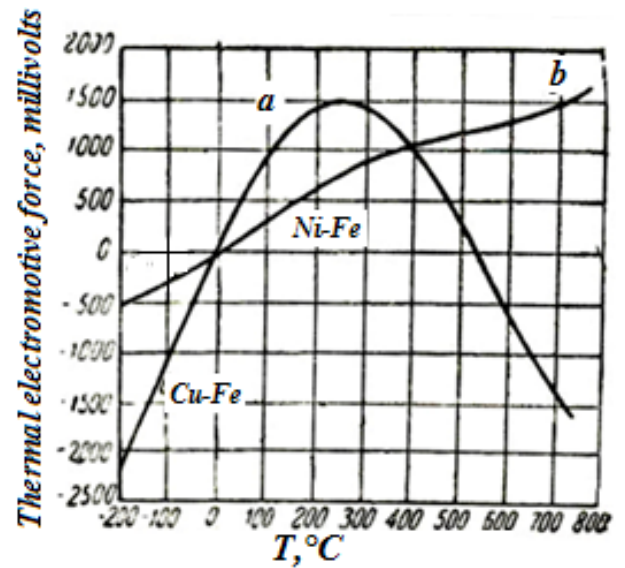


b

Fig. 53. Diffusion of hydrogen in pure undeformed iron (a); solubility of hydrogen in α -iron (b).



a



b

Fig. 54. Tension curve of hardened steel with 0.2% C (a); thermos EMF of thermocouples Cu-Fe (a) and Fe-Ni (b) (b).