

**Sharing of experience in
Reject Management System (RMS)**

**Perundurai SIPCOT Textile
Processors Association (PSTPA)**



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Uniqueness of Perundurai SIPCOT

- 100% land lock.
- 27 wells around Perundurai SIPCOT is constantly monitored by TNPCB on monthly basis.
- Pioneering in Zero Liquid Discharge System (ZLDS)

Stages of Reject Management System

Sodium Chloride

RO Reject

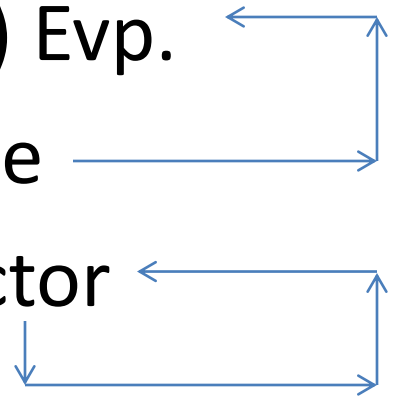
→ Multiple Effect Evaporator (MEE)

→ Forced Circulation (FC) Evp.

→ Pusher Centrifuge

→ Jacket Reactor

→ SEP



Stages of Reject Management System

Sodium Sulphate

RO Reject

→ Multiple Effect Evaporator (MEE)

→ Crystallizer

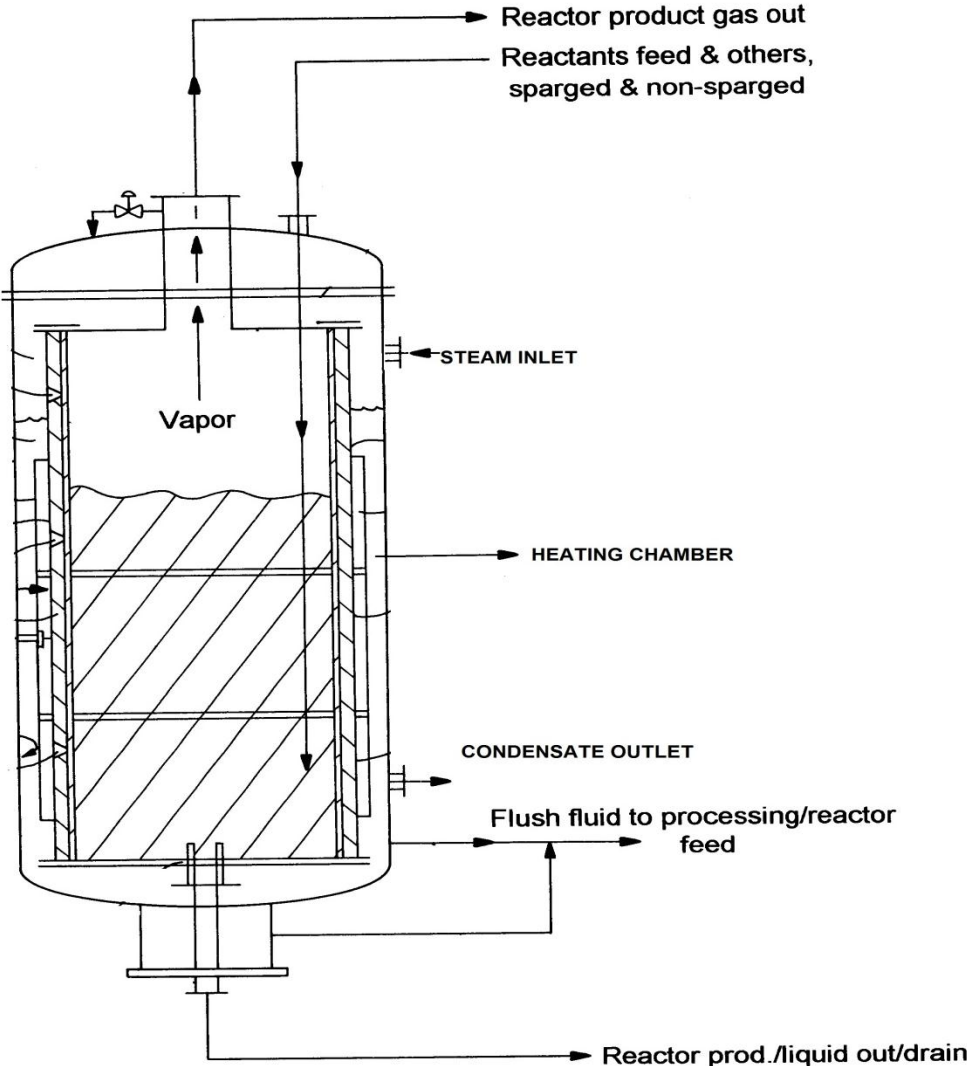
→ Forced Circulation (FC) Evp. 

