



New Technologies for Water Purification

ION EXCHANGE (INDIA) LIMITED



SAFE DRINKING WATER- A CRITICAL ISSUE

- **Safe Drinking Water is a must for good hygiene and health**



- **Water is the elixir of life**

- **Water covers over 75 % of our body**

t Safe Drinking Water is getting scarce day by day.



OUR APPROACH

PLANNING FOR WATER SECURITY THROUGH ...

➔ TOTAL WATER MANAGEMENT

➔ TECHNOLOGY INNOVATIONS

➔ CONCEPT OF RECYCLING

➔ SERVICES

➔ TRAINING & DEVELOPEMENT



WATER CLASSIFICATION

SURFACE WATER

- t Rivers
- Lakes
- Reservoirs
- Municipal
- Sea

GROUND WATER

- Borewell
- Natural Spring

(Every source is contaminated ???)

IMPURITIES IN WATER

SUSPENDED SOLIDS

- **Turbidity**
- **Silt**
- **Colloids**
- **Organics**

DISSOLVED SOLIDS

- **Inorganics**
- **Organics**
- **Silica**

IMPURITIES IN WATER

DISSOLVED GASES

- CO₂**
- O₂**
- H₂S**
- NH₄**

MICRO-ORGANISMS

- Bacteria**
- Algae**
- Virus**
- Fungi**
- Cyst**

TYPES OF BOTTLED WATER



➔ **PACKAGED DRINKING WATER**

➔ **NATURAL MINERAL WATER**

MODES OF WATER TREATMENT

DOSING SYSTEMS

- ➡ Disinfection**
- ➡ Coagulation**
- ➡ pH correction**

SAND FILTERS

- ➡ Removes Suspended solids**
- ➡ Removes Turbidity in the water**

ACTIVATED CARBON FILTER

- ➡ Dechlorination**
- ➡ Deodourisation & Decolourisation**
- ➡ Removes low molecular weight organics**

MODES OF WATER TREATMENT

SOFTENER

- ☞ For pretreatment to RO systems**
- ☞ Removal of scale forming Calcium and Magnesium ions.**

MICRON FILTRATION

- ☞ Cartridge filters having rating in the 0.2 to 20 micron range**
- ☞ Reduces Suspended solids and Turbidity**
- ☞ Prefilter for RO membrane system**

MODES OF WATER TREATMENT

REVERSE OSMOSIS SYSTEM (RO)

- ➡ Rejects dissolved ions / salts.**
- ➡ Reduces the Total Dissolved Solids in water**

ULTRAFILTRATION

- ➡ Separates high molecular weight species**
- ➡ Reduces suspended solids, Turbidity, macromolecules by more than 99.8 %.**
- ➡ Removes Organics, Bacteria, Pyrogens by more than 4 LRV**
- ➡ Does not alter the natural composition or dissolved salts of water**

