is phosphate conditioning 3 Ca Son + 2 Na3 Pon -> Ca3(Pon) 2 +3Na3 Son in Colloidar conditioning + 10H 9Xil 2010 by adding agents like Kerosene, agar agar, gelatin , etc. + scale dismotion can be sumoved by

3. Sodium aluminate conditioning

NaA102 + 2H20 -> Al (OH)3 + NaOH

Al (OH)3 + (a SO4 -> (a (OH)3

4. Calgon conditioning [Na2[Na4 (PB)6].

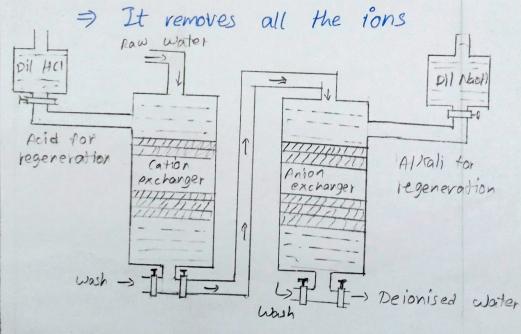
Caso4 + Na2[Na4 (PO3)6] ->

Na2[Ca2 (PO3)6] + 2Na2 SO4

ii External treatment

=> Removing salt => boiling.

a) Demineralization / ion exchange process



Resin XXXXXXXX

Cation exchange resin

- => COOH 1 SO3H
- => Represented as RH2

is Anion echange riesin

- => NH2, OH
- => Represented as R'(0H2)

i

\*

RH2:

•  $RH_2$  +  $CaCl_2$   $\rightarrow$  RCq + 2Hcl  $R(OH)_2$ :

· R'(OH)2 + 2HCl -> R'Cl + 2H2O

\*

Regineration:

j + ion

RCa + 2HCl -> Rl+2 + CaCl2

ib - ion

R'C(2) + NaOH -> R'(OH)2 + Naci