



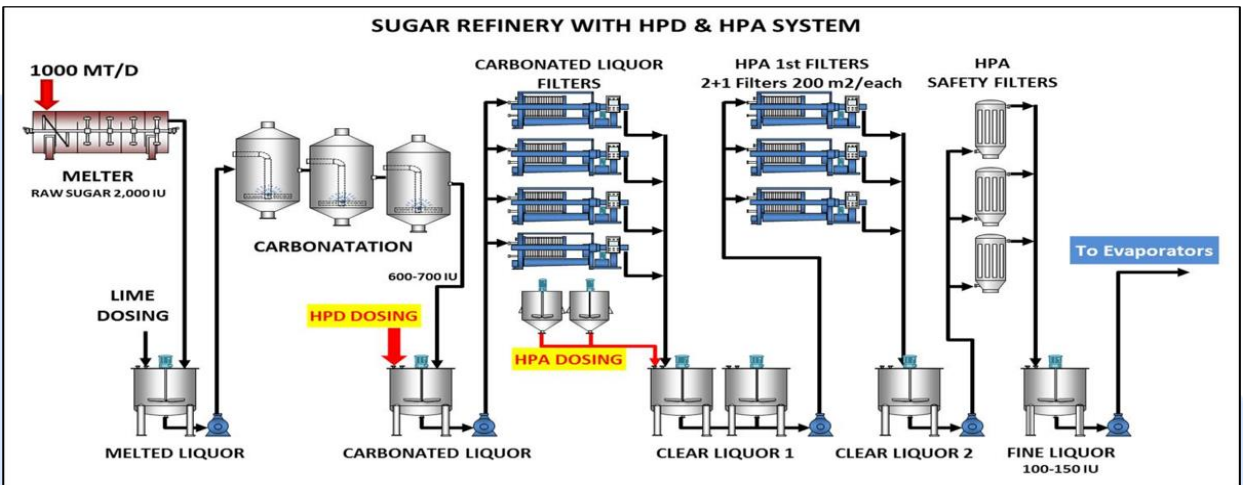
HPD & HPA Decolorization: Carbonatation Sugar Refinery

- **HPD (High Performance Decolorant) and HPA (High Performance Adsorbent)** are patented products engineered and designed for superior decolorization as an alternative of IER and GAC in carbonatation sugar refinery.

Functionality:

- HPD enhance the carbonatation impurity removal by 30-40%.
- HPA improves liquor's quality, filterability and impurities removal by 70-80%.
- Removes beverage floc.
- Energy savings.
- No liquid effluent discharges.
- Low centrifugal washing water consumption.
- Low pol in mud.
- Operates at higher brix.
- Increases over-all factory yield.

Process Diagram:



Feasibility study:

Carbonatation Refinery, 1500 MTD

HPD (ppm)	HPA (ppm)	Fine Liquor (IU)	%Color Removal
Carbonated Liquor Color : 753 IU			
200-250	500-750	188	75 %
200-250	750-1000	136	82 %
200-250	1000-1500	90	88 %

Application:

1st Step: HPD added to the carbonated liquor.

2nd Step: HPA added to the clear liquor.

