

K H EXPORTS INDIA PRIVATE LIMITED

TANNERY 'A' DIVISION- Individual Effluent treatment unit



K H EXPORTS INDIA PRIVATE LIMITED
TANNERY 'A' DIVISION- Individual Effluent treatment unit (Red large unit)

| | |
|--|---|
| Type of manufacturing process carried out | Raw to finish leather |
| Consent obtained from the Board | Processing of Raw to semi finished Hides-10T/Day & Processing of Semi-finished to finished 15t/Day |
| Consented Effluent quantity | 830 KLD |
| Raw material processed | Buffalo Hides and Calf Skins. |
| ETP provided (Primary and Secondary | Collection sump, Equalization tank, primary Aerators, Flash mixer, Pri-Clarifier, Sec. Clarifier, Sec. Aerators , Sec. Clarifiers, Final Settling Tank, Sludge Drying Beds, Filter Press, Sludge storage Yard |
| ZLD system Provided | Ultra filtration, 3 stage RO system and RMS (Accelerated solar evaporation pan and crystallization pan |
| Sludge Disposal | Sludge from the Primary and secondary are collected dried in the Sludge Drying bed and temporally stored and disposed in to SLF at RANITEC CETP. The unit has obtained HWM authorization form the Board for handling of HW waste |

**CLEANER & GREENER
TECHNOLOGIES IN
PROCESS SECTION**

KHEIPL -TAD
Cleaner & New
Technologies
Water Conservation

HUNI
Aqua Mix
Automated
Water
Addition
System for
Dye Section
Drums



KHEIPL -TAD
Cleaner & New
Technologies
Water Conservation

**Poly Propylene
Drums with
Aqua Mix
Automated Water
Addition System
for R & D
(Sample) Section**



New R & D Section – PP Drums



**New R & D
Section –
Aqua Mix
System**

Dyeing Drums – Dye Drums unloading and after the process and the effluent is sent to ETP/RO for treatment