MODES OF WATER TREATMENT

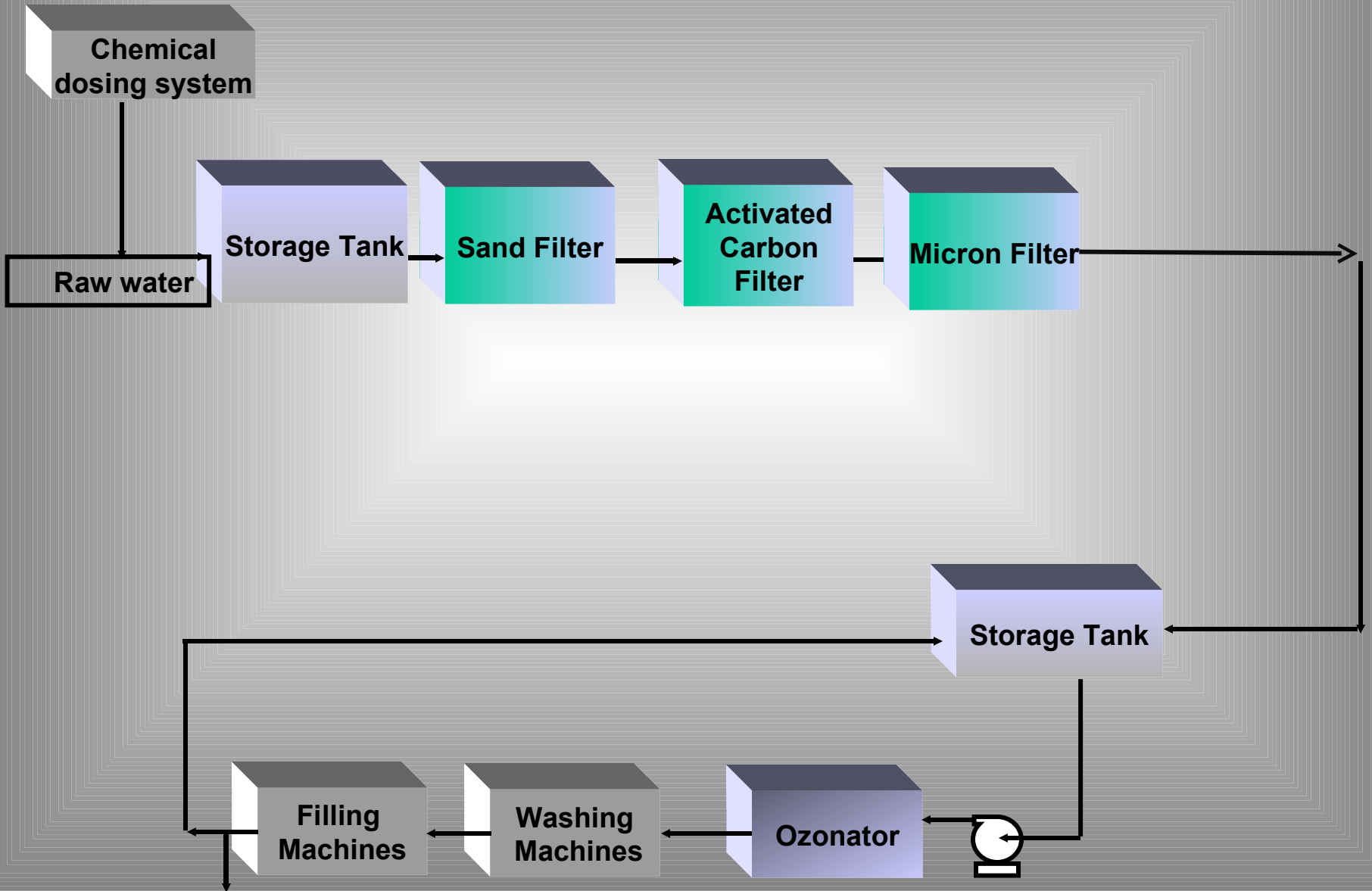
ULTRAVIOLET STERILISER

- ☞ UV light disinfects water by killing Bacteria, Moulds, Viruses, Yeasts etc.**

