# Pressure induced changes of magnetic phase transitions in $RCo_4B$ compounds

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Abstract: The magnetovolume and magnetic properties of $RCo_4B$ (R - Y, Ce, Gd) compounds under pressure up to 12kbar have been studied. We determined the volume dependencies of Curie temperatures, magnetization, spin reorientation transitions (for $YCo_4B$), first-order magnetization process (for monocrystalline $GdCo_4B$) and also the pressure induced changes of the volume anomaly connected with the isostructural phase transition of $CeCo_4B$. The results have been used to analyze the influence of rare-earth atoms on the volume dependencies of exchange interactions and magnetic anisotropy of $RCo_4B$ compounds.

Author Keywords: Intermetallic compounds; Magnetic anisotropy; Magnetic phase transitions; Pressure effect

Index Keywords: Cobalt; Magnetic anisotropy; Magnetization; Phase transitions; Rare earth elements; Spin reorientation transitions; Yttrium compounds

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