RENEWABLE ENERGY

*To Avoid Usage of Fossil Fuels &
Reduce Carbon Emission*

KHEIP-TAD
Reduction in Carbon
Emission by using Solar
Energy in Dehumidifier

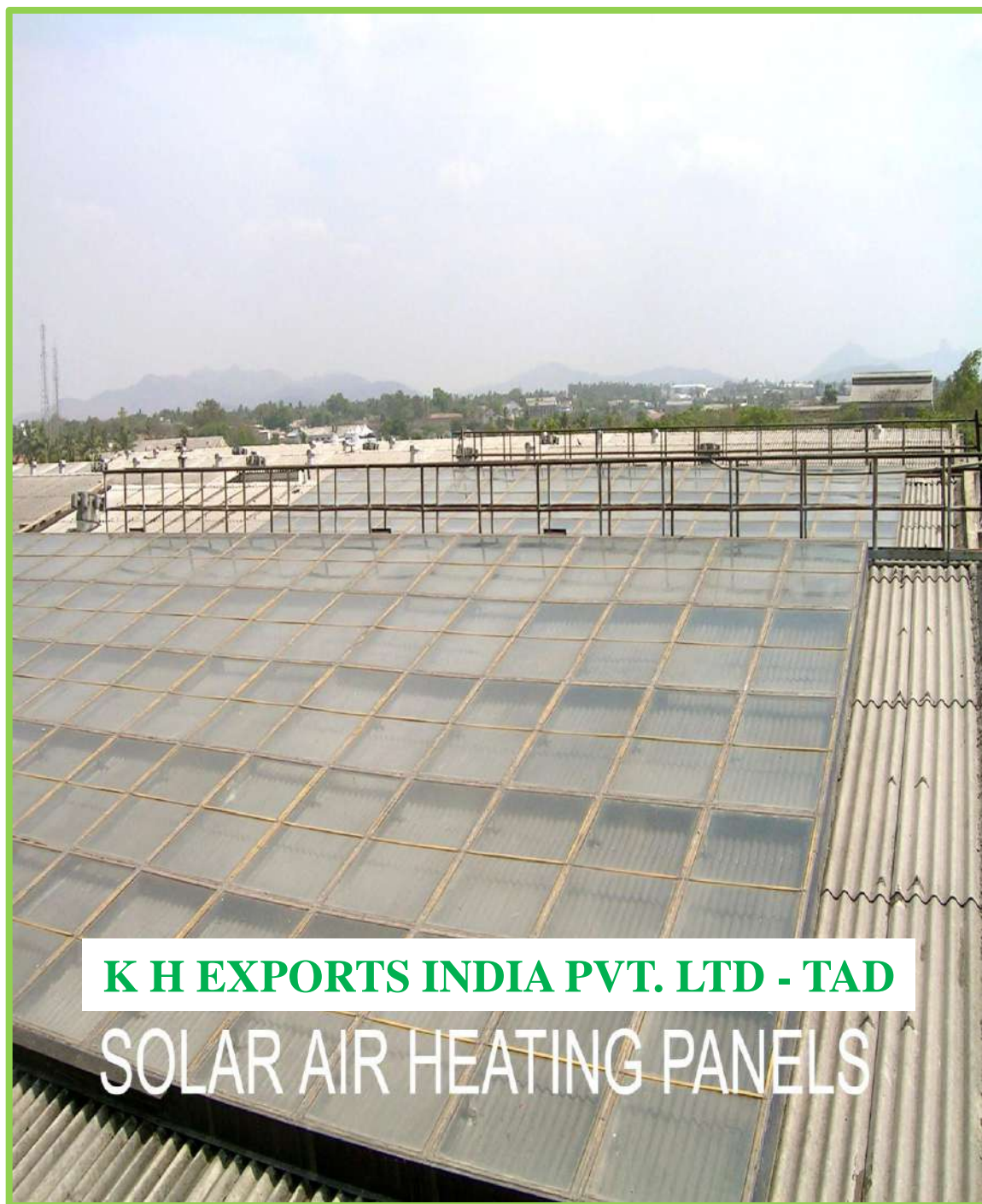
**Leather
Drying
Process
using Solar
Energy**



KHEIPL-TAD

**Renewable Energy for
Reduction in Carbon Emission**

**670 m² of Solar
Air Heating
Panels for De-
humidifiers which
reduces about
1000 Tons of CO₂
Emission per
annum by saving
600 Tons of Fire
Briquette per
annum.**



K H EXPORTS INDIA PVT. LTD - TAD

SOLAR AIR HEATING PANELS

KHEIPL-TAD
Renewable Energy
Biomass Fire
Briquettes
used as
Boiler Fuel to
avoid usage
of Fossil
Fuels



Fire Briquette

K H Exports India Pvt. Ltd. – Tannery ‘A’ Division
**Shaving operation & shaving dust which is sent to Leather Board
Manufacturer / Shaving Dust machine**



K H Exports India Pvt. Ltd. – Tannery ‘A’ Division Solar Lighting, LED & CFL Lamps installed