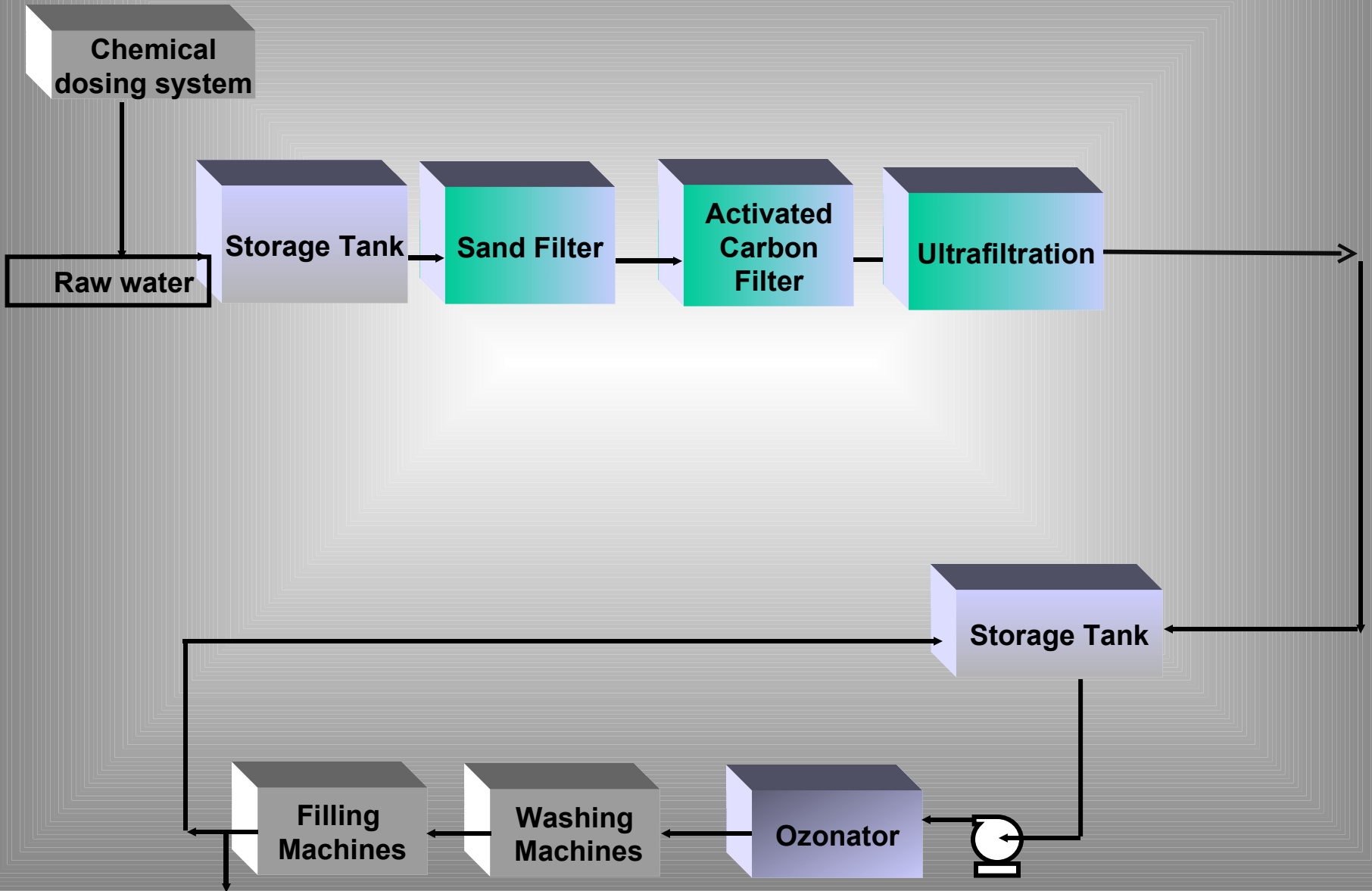
OZONATOR

- ☞ Ozone generated is used for disinfection of water**
- ☞ Increases the shelf life of bottled water**
- ☞ Provides residual disinfection effect in bottled water**

