

Chapter 31

Introduction to metal hydrides of A_6B_{23} compounds

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31.1 Introduction

The hydrogenation properties of A_6B_{23} compounds have been mainly studied for binary and pseudobinary compounds with $A = Y, Th,$ and RE and $B = Mn$ and Fe . They absorb generally less than 1 H/M and form stable hydrides with low equilibrium pressure near RT; the H reversibility is therefore limited. For these reasons, they have not been used for hydrogen storage applications compared to other intermetallic compounds ($AB, AB_2, AB_3,$ and AB_5) which can absorb larger H content. Nevertheless, the hydrogenation properties of A_6B_{23} hydrides have been investigated in particular to study the influence of hydrogen absorption on their magnetic properties.

Symbols and Abbreviations

Short Form	Full Form
H/M	number of moles of hydrogen by mole of metal atom
RE	rare earth

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