

# **2008 TAIWAN INTERNATIONAL SCIENCE FAIR**

**CATEGORY : Environmental Science**

**PROJECT : Electronic Lrrigating Machine**

**AWARDS : Environmental Science Third Award**

**SCHOOL : Abha Secondary School**

**FINALISTS : Nizar Turki Mohammed AL-shehry**

**COUNTRY : Saudi Arabia**

# ABSTRACT OF EXHIBIT

## TAIWAN INTERNATIONAL SCIENCE FAIR

CATEGORY: Environmental Science

TITLE: **Electronic Irrigating Machine**

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### **The purpose of research:**

Lies the importance of research in rationalizing the consumption of water during the irrigation of gardens, farms and green spaces.

Where the world suffers from the problem of water scarcity, especially groundwater was the slogan of World Water Day in 2007 ((water scarcity)), and therefore we find through studies and scientific research that the world is suffering from a marked decrease in the water up to 30% and thus to drought.

The one of the reports issued by the United Nations Environment Programme, that more than half the world's population will live during the next thirty years until in 2032,

In areas suffering from water shortages, and West Asia, including the Arabian peninsula will be more areas suffering from water shortages, are expected to live about 90% of the population in areas suffering from water shortages in 2032.

### **Steps of scientific research:**

**Theme:** the rationalization of water consumption in irrigation

**How can rationalize water consumption and maintenance?**

**How to benefit from raw materials to the environment be friends of the environment and water?**

**How to maintain in our hemisphere is suffering from the problems of pollution?**

R: field environment

**Compile information:**

Started to develop the idea of working model in detail (scientific deliberate scheme) of the parts used in the rationalization process model and then work on the ground.

**Forming hypotheses, research and analysis of information:**

Assume that the flow of water through the faucet immediately for a period of one minute quantity of 2 liters permission when using pregled control the flow of water and a minute amount of water will be 0.2 liter. Suppose that the system used in the rationalization process is linked with the timing of rush hour drops of water every minute and measuring the quantity flowing from the pipeline, we find it  $2 / 10$  from the amount of water flowing from the tap directly.

**Procedures used:**

Been working model ready by using the following **tools:**

Ban small-sized water

Basin water model using plastic-coated shell and clay.

Wall hours with wire sensitive prove on the basis of hours rolled aluminium conductor of electricity affected debates clock

Plastic trees.

Electricity wires - the context of an electric effort to 220 volts.

**The idea of working model:**

Labour deliver electric power 220 volts.

Scorpion am touching on the sensitive installed base pm (aluminium foil) relates to the electric dynamo worked on the flow of water to the delicate moment senses only wait until touching once again to work regularly.

**Conclusion:**

Conclude that the rationalization of water consumption by 90% during irrigate parks and green spaces and farms.

**Perception of the future work:**

Research can be developed so that rationalization for more than a minute using the control and distance.

## 評語

本研究是設計一套可以調配供水之機制，以減少灌溉用水之量達九成，效果卓著。