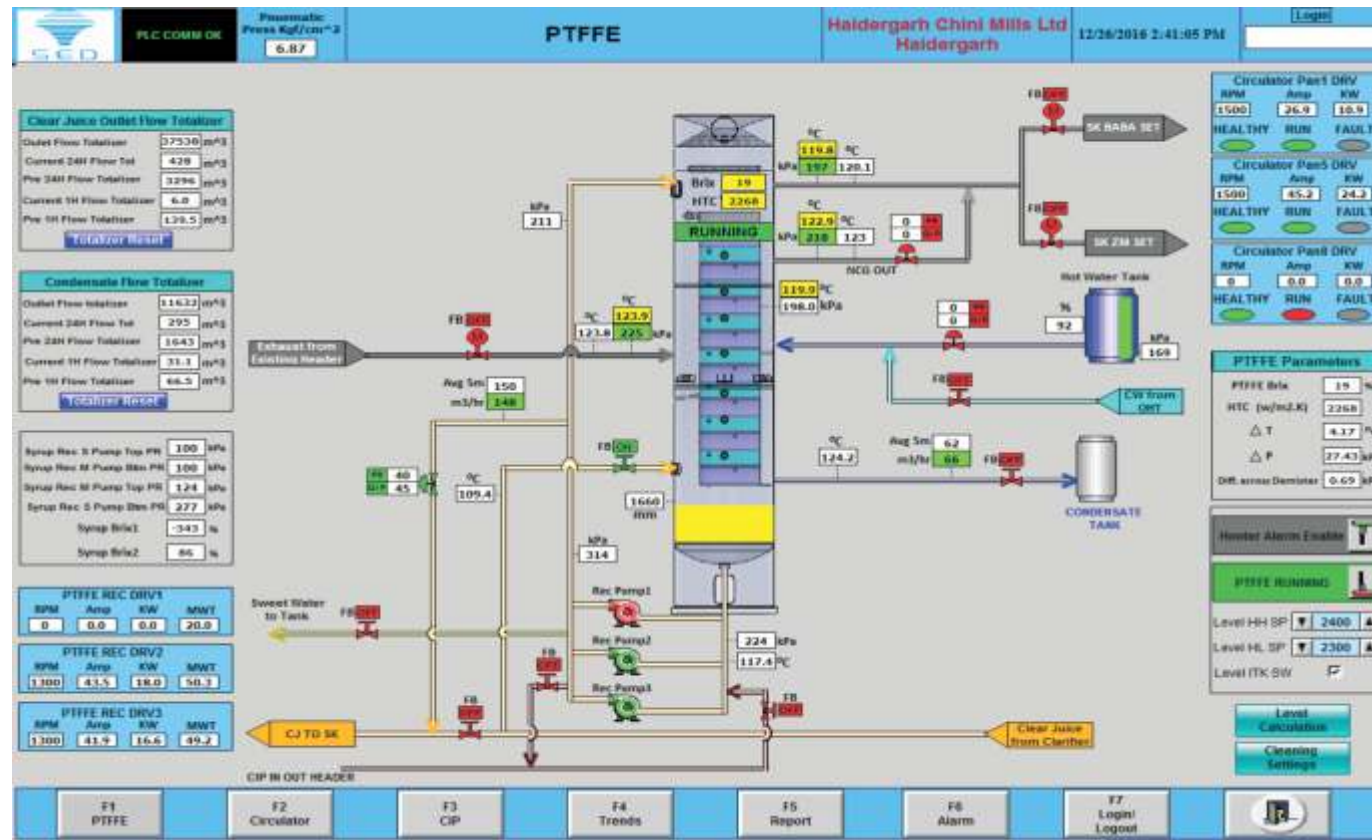


FULLY AUTOMATIC OPERATION :



REFERENCES :

Sr. No.	Project Name	Quantity	Total HSA (m <sup>2</sup> )
<b>INTERNATIONAL</b>			
1.	Al-Khaleej Sugar Co., Dubai, UAE	3	34000
<b>DOMESTIC</b>			
1.	Vishwaraj Sugar Industries Ltd., Karnataka	5	15000
2.	Haidergarh Chini Mills Ltd., U.P.	1	4000
3.	Indian Sucrose Ltd., Punjab	4	10000
4.	Superior Food Grains, Unn, UP	3	7500
5.	Gangakhed Sugar & Energy Ltd., Maharashtra	1	3100
6.	SEDL's R&D Unit, Bidar, Karnataka	1	1500



**SPRAY ENGINEERING DEVICES LIMITED**

SPRAY HOUSE, C-82, Industrial Area,  
Phase - VII, Mohali - 160 055, Punjab INDIA  
Tel.: +91-172-3029703, Fax: +91-172-3029774



