

# A MECHANISM TO USE WASTE WATER FROM RO FILTER

Shivam Pandey<sup>1</sup>

<sup>1</sup> Department of Computer Science and Engineering, Chandigarh University, Punjab  
140413

## ABSTRACT

*On Earth, about 97% of the water is either excessively salty or dangerous to drink. Glaciers and ice caps are where an additional 2% is confined. To meet all of humanity's needs, such as those for food, shelter, manufacturing, community, and personal care, only 1% of that is available.*

*In this paper I will try to conserve the dirty water that is we are wasting in a small amount but when gathered it can be a big volume. I will use the RO filter waste water which generally comes out when the water is purified. Idea is to design a system in a way such that when the water full of impurity comes out from the Ro filter rather than wasting that water. We can think of reusing it in many forms like we can store the same water in a food grade plastic container. The waste RO water can be used to clean the sewage pipes at home or in the kitchen because the waste water coming out from RO filter is saline in nature. We can also use this water in many household activities like washing clothes, cleaning utensils and washing our car etc. We can not only use this in household work, we can try to purify it too in this way not only will water be saved from being finished but also as water is very less on earth, we can save it for our future generation also.*

**Keyword:** - Purified, Liter, Flat shaped, Pipeline, TDS

## 1. Introduction

We commonly refer to the water as filthy water and Majority It is squandered by us.

As a result the water is supplied by the Ro filter impurity pipeline and then flows into a channel where pollution occurs or is dumped then water is discarded.

And on average RO purifiers waste about 3 Liter of water for every 1 filtered water.

That means that only 25% of the water is cleaned while the remaining 75% of the water is lost. Not just one house but practically every house in the entire planet experiences this.

And we all know that only 1% of the water present on earth meets all of humanity, such as those for food, shelter, manufacturing, community, and personal care.

A single person drinks approx. 2 Liter of water in a single day so if it took an example of a small family then in a family around 8 to 10 Liter of water is needed in a single day for drinking purpose it means approx. 24 to 30 Detail of the water wasted by RO filter every day.

Therefore, if we think about saving that water instead of Squandering it and instead collecting it in a container about 24 Liter of water will be collected in a single day.

On a broad scale 500 households translate to 12000 Liter water everyday which is a staggering amount to consider. That water is used once more, our surroundings could undergo such significant alteration.

Study only focuses on that region and has created an apparatus for it.

Impure water which comes out from the Pipeline can be used in many ways but we had to firstly collect that water in a food grade plastic container which has the capacity to store around 40 to 50 Liter of water.

Can reduce the TDS of that collected water by adding lime and soda Ash into it

This lime and soda Ash can be easily found in a market also it cost very less

Process of adding lime soda Ash in water is known as Clark's process.

Clark's Process:- TDS of water can be removed by adding lime and soda Ash.

lime and soda Ash Precipitate carbonate Bicarbonate and sulphate of calcium and magnesium mainly responsible for hardness of water this result into low TDS of water.

Now the container will be connected to a Pipeline through which water is supplied to the needed area.

Use this water for washing clothes and also to wash our car and other vehicles. In this way a lot of fresh water will be saved.

More ever we can make that water Again drinkable by purifying it as follow

As the container will get full of water, we can pass this water to a small plastic container Which will set up a charge carbon electrode when water is in container then carbon electrode at sides of the opposite charged ions. Water With low iron or less salt remains and this water is now fit for drinking.

The cost of carbon electrode and lime soda Ash is very less (cost effective) Means that this apparatus is very useful and affordable to use in every household industry and everywhere in the world.

## 2. METHOD TO BUILD

1. We need to establish a flat shaped container Help of strong Food grade plastic having 2 mm thickness from outside boundary.
2. The holes will be connected with the pipe such that one hole is connected to aaro filter supply and other connected to the other small container which is having a charge electrode. The backside can be connected with the initial pipeline of the house from where water is supplied to the house where it's needed.
3. Set up the whole Apparatus near Ro Filter.

