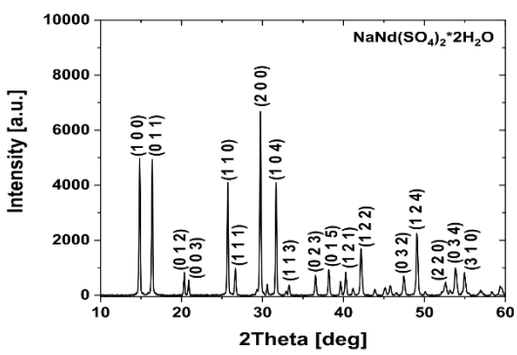
13 – NEODYMIUM RECOVERY AND MATERIAL ANALYSIS

NEODYMIUM RECOVERY

Nd permanent magnets

$NaNd(SO_4)_2 \cdot H_2O$



Leaching tests of scrapped Nd magnets and the separation of neodymium from the resulting solutions in the form of $NaNd(SO_4)_2 \cdot 2H_2O$ allowed to achieve over 92.5 % yield of Nd recovery

XRF SCREENING OF PCBs COMPONENTS

- X-ray fluorescence spectrometry (XRF) for screening analyses of components from first collection of PCBs – initial data input for ADIR
- novel sample holding system for the WDXRF analysis of single tiny components
- semi-quantitative method to determine the composition (carbon to uranium)

COMPOSITION CONTROL AND DETERMINATION IN Au, Ag, PGM AND Nd RECOVERY

- Complete analytical procedures for determination of composition and process control for all stages and streams from precious metals recovery were developed.
- Twenty different elements, which are of economic and/or process importance, were determined on different concentration levels (Au, Ag, Pd, Pt, Cu, Zn, Sn, Pb, Ni, Co, Fe, In, Ga, Ge, Ta, Si, La, Nd, Nb, W).
- Fast instrumental methods were used for control of process and final product quality (AAS, ICP-OES, ICP-MS, XRF).
- Analytical control can be provided by IMN as a service or implemented in a target company in a form of license.