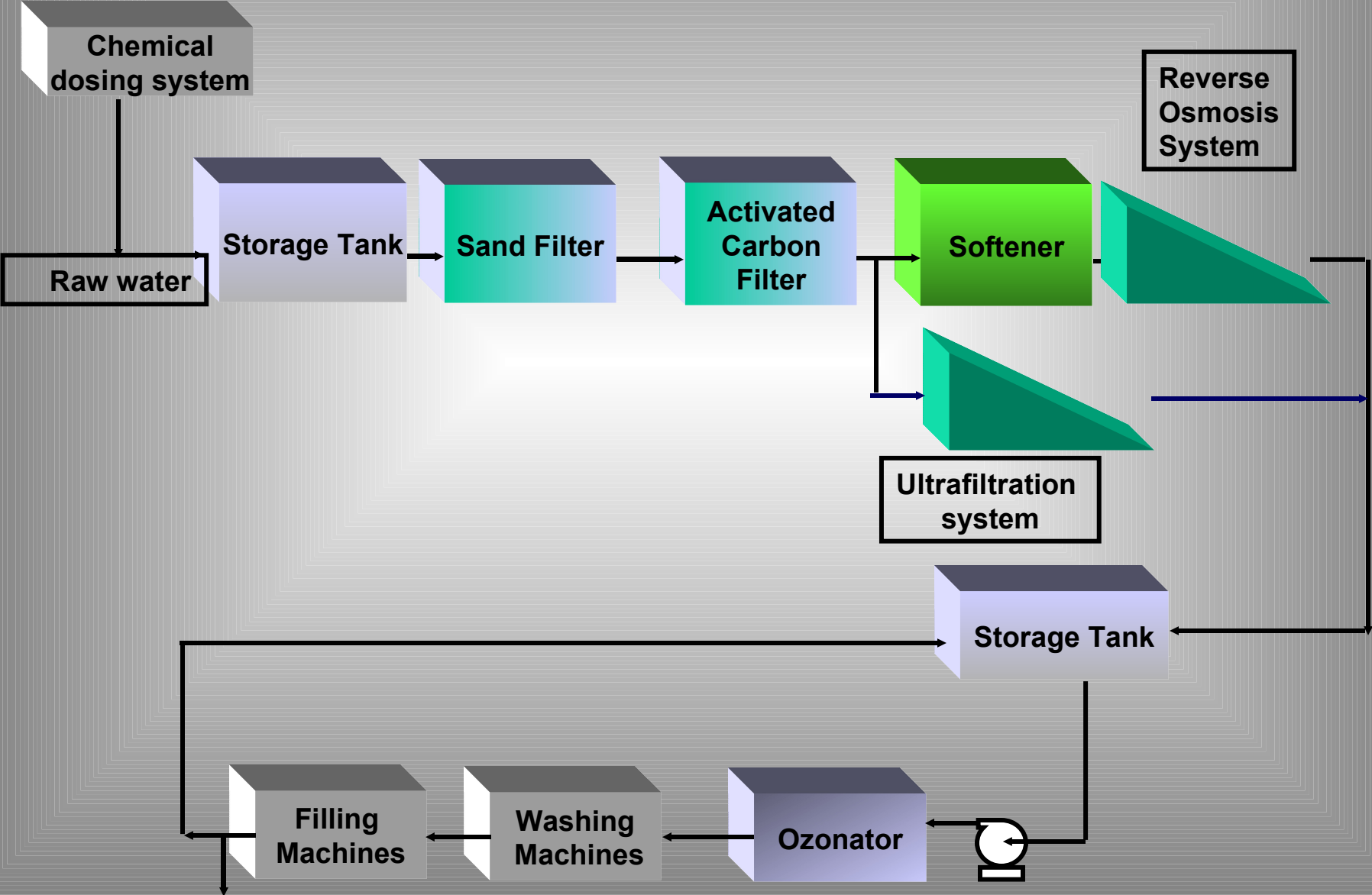
WATER TREATMENT SCHEME FOR NATURAL MINERAL WATER



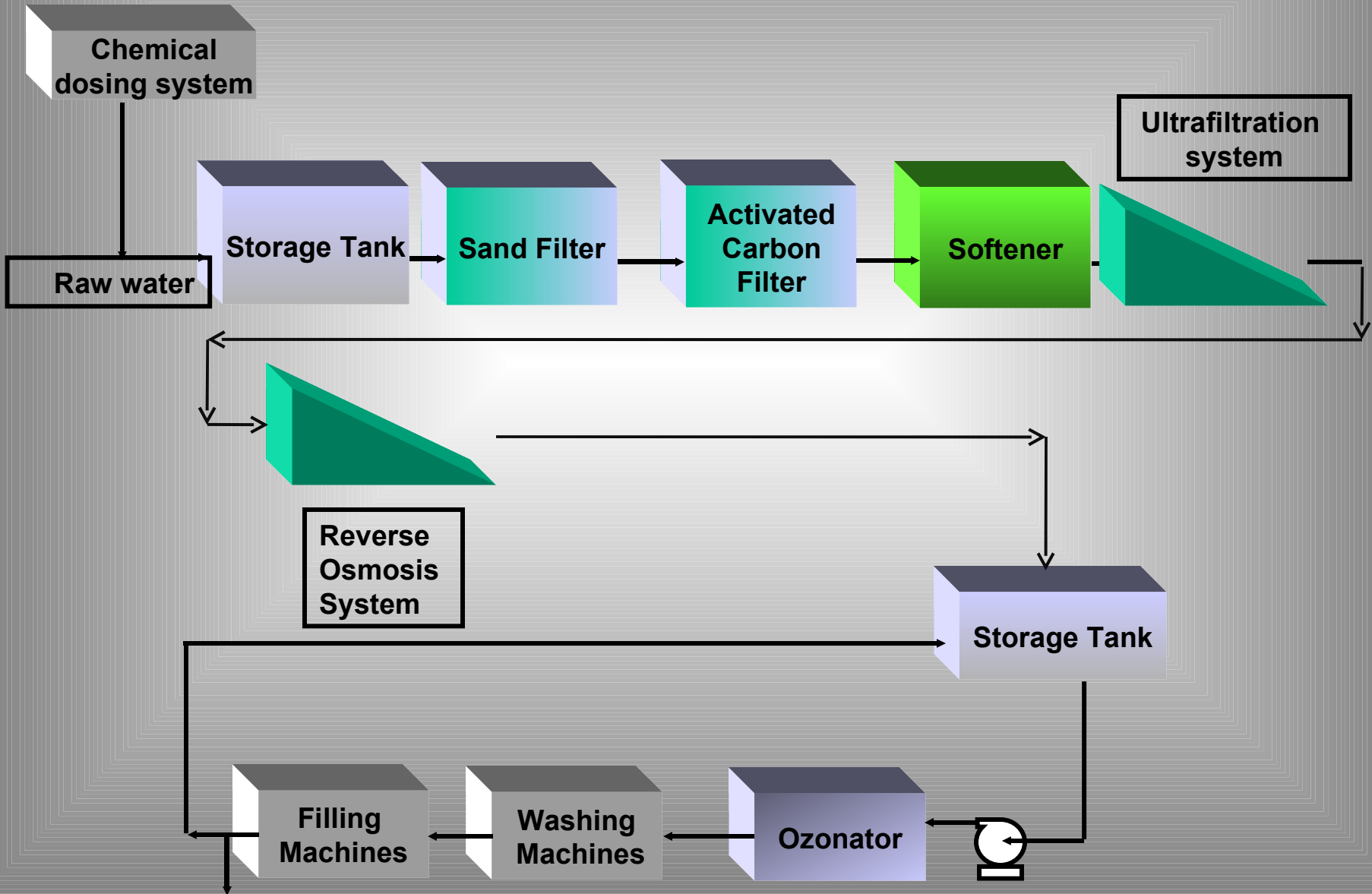