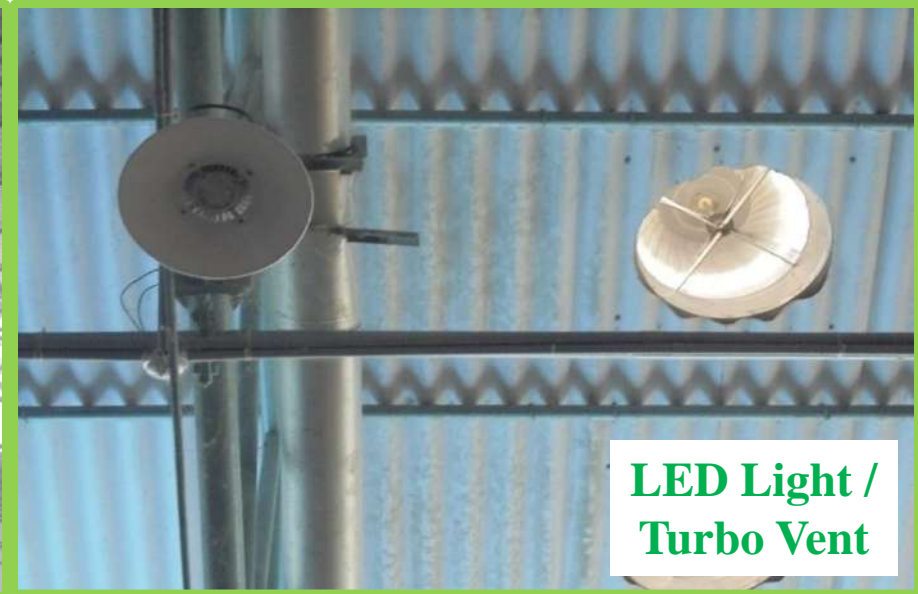
Solar Light



LED Light



CFL Light



**LED Light /
Turbo Vent**

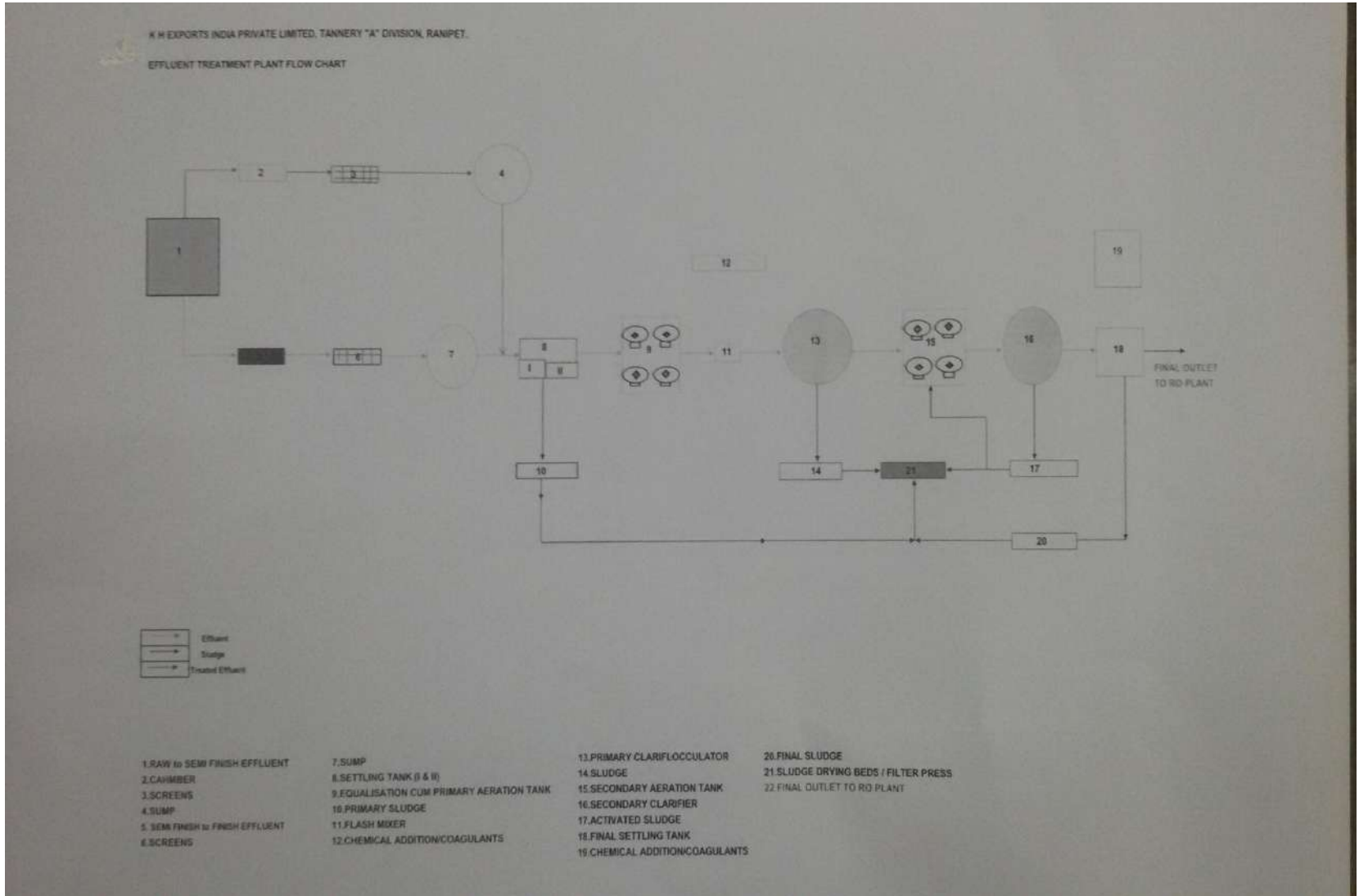
ZERO LIQUID DISCHARGE (ZLD)

