

a 2006 0078

The invention relates to processes for metal extraction from waste, in particular to vanadium extraction from waste resulted from fuel oil burning.

The process includes extraction of vanadium in the form of NaVO_3 by waste leaching at heating with a NaOH solution in the presence of oxidant, decantation of the NaVO_3 extract from the insoluble residue, repeated washing of the residue, with subsequent filtration of the combined NaVO_3 extract and treatment thereof with ammonium inorganic salts, for example NH_4Cl , NH_4NO_3 or $(\text{NH}_4)_2\text{SO}_4$ for vanadium sedimentation in the form of NH_4VO_3 , separation of the sediment, washing, drying and calcination with V_2O_5 obtaining.

At the same time, as oxidant is used $(\text{NH}_4)_2\text{S}_2\text{O}_8$ or Na_2O_2 in NaOH solution with the concentration of 500 g/dm^3 , in the molar ratio oxidant: NaOH of $(1 \dots 2):10$. The leaching is carried out at the temperature of $100 \dots 120^\circ\text{C}$, during 20 minutes, the ratio solution:residue being of $10:(6 \dots 6,5)$.

Claims: 1