

**Project Profile on Electroless Nickel Plating**

**Introduction :**

Metals can be recovered from aqueous solutions of their salts in metallic form by means of reducing agents. It is necessary that the metal deposits on any solid surface be continuous and coherent so that they just coat the surface desired and not the walls of the containing vessel. The process is expensive but it is highly suited to coat the interior of complicated chemical plants, tubes, condensers even after assembly or installation.

**Process of Manufacture:** The electrolysis nickel plating process given here has particular reference to steel jobs. The mild steel job is degreased in trichloroethylene for about 10 minutes. It is derusted in a solution of citric acid for above 30 minutes and then thoroughly rinsed in running water followed by distilled water. It is then alkaline soak cleaned a solution of sodium silicate for 10 minutes before being thoroughly rinsed in running water and then in distilled water. It is thereafter activated in hydrochloric acid for about one minute, and then rinsed once again thoroughly in running water and distilled water. The bath is prepared by dissolving a solution of nickel chloride, sodium acetate, glycerin and sodium hypophosphite in distilled water. The job is immersed in the bath which is maintained at a temperature about 85 degree C, for a specified time.

**1 Name of the Product : Electroless Nickel Plating**

**2 Project Cost :**

a	Capital Expenditure				
	Land	:			<b>Own</b>
	Workshed in sq.ft	On rent	<b>2000</b>	Rs.	400,000.00
	Equipment	:		Rs.	<b>278,000.00</b>

1) Vapour degreasing plant, 2) 5 Tanks, 3) Lab glassware, 4) Waste treatment plant, 5) Deionising Plant

	Total Capital Expenditure	Rs.	678,000.00
b	Working Capital	Rs.	582,000.00
	<b>TOTAL PROJECT COST :</b>	<b>Rs.</b>	<b>1,260,000.00</b>

**3 Estimated Annual Production Capacity:** (Rs. in 000)

Sr.No.	Particulars	Capacity in No..	Rate Rs	Total Value
1	Electroless Nickel Plating			3487.92
	<b>TOTAL</b>	<b>0.00</b>		<b>3452.02</b>

<b>4</b>	<b>Raw Material</b>	<b>:</b>	<b>Rs.</b>	<b>2,616,000.00</b>
<b>5</b>	<b>Labels and Packing Material</b>	<b>:</b>	<b>Rs.</b>	<b>5,000.00</b>
<b>6</b>	<b>Wages (3-Skilled &amp; 3-Unskilled)</b>	<b>:</b>	<b>Rs.</b>	<b>376,000.00</b>
<b>7</b>	<b>Salaries Manager 1</b>		<b>Rs.</b>	<b>120,000.00</b>

8	Administrative Expenses	:	Rs.	100,000.00
9	Overheads	:	Rs.	75,000.00
10	Miscellaneous Expenses	:	Rs.	25,000.00
11	Depreciation	:	Rs.	47,800.00
12	Insurance	:	Rs.	6,780.00
13	Interest (As per the PLR)			
	a. C.E.Loan	:	Rs.	88,140.00
	b. W.C.Loan	:	Rs.	75,660.00
	Total Interest		Rs.	163,800.00
14	Working Capital Requirement	:		
	Fixed Cost		Rs.	339,920.00
	Variable Cost		Rs.	3,147,660.00
	Requirement of WC per Cycle		Rs.	581,263.00

## 15 Cost Analysis

Sr.No.	Particulars	Capacity Utilization(Rs in '000)		
		100%	60%	70%
1	Fixed Cost	339.92	203.95	237.94
2	Variable Cost	3148.00	1888.80	2203.60
3	Cost of Production	3487.92	2092.75	2441.54
4	Projected Sales	4000.00	2400.00	2800.00
5	Gross Surplus	512.08	307.25	358.46
6	Expected Net Surplus	464.00	259.00	311.00

- Note :
1. All figures mentioned above are only indicative.
  2. If the investment on Building is replaced by Rental then
    - a. Total Cost of Project will be reduced.
    - b. Profitability will be increased.
    - c. Interest on C.E.will be reduced.