## 3. IMAGE OF STEP OF CONSTRUCTIONS

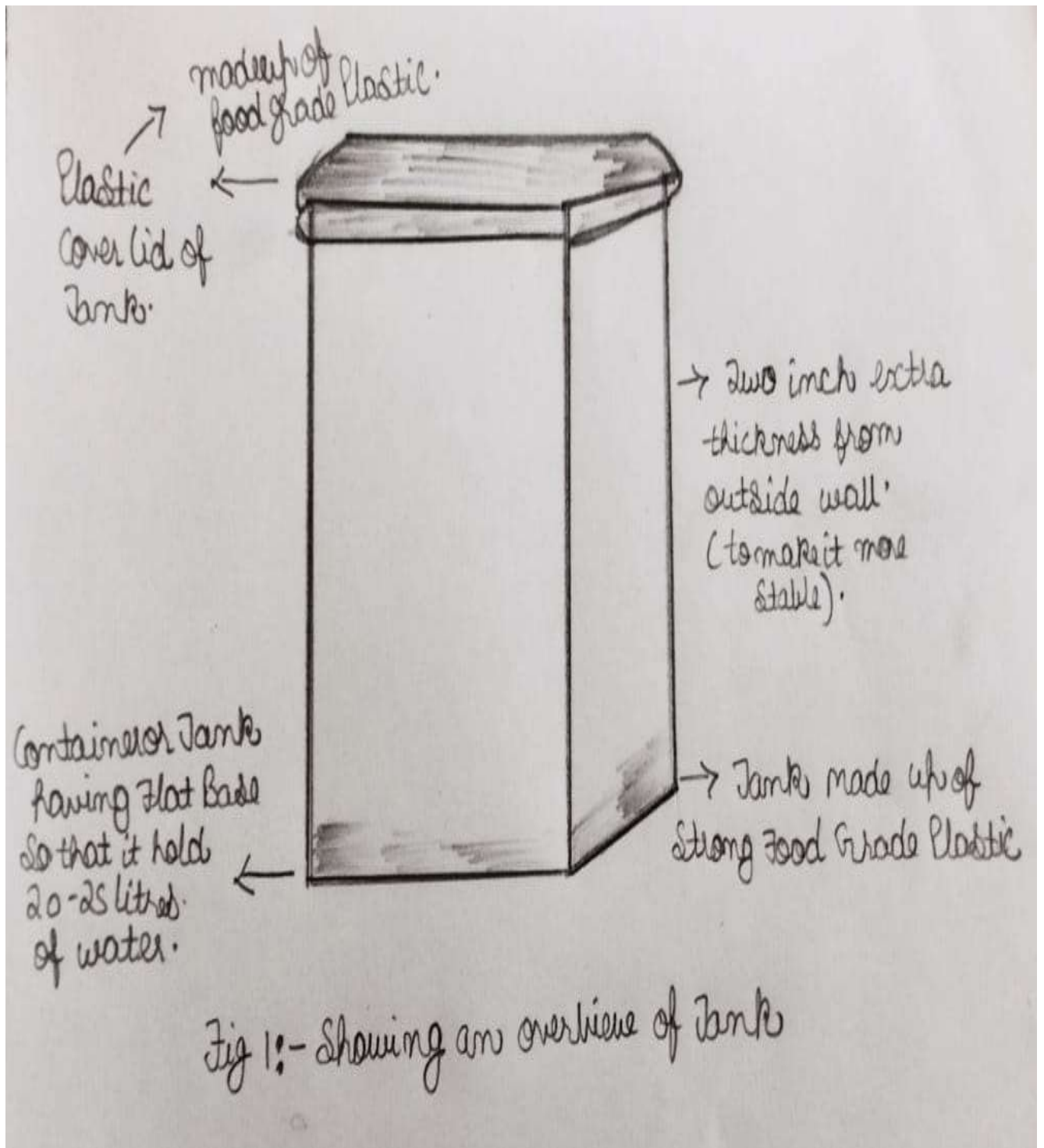


FIGURE: - 1

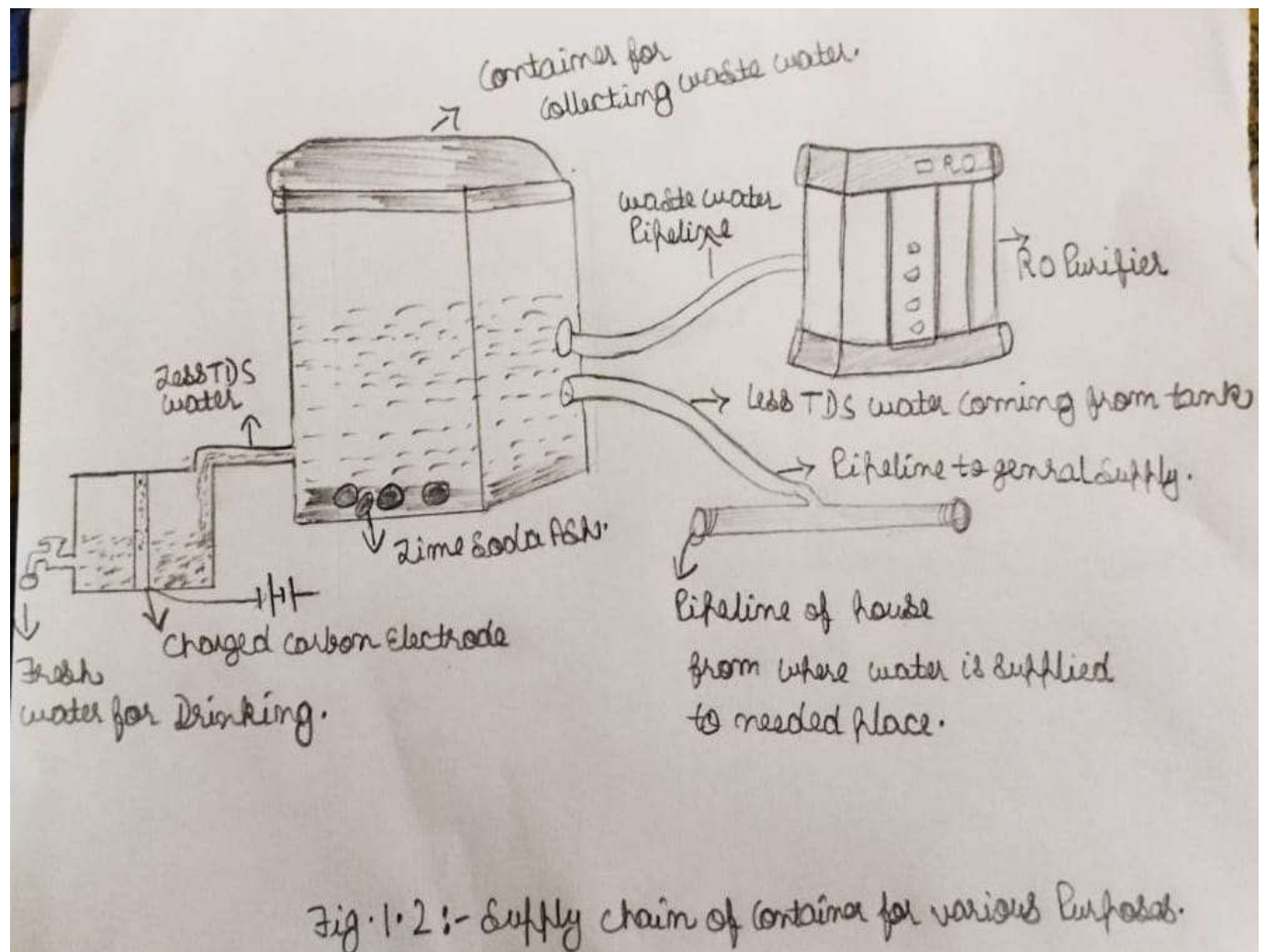


FIGURE: - 1.2

#### 4.RESULT

Device or Technology was created based on daily needs and is suitable for use in any home this will not only conserve water for the benefits of future generation but it can also be used to recycle water and cut down on water loss.

#### 5.DISCUSSION

The primary thesis of the discussion is that different water conservation strategies should all be implemented if we are to safeguard the environment and future generations. Think big when you act.

Modern civilization's primary requirement is "big," and even the the requirements of today's world.

## 6. CONCLUSION

Besides offering impractical suggestions, the study concentrates on water conservation techniques and explores the question of whether tainted water that has been boiled can still be used. why can't unclean water and with be purified this idea, the study has attempted to present an a device that can be used extensively to conserve water throughout the entire world, and it also stands for total process for engaging the equipment with its images.

## 7. REFERENCES

- [1]. Research on how to link Pipeline for different supplies.
- [2]. Research on how to reuse RO Filter waste water.
- [3]. Research on Clark's Law
- [4]. Research on ION Electro sorption.

## BIOGRAPHY



**SHIVAM PANDEY**

**Student OF B.ECSE(AML) CHANDIGARH UNIVERSITY.**