

Solar collector mirror

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Solar Collector Mirror Metal that is the easiest to bend and has the highest reflective ability is freshly deposited silver (Emsley, 2001, p. 394). A typical flat plate collector is essentially a metal box that has a plastic cover or glass on top whereas the bottom is made up of a dark-colored absorber plate. To minimize heat loss, the collector's bottom and sides are mostly insulated (flasolar. com, n. d.).

Concentrators can be made with parabolic trough design to reflect the sun's energy and concentrate it over a single collector pipe of copper that is positioned at focus (Plhak, 2011). Conduction with copper heats the water passing through the pipe.

Mirror is bent by heating it. Attempting to bend mirror at too low heating would cause it to break whereas too much heating makes mirror melt and disfigure rather than being bent. Before, heating, the mirror is polished and cleaned good enough to make any dust particle invisible to the naked eye. After the mirror is cleaned, it is painted with a mix of detergent, clay, and calcium carbonate to prevent it sticking with the steel bracket when it gets hot. Exciting the silica molecules can take up to three hours before the mirror starts to bend when placed over the bracket and heated (Dinh, 2011). After the mirror has been bent, it is allowed time to cool down in a process called annealing that usually takes up to two hours to complete. If the mirror is allowed to cool down too quickly, the internal stresses built up during heating may cause it to crack.

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