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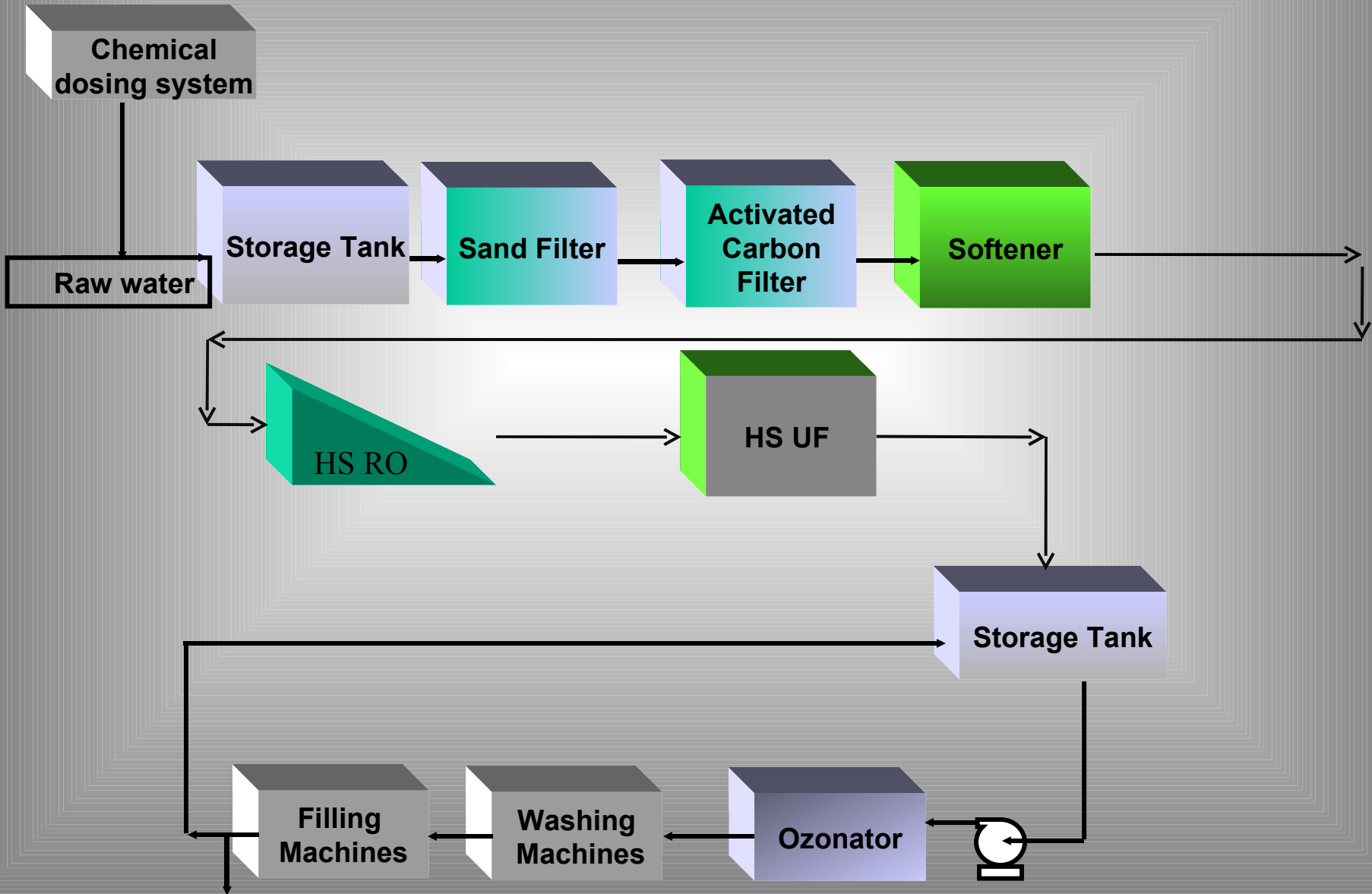
WATER TREATMENT SCHEME FOR PACKAGED BOTTLED WATER



