THE METHOD FOR EXTRACTING MOLYBDENUM COMPOUNDS FROM TECHNICAL INDUSTRIAL WASTE

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Our studies have shown that the concentration of MoO_3 in a solution with an ammonia content of 120 g/l reaches 400 g/l. As for vanadium compounds, hydrogen peroxide increases the solubility of MoO_3 in ammonia solutions-the solubility of MoO_3 in a solution with an ammonia content of 60 g/l is increased to 450 g/l. Hydrogen peroxide also accelerates the rate of dissolution of molybdenum compounds, however, despite the increase in dissolution rate, the use of hydrogen peroxide in the process to reduce the dissolution time of molybdenum from 5 to 3 minutes is inappropriate, since the additional consumption of the reagent will not result in a significant increase in productivity.

Due to the presence of NH_4^+ ions in the proposed process, studies have been carried out to study the dissolution of ammonium molybdate, which showed that ammonia ions reduce the molybdenum content in the solution only after concentrations of ammonia in the solution of more than 100 g/l with an ammonia concentration of less than 50 g/l ammonia additive positively affects the solubility of molybdenum compounds, and its concentration reaches 350 g/l.

In the case of dissolution in water, the solubility of MoO_3 is relatively small and increases with increasing temperature.

The solubility of ammonium molybdate in water is much higher than that of molybdenum (VI) oxide and at 298K is 245 g/l in terms of MoO_3, and the solubility increases to 430 g/l with increasing water temperature to 353-363K.

Thus, the presence of free ammonia in the solution is an important factor for increasing the solubility of molybdenum (VI) oxide.

Thus, as a result of studying the process of dissolution of molybdenum compounds, it was shown that the presence of ammonia ions is very important.

The process of dissolving molybdenum in ammonia solutions and water has been studied, the effect of hydrogen peroxide on the process has been shown, and conditions have been proposed for the precipitation of molybdenum compounds.