

MAGNETIC PROPERTIES OF THE DOUBLE TUNGSTATES.

M.T.Borowiec^{1*}, V.P.Dyakonov^{1,2}, A.Majchrowski³, E.Zubov^{1,2}, T.Zayarnyuk¹,
M Arciszewska¹, W Dobrowolski¹, W.Domukchovski¹, J.Zmija³, H.Szymczak¹.

¹ Institute of Physics, Polish Academy of Sciences, Al. Lotników 32/46, Warsaw,
PL 02-668, Poland

² A.A.Galkin Physico-Technical Institute, Donetsk, UA 340114, Ukraine.

³ Institute of Applied Physics, Military University of Technology, 2 Kaliskiego str,
Warsaw, PL 00-908, Poland.

*corresponding author borow@ifpan.edu.pl

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The results of the magnetic investigations for the potassium-erbium and potassium-holmium double tungstates are presented. These monocrystals crystallize in the monoclinic crystal structure, with the C2/c space group. For these crystals the measurements of specific heat in magnetic field and without magnetic field and the magnetization were made. A strong anisotropy of these properties was found. The peculiarities of magnetic, optic and thermal properties KErW and KHoW results from the low symmetry of crystal field. Multiplet structure of rare-earth ions is very different for these crystals. For the Er³⁺ and Ho³⁺ ions ground state is ⁴I_{15/2} and ⁵I₈, respectively. The ground multiplets for KErW and KHoW are splitting into 8 Kramers doublets and 17 singlets by the low-symmetry crystal field, respectively. The experimental data were analyzed using crystal field theory with exchange interactions of magnetic ions.