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Critical behaviour at paramagnetic to ferromagnetic phase transition in Nd2Pt2In

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The critical behaviour at the paramagnetic to ferromagnetic phase transition in Nd2Pt2In compound has been investigated by means of magnetization measurements using various techniques such as the modified Arrott – plot, the Kouvel – Fisher plot and the critical isotherm analysis. Still the nature of the ferromagnetic transition is found to be of the second – order, the obtained values of the critical exponents, &beta = 0.346(8), &gamma = 1.3548(7) and &delta = 4.14(4) are close to those predicted theoretically by the 3D – Heisenberg model (&beta = 0.365, &gamma = 1.386 and &delta = 4.8). Furthermore the scaling relations are obeyed indicating renormalization of interactions around the Curie temperature TC.

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No

Level for award
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No

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