

2003 TAIWAN INTERNATIONAL SCIENCE FAIR

CATEGORY : Physics

PROJECT TITLE : In The Name Of Allah

AWARD : First Award

SCHOOL : Namera Secondary School

FINALISTS : Omar sulaim Almotairi

COUNTRY : Saudi Arabia

In The Name Of Allah.

Introduction:

All Praise be to Allah and Pray and Peace be upon to the Prophet of Allah (Mohammad peace be upon Him) .

Offering:

I present this search for every person participates in saving water; hoping this search assisting them to do the best.

Apparatus Concept.

The most important thing for making this apparatus is to reserve and save water consumption as the resources of water in Saudi Arabia is (Superficial) not groundwater, which comes as a result of the rainfall and floods.

On the other hand, the groundwater is available in much quantity only in the shallow high deep grounds. These resources are invested and in the addition for the Seawater Refinery as to meet the needs of water for the Human being Purposes (Drinking Water) and to be used also in the industrial and agricultural fields.

Recently, the sewerage water was invested that it was used again after it has been refined and processed chemically to be used again in the industrial and irrigating.

This shallow groundwater is available in the wild wither like the wither of Saudi Arabia, which can be depended on in future.

These resources are consumed highly that is because the great consumption of water which exceed the feeding quantity which are usually gathered from the rainfall, valleys and so on, through the ground layers.

Now, in Saudi Arabia all requirements of water in the main cities are covered through Refined Seawater operated by 25 Refinery station located on 15 location on the shore of the Red Sea and The Shore of The Arab Gulf.

This is to supply most of the towns in the Kingdom with water. However the supplying the other small towns in the Kingdom comes through the groundwater.

According to this importance of water we should pay high care for this boon. And all spendthrift should be controlled strictly.

Numerical Language shows us that Saudi people consumption of water is about 230 litter per a day, whereas Rainfalls in Saudi Arabia are rare , and there is no other resources for water such as rivers. However, French consumes 150 liter per a day and in Holland 104 liter of water is consumed through a day individually.

This is not acceptable compared to Saudi Arabia.

Are Teachers and students know that the country offer a price (10) Halalah⁽¹⁾ for a category of (50)m³ and (15) Halalah for the second category of (50) m³ which means the citizenship pay 12.5 SR⁽²⁾ monthly for each 100 m³. However, this is costing the government (Refining, pumping and transportation for each cubic meter) reaches up to 4 SR per/ m³

Realy, these high efforts and the great amount of fund deserved our thanks to those who works loyalty to serve their Homeland.

Saudi Arabia is considered as the leader in the world in the field of producing refinery water that its production reaches up to 5,253,208 cubic meter everyday.

The following Table shows the requirement volume of water for the purpose (drinking , industry , and agriculture)

Year	Industrial Purpose	Agricultural purpose	Total
1400 A.H ⁽³⁾	510	1850	2360
1405 A.H	1300	7400	8700
1410 A.H	1700	14600	16300
1420 A.H	2765	15000	17765
1445 A.H	7900	16300	24200

Prediction for requirement of water is to 1445 A.H assenting 2025 AD
Source: Compiled by ESCWA (Economic and social Commission for
Western (Asia) selected from country Reports and international sources,
1994 and 1995.

The above table is annually requirement of water in Saudi Arabia Kingdom by Millions of Cubic Meters.

After we have a look on the requirements and needs of water in Saudi Arabia we note that a great consumption of water in Saudi Arabia is happened.

Which was the leads to think deeply about this important matter and to think in a special way to save wasting water and to rescue the nature of Saudi Arabia as much as I can , and I thank Allah that He Guide me to invent this apparatus which I hope to serve my self at first and then my country and all the world wide with willing of Allah.

Apparatus Field.

The apparatus relates with physics field .

⌚ The factors which assist to appear.

My Family encouragement, which helped me so much and pushed me to the successes.

So I offer my great deep thanks alal members of my family.

- ⌚ The Scientific Club in the School and my teacher / Abdul-Muhsen Al-Howeai , to him I offer my best regards and a lot of thanks.

Apparatus Components:

- ⌚ Some Wooden Parts.
- ⌚ Small Water Tank.
- ⌚ Some Plastic Tubes.
- ⌚ Tap.
- ⌚ Battery.
- ⌚ Zipper apparatus for tap closing.
- ⌚ Small buoy.
- ⌚ Electrical Wires.

⌚ Steps of Improving The Apparatus:

The Idea begins when I have seen one of the taps in my home leaks water , then I thought to solve this problem, then I begin to improve this apparatus to prevent water leaking as possible as I can.

⌚ Working Style of the Apparatus:

The tank should be filled with water through the upper whole of the tank. Then water flows to buoy of the tank which is surrounded by metal wires connected to an electrical circuit, which pushed up by the affect of water, then this buoy touches the wires which they are fixed up to connect the

circuit with power which runs the bill giving us alarm voice and to operate the Zipper apparatus which close the tap .

Apparatus Name:

Water Consumption Saving

⌚ **The Basic Aim Of This Apparatus:**

⌚ Saving water consumption , that it has great value in our life.

Realized Successes:

This search and offering this new invention get The great prize in (Scientist of Future Competition) which is consisting in A journey to the Space Camp ,in Azhar, in Turkey .

Conclusion:

At the end of this search I offer all my thanks for every person assisted me to offer this search.

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- (1) Halalah is a unit of Saudi currency Rial (1 Saudi Rial = 100 Halalah)
 - (2) Means : Saudi Rials
 - (3) Abbreviation for After Hijra (Calender of Muslims Countries which begins to be calculated after Hijra. (Departure of our Prophet Mohammed peace be upon Him from Makkah to Maddina)

評語

探討研究節水裝置，實用而考慮周到。