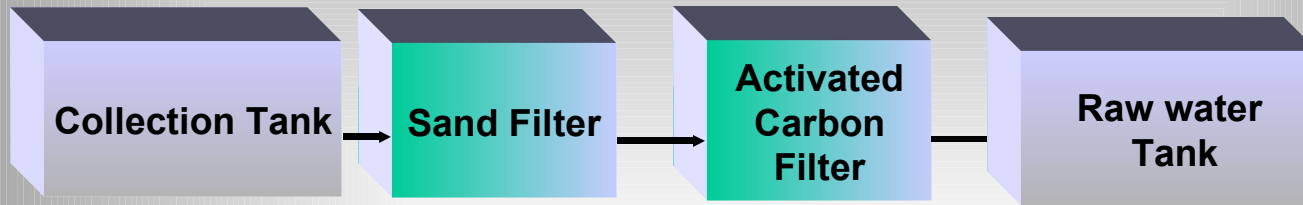
WATER TREATMENT SCHEME FOR PACKAGED BOTTLED WATER



WATER TREATMENT SCHEME FOR PACKAGED BOTTLED WATER



WATER RECLAMATION SYSTEM

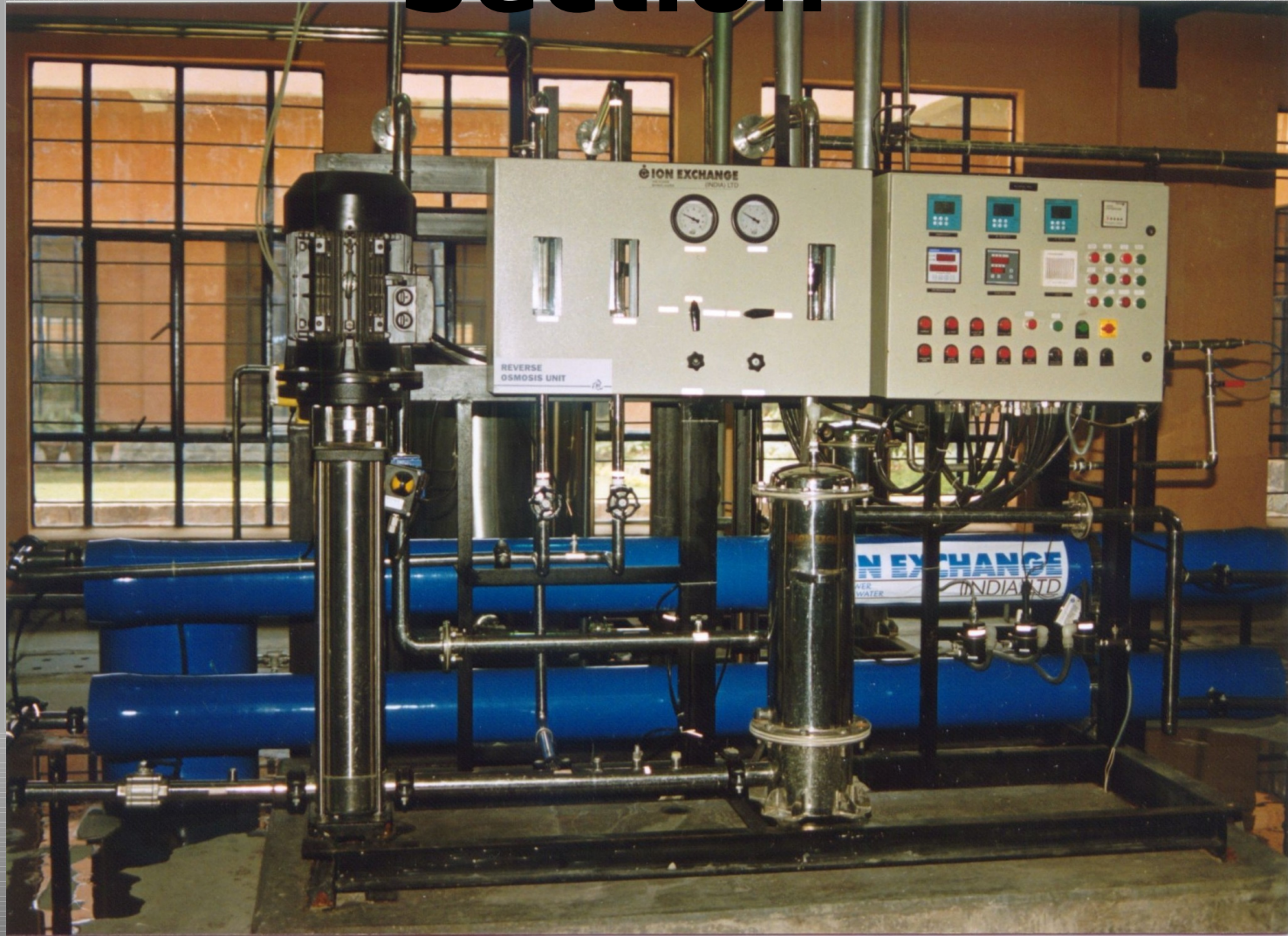


A Multi-stage Purification Process

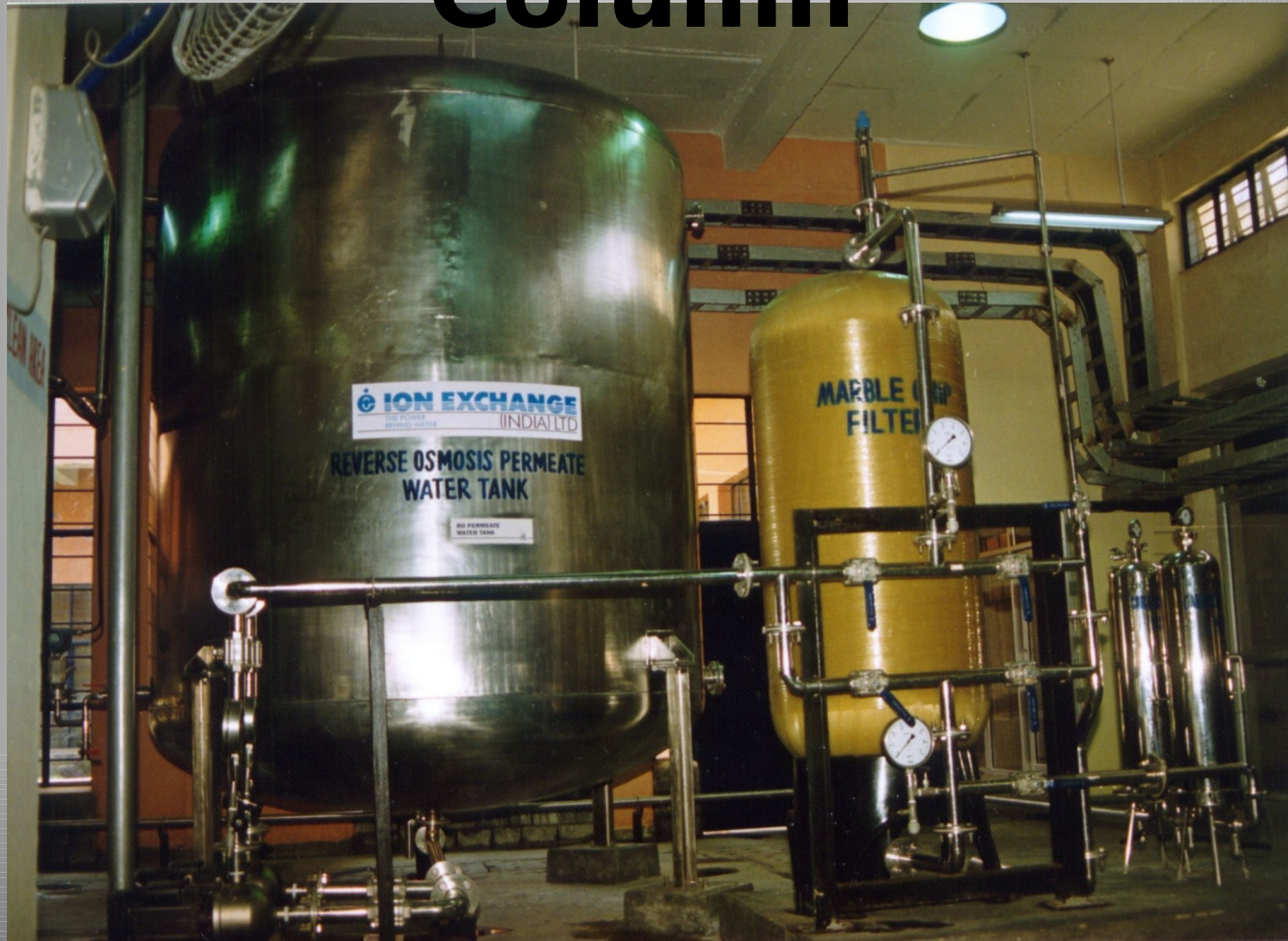
Ultra Filtration Section



Reverse Osmosis Section



Calcite Marble Media Column



UV Sterilisation



Ozonation



Blowing Machine



Bottle Filling Line



Bottle Packing Line



ION EXCHANGE (INDIA) LTD.

sets up
Indian Railways' First
Packaged Water Plant
for *Rail Neer*

Produces Highest Quality
Pesticide-free Water



**“We assure you highest quality
pesticide-free water”**

**Mr. Rajesh Sharma, MD, Ion
Exchange**



Raising a toast...