Treating Waste Water to Recover, Reuse

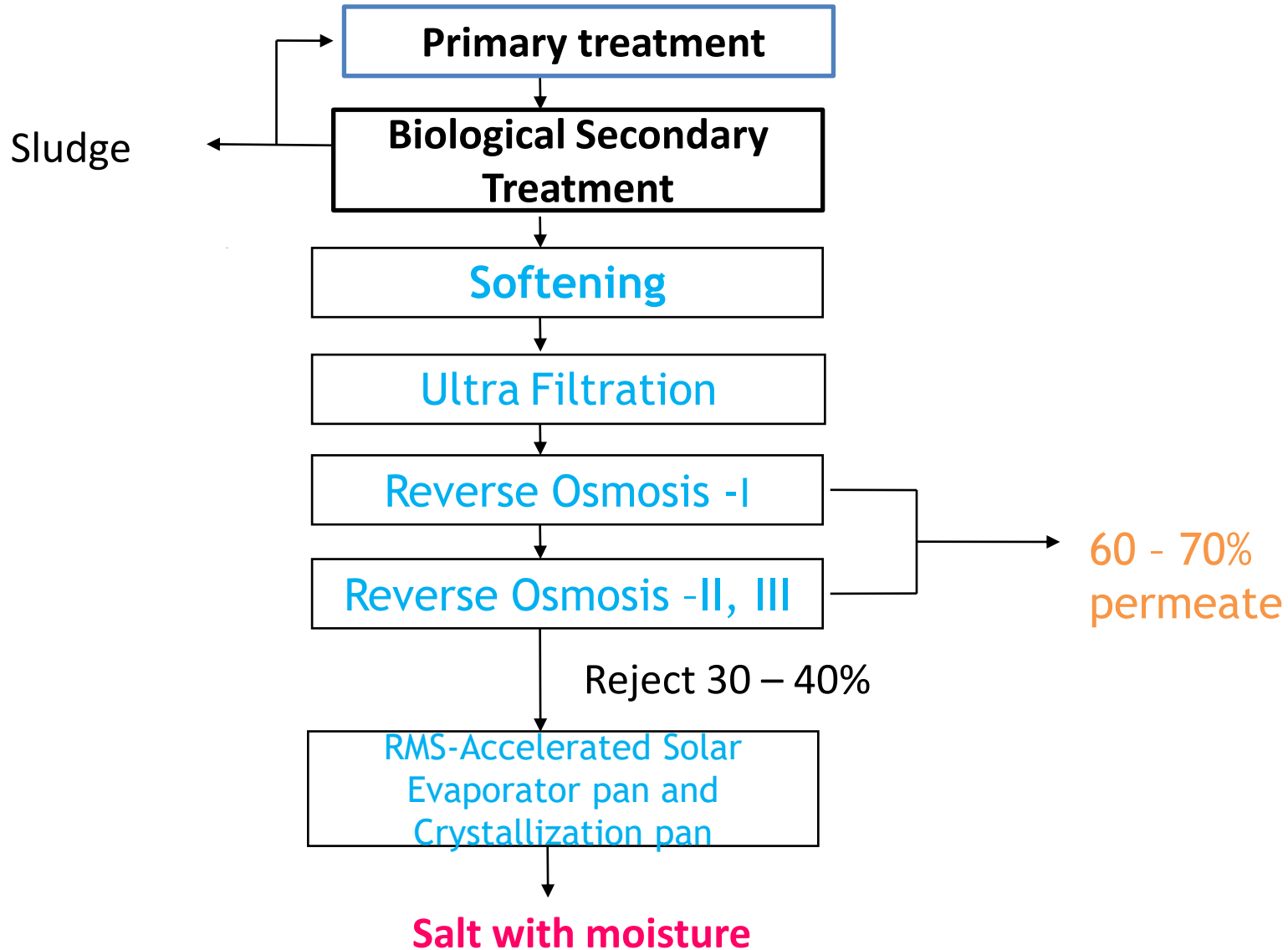
&

Reduce Fresh Water Abstraction

Typical Flow diagram ETP and ZLD System for tannery effluent



Typical Flow diagram ETP and ZLD System for tannery effluent