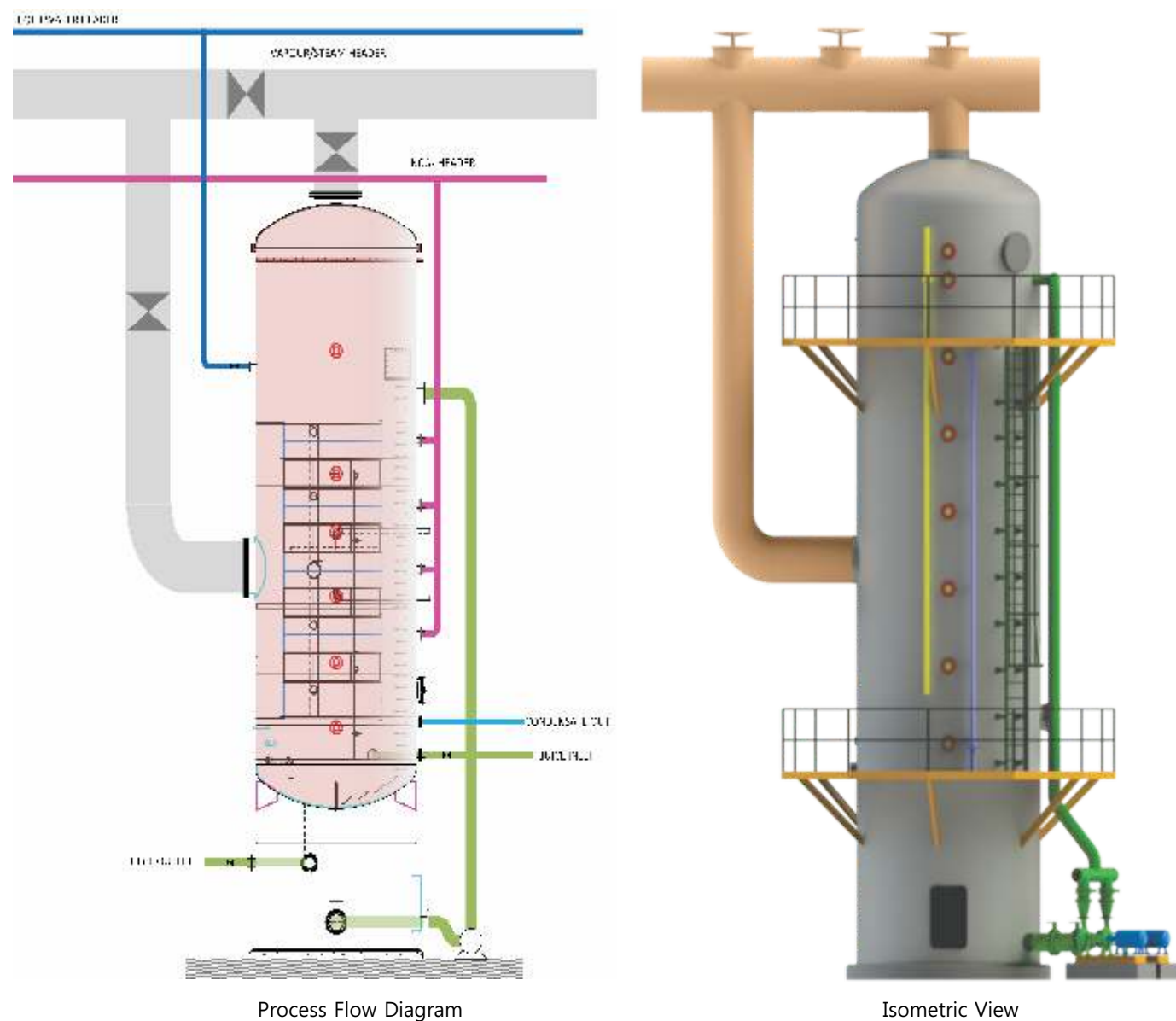
# Plate Falling Film Evaporator

"Lowest  $\Delta T$  (1-4°C) Operation"

