

**Special Article:****TOWERED SOLAR DESALINATION PLANT**  
(An alternative source of water)**Akhter Iqbal Zuberi\***  
**Hira Zuberi\*\*****ABSTRACT:**

*Water is the most essential commodity for the survival of life. The Consumption of water by human population is increasing much faster than the population itself. On the other hand, the fresh water resources are rapidly becoming polluted, and scarce to meet the increasing demand. According to an estimate by 2025, two-thirds of the World will be living under a condition of water scarcity.*

*To cope up with water scarcity, non-solar desalination plants as an alternative source of water, are being installed throughout the World. These methods, depend upon the fossil fuel for processing water, are energy-intensive and unaffordable. While the conventional Solar Desalination Plant is comparatively cheaper method and does not depend upon the fossil fuel energy while its production capacity is very low. However, the Towered Solar Desalination Plant is the solution that keeps the cost of cleanest water extremely lower and is highly productive plant.*

**INTRODUCTION**

The conventional solar desalination plants are horizontally spread on ground consuming space produces only 4 to 6 liters water per square meter per day. First major solar plant of the capacity 6000 gallons per day was built in Chile in 1872, this technique is being used more or less in its original form till now all over the world. In 1995, the scientists of Kiel University of Germany succeeded in obtaining 20 liters from 4 square meter plant.

The conventional solar desalination plants developed in different areas of the country. The largest one of the capacity of 6,000 gallons per day covering an area of 2 acre set up at Gawadar, to meet the requirement of Pakistan Navy, developed by the Solar Energy Research Center of PCSIR, Hyderabad.

Towered Solar Desalination Plant invented by one of the co-author of this paper Akhter Iqbal Zuberi, works on the natural process of water cycle- evaporation - condensation. It is a towered structure made from locally available materials. It breaks the production limitation of previous technology by producing 40 liters of water on one square meter area per day.

It is an economical source of water as all the energy requirements are met from solar energy; furthermore there is no need of filtration, purification or of adding any chemical throughout the process. This technology curtails the expenses which are necessary for energy consumptive non-solar desalination plants. It does not depend on consumables as in other technologies. Hence from its low installation investment and with very little running cost it is the cheapest source of water for the water deficient countries.

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feelings of materialistic race in the society, man falls prey to pride and pomp; in the pursuit of such accumulation, he employs fowl and fair means and surpasses all the bounds of justice and ethics. Eventually, it leads to ultimate downfall and decay of the society.

### **CONCLUSION:**

All ancient or modern religions of world like Buddhism, Zoroastrianism, Judaism, Christianity, Jainism or Islam emphasize and endeavour for the uplift of highest moral and ethical values to be instilled in human being to procure discipline and good will in global perspective. Some of the religions strictly command for proper observance and submission to the laws and cannons whereas the other religions do not require strict allegiance so far the code or laws are concerned yet they nourish and treat human emotions and direct them for the general good of the society. Overall, all religions aim at moral and ethical uplift of man, to instill positivity in him and imbue the spirit of sacrifice, equality, affection, brotherhood and justice in mankind.

Thus, all these facts testify that all religions, with some differences of pattern, propagate the message of love, equality, brotherhood, justice and equity in the age of materialistic-accumulation, race and greed-ridden epoch where individual profits and benefit overwhelm collective cause and general welfare of mankind.

### **FINDINGS**

The thorough study of religion and human history reveals that religion is an additional blessing and power bestowed upon man that serves as a natural force to direct the cognitive self-will and intellectual power of man to the right direction. One cannot deny the fact that the fountainhead of all ethical and moral values of present time is none other but religion.

The history of the world bears testimony that the religious teachings promote peace, love, brotherhood, equality, justice and curb wars, oppression of all sorts, exploitation, selfishness and barbarism.

Whenever, man assumes the entity of a callous barbarian and exercises his natural power and potential to shed blood and commit injustice and oppression, the religion steps forward to enthuse and inspire man with the noblest notion of love, peace, justice, brotherhood and equality. Thus, the course of collective goodness and selfless righteousness get saved from being derailed and man in particular and humanity in general march towards the path of truth, progress and prosperity.

As bodily desires invoke negative feelings like jealousy, anger, selfishness, exploitation; whereas, the religion endeavours to curb these negative feelings and promotes love, tolerance, justice, brotherhood, sympathy, sacrifice, equity and ethical values, hence religious teachings primarily emphasize human rights and service to mankind.

what mostly the kings or emperors of the powerful empires often did. He wore simple clothes, ate simple food and preferred simplicity and frugality in other affairs of life as well. Hazrat Ayesha narrated that the bed of the Holy Prophet was made of leather, and a mat made out of the leaves of palm lay spread onto it.<sup>37</sup>

When one of the wives of the Holy Prophet, Hazrat Hifiza was asked about the bed of the Holy Prophet, she replied that it was made of simple wool and was coarse and hard. Holy Prophet slept on it by folding it into two. Once she folded it four times to make it more comfortable, to the next morning the Holy Prophet enquired from her what kind of bed she had set for him. She replied the bed had been the same but she had just folded it four-fold to make it more comfortable. The Holy Prophet ordered her to bring it to its previous state, because the comfortable bed constrained him for rising to Tahjad Prayers (offered after mid night).<sup>38</sup>

The above cited statements authenticate that the Holy Prophet did not sleep/recline on soft or comfortable bed, as these enhance to intensity and duration of sleep, thus one fails to worship one's Lord. Though the Holy Prophet was the quintessence of humanity and paragon of virtue, one cannot expect or associate such failure with him, but he set this example for his followers and rest of humanity to track the path of truth.

#### **10. Avoidance from Wearing Jewelry made of Gold or Silver**

The tenth and last commandment of Buddha for Nirvana is that a Bhikshu would refrain from wearing/using gold and silver ornaments. It is also a source of detachment from materialistic world. It has been generally observed that greed and avarice of possessing silver and gold ensue quarrels and disputes in the society. Likewise, Islam also forbids use of the crockery/vessels made of gold, especially one used for dining purpose. The Sahih Bukhari includes one tradition: Narrated Hudhaifa: The Prophet (S.A.W.S) forbade us to drink out of gold and silver vessels or eat in it and also forbade the wearing of silk.<sup>39</sup>

However, Islam allows women to wear the ornaments made of gold and silver but man is forbidden to wear ornaments made of such metals.

The Holy Prophet said that these both metals (their use for the sake of ornaments) are unlawful for male believers/followers; whereas, woman can use (silver and gold) for the sake of ornaments or jewelry.<sup>40</sup>

In the light of above tradition all Islamic jurists unanimously agree that: The use of gold and silver for sake of beautification is unlawful for male Muslims whereas female Muslims can use it.<sup>41</sup>

Islam has strongly forbidden the use of dining crockery/vessels made of gold or silver because it promotes affectation, vanities and pomp and show; moreover, it is the sign of profligacy, lavishness and extravagance. Thus, it invokes the

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