Cost Benefit Analysis : Cardanol Oil Distillation

EVEREST VACUUM
Innovative Engineering Solutions

NOVOSIS GREEN TECHNOLOGIES

Process Brief:

1) Product : Cardanol Distillation
2) Process : Distillation under Vacuum -WFE
3) Pumping : 7000m3/hr.
4) Vacuum : 0.5 TORR.
5) Vacuum System : SUPERVAC 7000 + I. Condenser
6) Old System : 3 Stage Ejector with Mechanical Vacuum Booster

Sl.N	Description	SEMI-DRY	DRY
1	Power/Steam (Cost)	19,61,280.00	11,08,800.00
2	CW Utility (Cost)	12,18,355	1,23,840
3	Solvent Recovery (Saving)	0	3,60,000.00
4	N2/Air Utility (Cost)	0	4,320.00
5	Maintenance (Cost)	1,20,000.00	1,43,100.00
6	Total (Cost+Saving)	32,99,635.20	13,80,060.00
	Total Direct Saving (Wet - Dry)		**22,79,575.20**
	% Utility Cost Spend **(DRY to WET)**		**41.82%**
	% Saving Utility Cost Spend **(DRY to WET)**		**58.18%**

PRODUCTIVITY:		
TIME SAVING	11 TON/DAY MATERIAL PROCESSING	13 TON/DAY MATERIAL PROCESSING (18%)
YIELD	60%	63-65%
SOLVENT RECOVERY	0	3,60,000