KHEIPL –TAD

ZLD–WWTP–3R (Recover, Reuse, Reduce)

**Membrane based Effluent
Recycling ZLD Plant.
Established with an
investment of ₹ 6 Crores.**

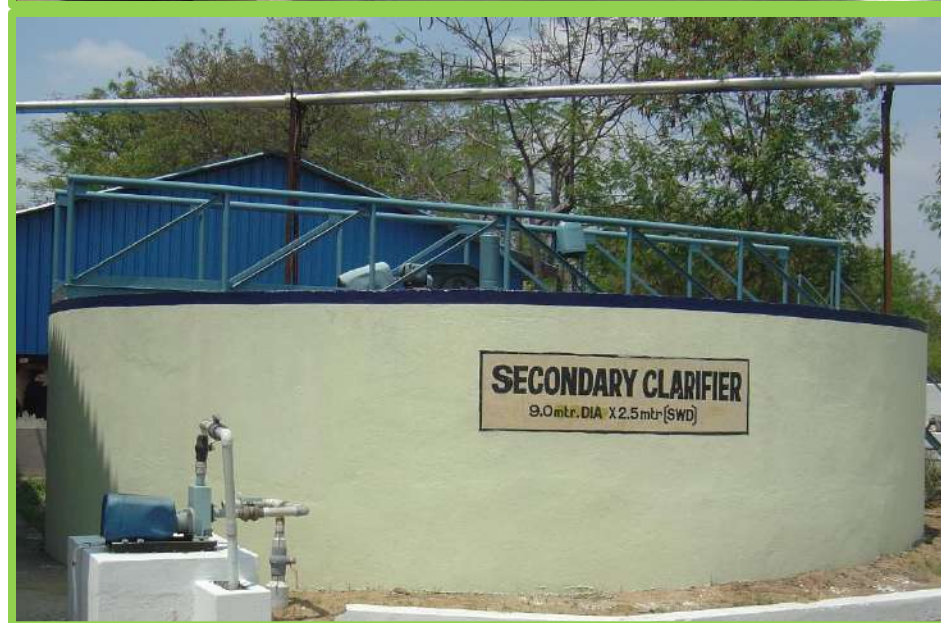
State of the art technologies.