→ Pusher Centrifuge 

→ Jacket Reactor 

→ SEP 

Jacket Reactor



Jacket Reactor



Jacket Reactor



Challenges in RMS

Cost of operation



Challenges in SEP

Elevated SEP

- Cost of construction – equivalent to RCC Roof

Elevated SEP



Challenges in SEP

Concrete Base

- Concrete always absorbs water (effluent) –
How to safeguard ?
- Base safeguard – Epoxy coating / FRP coating
 - Will it withstand wet / dry cycle ?
 - Will it withstand routine manual scrapping ?

Challenges in SEP

Quantity Restriction

- Maximum discharge volume allowed is:
10000 litres / day

Other initiatives from PSTPA


Continuous online monitoring

- EMFM (Electro Magnetic Flow Meter)
- Energy Meters
- Steam Flow Meters
- TDS
- pH
- Differential Pressure (DP)
- Dissolved Oxygen (DO)

Other initiatives from PSTPA

Read Meter x

← → ↻ 🏠 bcs.pstpaonline.org/Reports/LatestReadingNew.aspx ☆ ☰



Perundurai SIPCOT Textile Processors Association

BEST COLOUR SOLUTIONS INDIA PVT LTD

| Latest Reading | Meter Reading | Admin | Change Pwd | Live Status | Report

Logout

Latest Reading

Groups

<input type="checkbox"/>	Meter	Prefix	Latest Reading	UOM	Latest Reading Date
<input type="checkbox"/>	3TPH2-Steam	A	7409408.00	Kgs	24-Mar-2014 1:54PM
<input type="checkbox"/>	3TPH2-Temp		172.76	Celsius	24-Mar-2014 1:54PM
<input type="checkbox"/>	TpCondensateProcess		67.90	Celsius	24-Mar-2014 1:54PM
<input type="checkbox"/>	ETP Inlet	A	267022.10	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	Overall Permeate	A	233086.41	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	Brine Outlet	A	26.94	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	RO-1 Feed	A	170097.37	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	RO-1 Permeate	A	165757.98	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	RO-2 Permeate	A	62747.70	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	RO-2 Reject	A	28933.10	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	RO-3 Feed	A	57251.79	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	RO-3 Permeate	A	6968.15	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	RO-3 Reject	A	43274.48	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	NF Feed	A	332596.69	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	NF Permeate	A	284965.31	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	NF Reject	A	47960.40	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	SEP Inlet	A	10026.20	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	MEE-Feed	A	53408.22	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	MEE-Reject	A	1236.33	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	MEE Condensate	A	3071.70	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	Decander	A	6859.66	m3	24-Mar-2014 1:54PM
<input type="checkbox"/>	pH-RO1 Feed		9.40	pH	24-Mar-2014 1:54PM

View Summary

Date From ...

Date To ...

Instants

Hours

Dailys

Monthlys

Other initiatives from PSTPA

Continuous Online Evaluation

- Consent Quantity
- Recovery Percentage
- Process Top-Up Quantity

Other initiatives from PSTPA

Continuous Online Evaluation

- Stage wise Reverse Osmosis recovery efficiency
- Operating efficiency of evaporators
- Quality parameters of both feed and permeate
- Matching output vs input of next stages

Discussions

Your input to us !