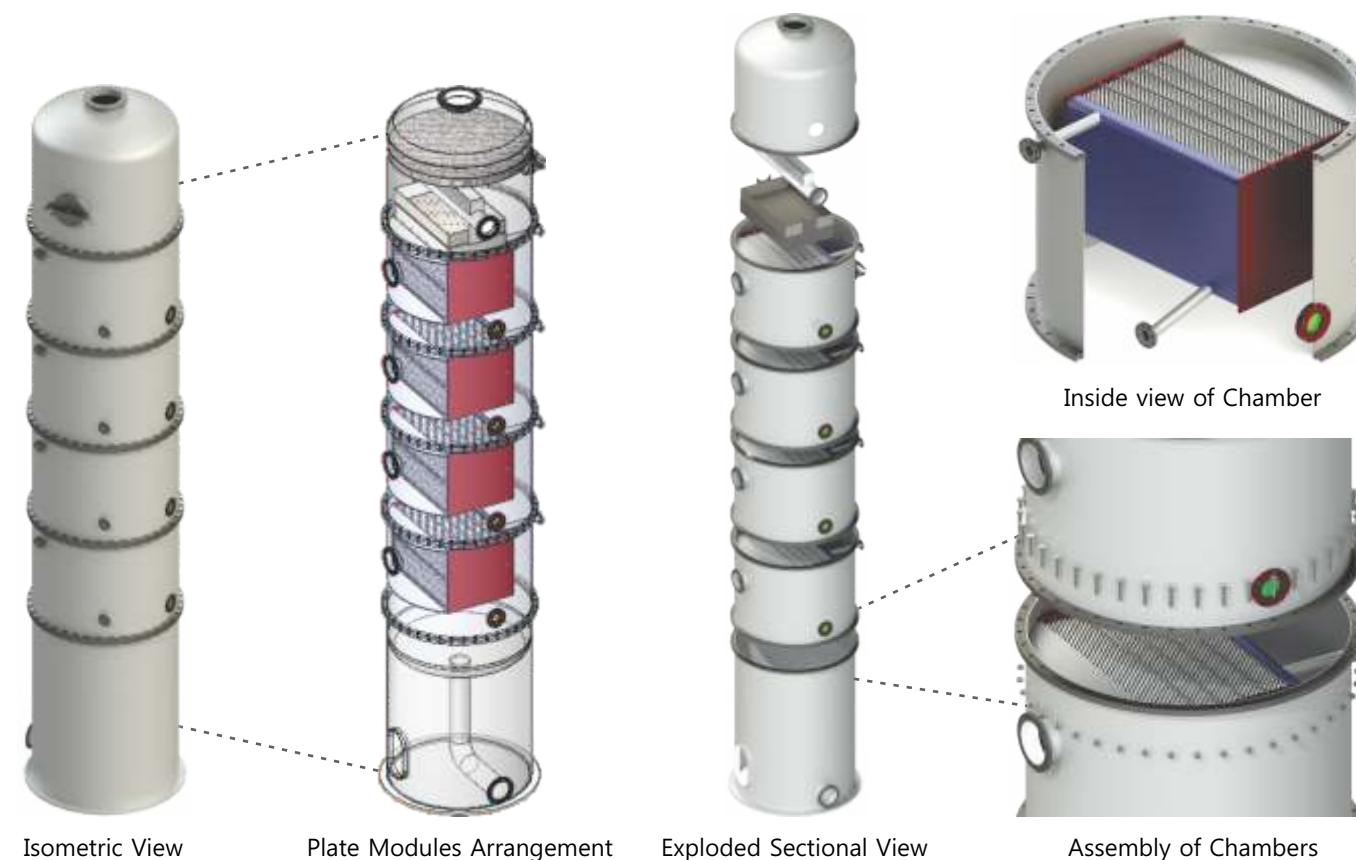
Plate falling film evaporator has lowest pressure losses and higher turbulence on liquid side to achieve highest heat transfer coefficient.

**DISTINCT FEATURES:**

- Lowest pinch temperature difference for minimum utility consumption.
- Highest heat transfer rate (up to 4500 W/m<sup>2</sup>K).
- Offers highest energy efficiency.
- Efficient entrainment separator (More than 90% removal of 5µm size particles).
- Allows accommodation of more number of effects in given ΔT and ΔP.
- Compact and modular design.
- Distributed HS that facilitates easy operation and maintenance.
- Low thermal residence time.
- Lower inversion and low color formation.
- Low recirculation pumping requirement.
- Having experience of Designing, Manufacturing, Erecting & Successful commissioning of Standalone 10,000 m<sup>2</sup> HSA in Single Unit.
- Patented technology.



**ASSEMBLY LAYOUT OF PLATE FFE :**



**INSTALLATIONS :**



**AL Khaleej Sugar Co., Dubai, UAE**  
(Largest PFFE of HSA 34,000 m<sup>2</sup>)

**Haidergarh Chini Mills Ltd., UP**  
(PFFE of HSA 4,000 m<sup>2</sup>)

**Gangakhed Sugar & Energy Ltd., Maharashtra**  
(PFFE of HSA 3,100 m<sup>2</sup>)

Parameters	Before	After	Parameters	Before	After	Parameters	Before	After
Capacity Utilization	6200 TPD	7000 TPD	Capacity Utilization	4080 TCD	4300 TCD	Capacity Utilization	6000 TCD	8000 TCD
Steam Consumption	24%	20%	Steam Consumption	47%	36%	Steam Consumption	46%	35%

Reduction in Power Consumption up to 15%.