**Cleaner water for
production process reuse
with very low TDS.**

**Largest plant of its kind for
Raw to Finish Processing
Tannery.**



K H Exports India Private Limited – Tannery ‘A’ Division WWTP – ZLD System



K H Exports India Private Limited – Tannery ‘A’ Division WWTP – ZLD System



K H Exports India Pvt. Ltd. – Tannery ‘A’ Division WWTP – ZLD System



KHEIPL -TAD
Cleaner & New
Technologies
ZLD SYSTEM

**3rd Stage RO
System installed at
an additional cost
of ₹ 30 Lakhs to
enhance recovery
of RO Permeate
from 80 to 85%**



K H Exports India Pvt. Ltd. – Tannery ‘A’ Division WWTP – ZLD System



K H Exports India Private Limited – Tannery ‘A’ Division Quality of Treated RO Permeate Water Sample Display

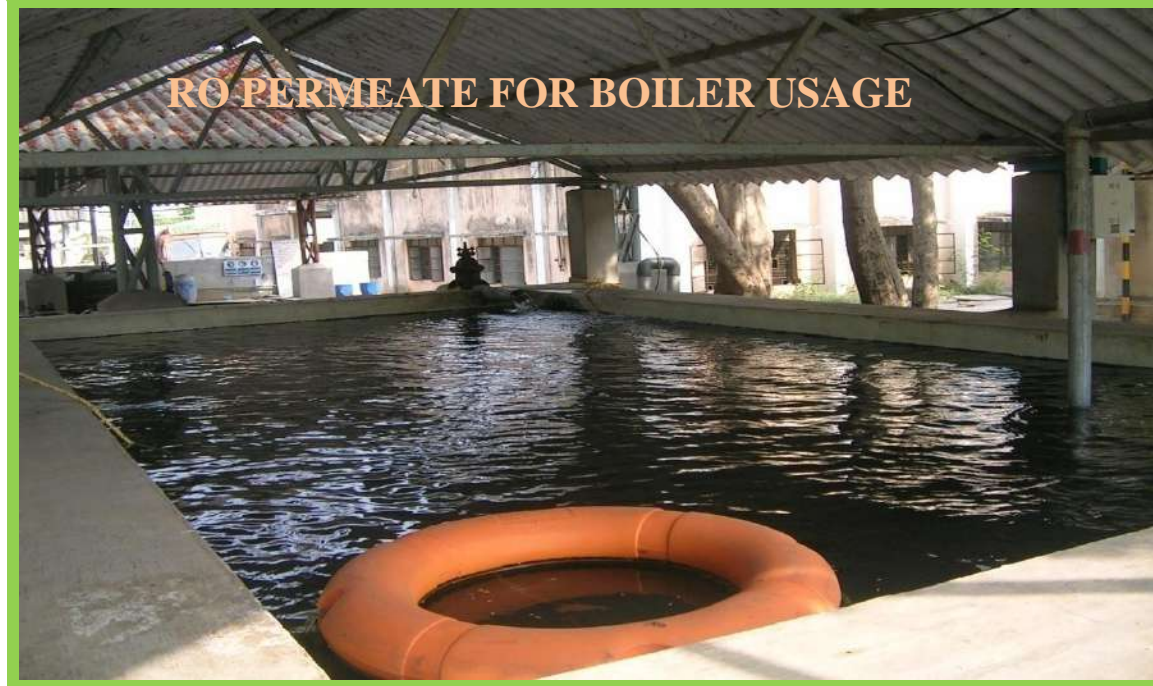
Total Dissolved Solids (TDS) - A Critical Parameter for WWT reduced through Membrane Technology from around 8,000ppm to 800ppm by meeting all TNPCB Regulatory Limits.

Recovered RO Permeate Water just equal to drinking water norms, fully reused for manufacturing process.



K H Exports India Pvt. Ltd.,
Tanner 'A' Division
Zero Liquid Discharge (ZLD)
by Re-use Treated Trade
Effluent

**Pumping of RO
Permeate Water
from RO Plant to
Storage Tank for
Process Reuse.
Collection of RO
Permeate Water
for Boiler usage.**



K H Exports India Private Limited – Tannery ‘A’ Division Segregated Waste Storage Facilities



Sludge Drying Beds (SDB)

Sludge from primary and secondary treatment Plants received , dried in the SDB and disposed to RNAITEC – CETP, SLF



Received salt packed in bags and stored in the yard

