

APPLICATION REVIEW

Digital Memory Storage Production Site Solves Acid Pickling Bath's Wastewater Issues with Vacuum Evaporation

The Challenge

A well known manufacturer in the memory storage industry was searching for a solution to their increasing disposal costs and significant storage problems that were occurring as a result of the amount of wastewater coming from their acid pickling rinse baths containing Nickel.

The Solution

Because no two wastewater streams are exactly alike, in order to find the best solution to meet the plant's goals and application, a careful review of their process was completed, along with a thorough testing and analysis of the wastewater. It was then determined that a PRAB EVALED® Vacuum Evaporator (model PC F 24FF) would be the best solution and it was added to the plant's wastewater treatment process.

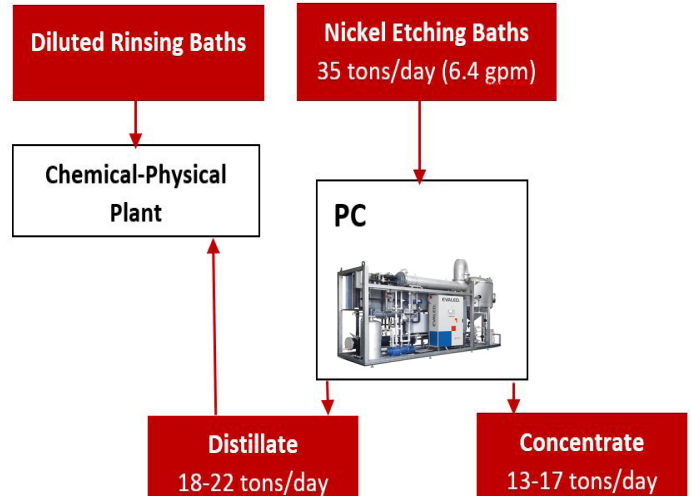
Results Achieved

After adding the new vacuum evaporator to the process, the plant saw a significant reduction in sludge and disposal costs. Now, 70-90% of distillate is recovered and reused in the production process—which has resulted in a system payback within 8-months of installation.



PRAB EVALED Vacuum Evaporator Model PCF 24FF

New Rinse Water Treatment Process Implemented



New Treatment Process Results

Parameters	u.m.	Waste In	Distilled Out	Concentrate Out
COD	ppm	50,000-60,000	1,000-4,000	-
Conductivity	µS/cm	160,000-220,000	400	-
TS at 105° C	%	16-18	-	35-40
pH	-	4.7-5.4	4.6	5.5
Ammonium	-	17,000-32,000	<300	-
Nickel	ppm	5,500-6,500	<2	12,000-15,000

About PRAB

PRAB is a leading engineer and manufacturer of conveyors, chip and fluid management systems, and industrial water and wastewater treatment equipment. Our customized solutions automate metal handling, reduce labor costs, recycle and reclaim expensive cutting fluids, maximize metal scrap value, and help maintain or achieve compliance with environmental rules and regulations. With our expertise, honed by more than 4,500 installations for the world's leading OEMs and suppliers, PRAB continuously improves scrap and fluid management processes within the automotive, aerospace, electronics, defense, energy markets, and more. For more information about PRAB, visit prab.com.

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