

Eco-Friendly Treatment of Exhaust Chrome Liquor for Removal of Chromium and Recycling the Float

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Abstract: Conventional leather making process is involved with the multifarious operations liable to develop pollution feature of alarming gravity. In the present study, exhaust chrome tanning bath are mixed with conventional exhaust soak liquor and refluxed. Chromium salts present in the liquor get precipitated and clear supernatant remain on the top. Precipitated chromium salts can be reused in the tanning house again after acidification and the filtered supernatant water can be recycled back to the tanning industry directly. The unique character of the supernatant liquor has shown to bear minimum COD and other highly encouraging degree low pollution levels. Utilization of the typical chemical behavior of basic chromium sulfate has paved the way for successful accomplishment of the innovative treatment system. Minimization of consumption of water by recycling the total water consumed by soaking, pickling and chrome tanning operation to the industry has also been of great importance from the viewpoint of rapid depletion of ground water level and economization of use of water in the tannery. At the same time, wastewater from two unit operation need not discharge to the canal directly or after tedious treatment. Another point to be highlighted is the simplicity of the developed process for persuasion by the workmen involved. Last but not the least is the enhanced treatment cycle for quicker in-house production.