Polymer Solar Heater

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The project consisted in the design and creation of a solar water heater to basis of polymers, taking advantage of the urban and rural solid waste generated in the community of Texmelucan. The polymers used were PET, PVC, LDPE and polycarbonate. The prototype was built considering the physical principles of a conventional solar heater, for to efficiently take advantage of solar energy and to optimize the use of the plastic waste. There was the temperature of the water that entered and exited through the heater, at intervals of 5 minutes, 10 minutes and 1 hour. These records were made on cloudy days, sunny, and at different times of the day (morning, half day and evening). The results showed that water can reach temperatures of maximum 105.8 degrees Fahrenheit, when using the solar heater of the polymer, this temperature is suitable for the bathroom with shower. It was therefore concluded that the polymer Solar Heater is a viable option for reuse the waste that are generated in urban and rural communities, in addition to the solar energy is used efficiently and reduces the use of gas.

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