

Microstructural Properties of Materials for Nuclear Applications

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Abstract. A large spectrum of ferritic steels with parametric variation of alloying elements were developed at EC - JRC Petten (the Netherlands) in order to understand the role and influence of Ni, Si, Cr and Mo as alloying elements and certain impurities as Cu and P on the properties of steels during irradiation. They were investigated by various non-destructive techniques in the in view of identifying the possible influence of alloying elements on material properties. In the present study we compare results of Doppler broadening annihilation spectroscopy and magnetic Barkhausen noise obtained on as-received specimens.