THE POWER
BEHIND WATER

(INDIA) LTD

T o t a l W a t e r M a n a g e m e n t

...providing safe drinking water to millions









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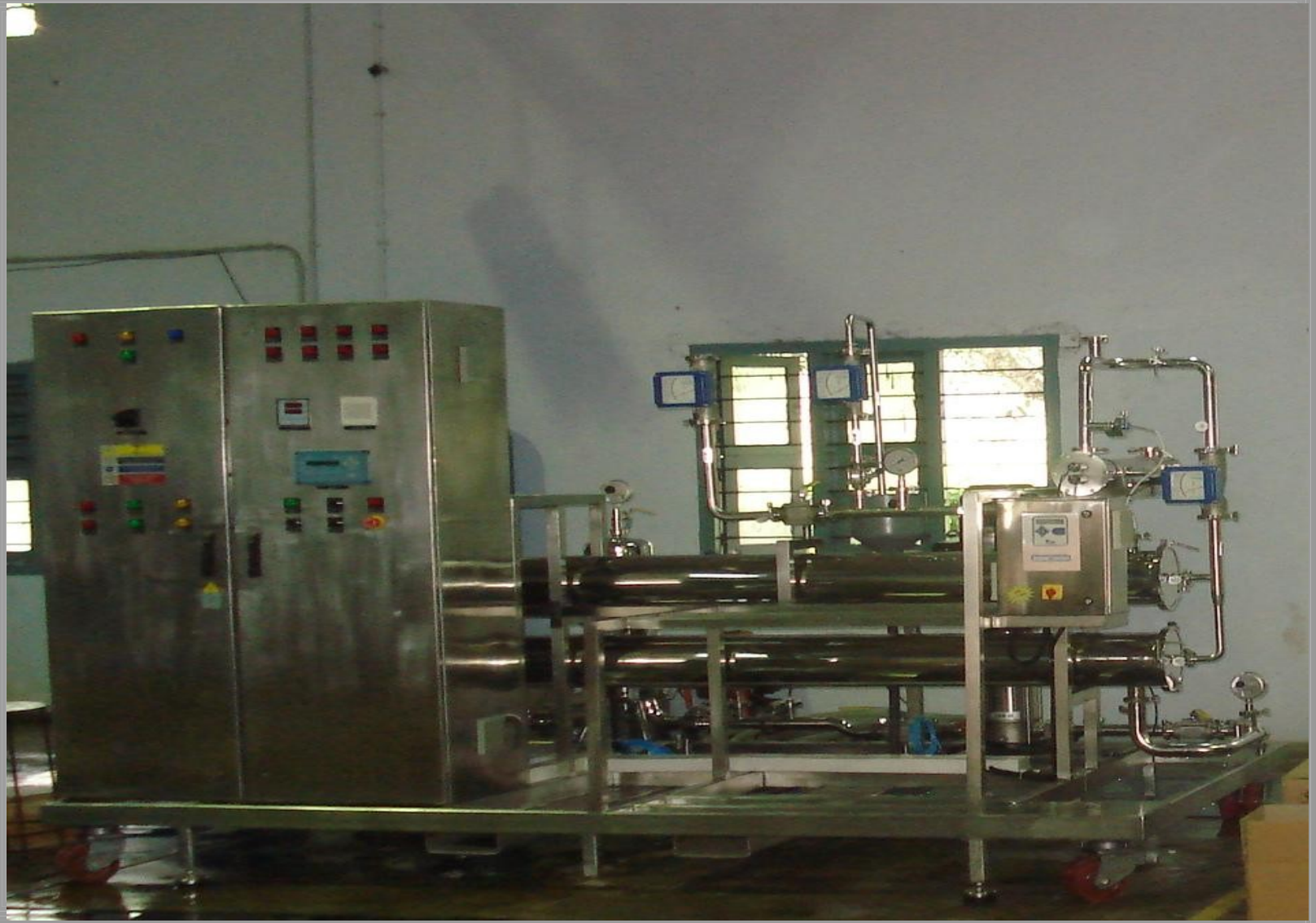
























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