

Title (en)

METHOD FOR THE PRODUCTION OF COBALT AND ASSOCIATED OXIDES FROM VARIOUS FEED MATERIALS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON KOBALT UND ASSOZIIERTEN OXIDEN AUS VERSCHIEDENEN EINSATZSTOFFEN

Title (fr)

PROCÉDÉ DE PRODUCTION DE COBALT ET D'OXYDES ASSOCIÉS À PARTIR DE DIVERS MATÉRIAUX DE CHARGE

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Application

EP 18816937 A 20180608

Priority

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Abstract (en)

[origin: WO2018227237A1] A method is disclosed for the recovery of cobalt, nickel and manganese from ores, concentrates, tailings, scrap alloys and spent batteries in an oxidic form, which is suitable for direct use in the manufacture of lithium-ion batteries, in particular. The process is unique in being able to recover cobalt, in particular, from concentrated solutions wherein the nickel to cobalt ratio is close to unity, rather than the more common 10:1 or 1:100. The process comprises selective oxidative precipitation of each metal under differing conditions of pH and ORP (oxidation-reduction potential). Sodium hypochlorite is the preferred precipitant, since it does not generate any acid, and is therefore self-buffering at the selected pH. A unique aspect of the process is to use Mn(VII) to effect the precipitation of Mn(II).

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