Funded under the Water and Innovation Action of the
7th Framework programme of RTD-D of the European Union

demEAUmed technological solutions

Plimmer

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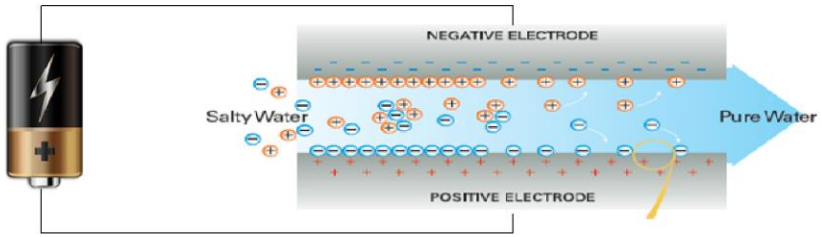
demEAUmed final conference
Barcelona, Spain
18th May 2017

Q: Plimmer CDI what is this?

- Is a technology for water desalination
- Alternate to RO technology with lot more advantages
- Can be used for drinking water to improve quality
- Glass/Dish washers
- Boiler rooms to reduce fuel usage (10%)
- Can be used for grey/waste water reuse in combination with other techs
- Nutrients removal/recovery

Q:How it works?

Plimmer CDI: Capacitive deionization is a technology able to remove salts and nutrients from a water stream using a low DC voltage (1,5V)



Salts are removed during a period of about 1 minute and after this are discharged in a small residual volume that is about 20% of the feed water and cycle restart

Q: Why should I install Plimmer CDI?

- Removes the widest spectrum of inorganic contaminants
- Lowest water wastage expecially compared to RO
- In drinking water applications some minerals can be retained while contaminants are removed
- Selectivity in ions removal contaminants removed better than healty salts
- For water reuse applications nutrients like NO3 NH4 P can be removed
- Possible nutrients reuse
- Increase water quality

One technology

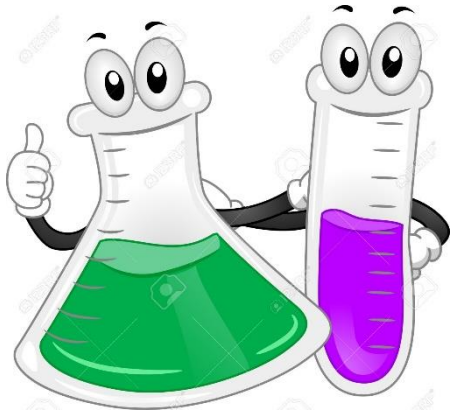
multiple salts removed

SALTS	METALS	OTHERS
• Total Dissolved Solids • Total Hardness • Calcium Carbonate • Magnesium Carbonate • Sodium Chloride • Phosphates • Sulphates • Chlorides • Nitrates • Fluoride ...	• Chrome • Iron • Arsenic • Nickel • Copper • Zinc • Cadmium • Mercury • Manganese • Lead • Vanadium	• Ammonia • Chromium 6 ...

Q: How much water will I recover for reuse?

CDI: High water recovery → 80%

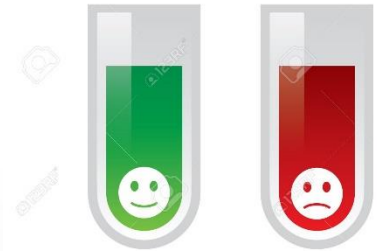
80%



20%

Competing tech's (RO): Low water recovery → 50% in best conditions

50%

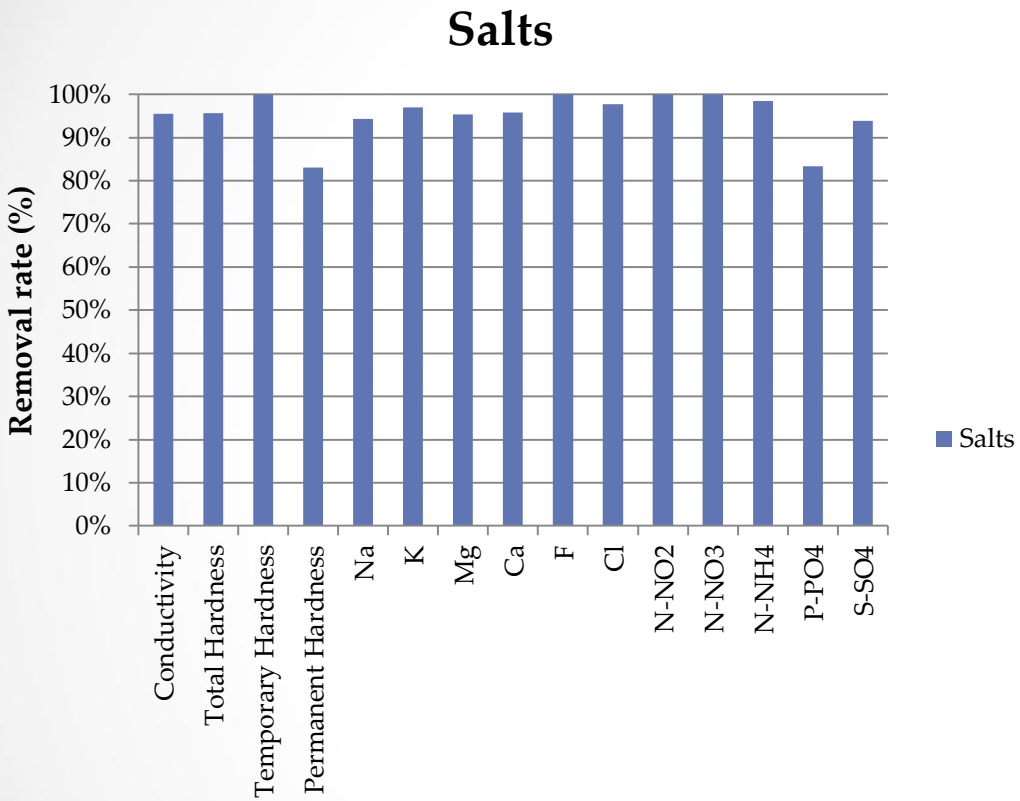


50%

Q: Will be more expensive than RO?

- Plimmer CDI is optimally priced for:
  - Drinking water
  - Glass/Dish washers
  - Boiler rooms
- Plimmer CDI in water reuse will become a low OPEX technology
- Plimmer CDI lower OPEX will lead to a much lower «cost of ownership»
- Plimmer CDI can become a strategical choice for Hotel/Resort in water scarce environments

Water reuse: one example of quality



- Grey water reuse
- Pretreatment technology was «Green Wall»
- Water quality is superior
- More advanced use than just toilet flushing
- Possible use is «Contact water»
- Example cloth washing
- Water quality similar to waterworks or better

Go and check the poster for more details!

Thank you for your attention

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This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No. 619116