PB32.

RECOVERY OF HEAVY METALS FROM WASTEWATER

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Separation of heavy metals from liquid streams has become more and more important. According to the legislative regulations, it has to been applied a pretreatment method for Industrial waste waters containing toxic heavy metals before their discharging into the canals. "The parametric pumping with variation of pH" as an alternative method to the other classical pretreatment methods.It have been applying for the separation and recovery of heavy metals from plating industry waste rinse water. Under the classical conditions pH is only a weak parameter for this kind of separation.However, addition of suitable complexing agents or using weakly basic anion exchangers converts pH to a strong parameter. Application of strongly acidic exchange resins and citric acid allows an effective elimination of metals forming more stable complexes (copper) from other metals forming less stable complexes (nickel). This is demonstrated for the different waste rinse water of metal plating bath industry. The proposed treatment method has advantage of a regenerant free ion exchange process which is more different one than the other classical methods have been applied for the removal of heavy metals [1].

References:

1. Höll W.H., Separation of Mixtures of Heavy Metals by Parametric Pumping with Variation of pH, 6th World Congress of Chemical Engineering Melbourne, Australia, 23-27 September 2001.

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