



BREAKTHROUGH PRODUCTS BASED ON BETTER TECHNOLOGY.

SOLAR PANELS AND SOLAR HOT WATER TANK



CASE STUDY

Nansulate® Solar Insulation Coating



Customer:

Kevin Lagorio



Location:

Stockton, California

Product:

Nansulate® Solar

APPLICATION:

Nansulate® Solar was applied to a solar hot water heater tank and piping. Surface temperature of pipes is over 200F. The pipes were coated with 12 coats of Nansulate® Solar to drastically drop surface temperature.

Nansulate® Solar was also used on the interior case of flat plate solar panels to increase efficiency and reduce energy loss.

RESULTS:

Surface temperature on pipes and tank were reduced from 200F to 80F.

From Customer:

“I will tell you why Nansulate is so important for solar thermal installations is not only its great insulating ability of the tanks and piping, but its overall ability to work in the new high tech solar thermal installations, where the new flat plate panels are combined with more expensive evacuated tube panels, which saves the customer money by lowering the overall cost of the system, but still boosts wintertime performance.

Evacuated tube panels are 60% to 70% efficient in cloudy winter weather, whereas flat plate panels only are 10% to 20% efficient. Since evacuated tube panels are better insulated and designed to hold their heat with the vacuum, the flat plate panels are detrimental to this process of retaining heat and unfortunately act as reflectors of this heat when it is needed to be retained for maximum heat transfer to take place.”

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Customer: Kevin Lagorio

“By treating the flat plate panels with Nansulate we have improved the heat retention of the flat plate solar panels which allows the evacuated tube panels to transfer more of the heat they produce in cloudy weather to be utilized by the end user. Furthermore they still can cool down the system and protect the evacuated tube panels if needed.

During a maximum heat exchange the treated flat plate panel was 169.50 degrees F which was the same as the evacuated tube panels; the non treated flat plate panel was 123.80 F degrees. At night after the panels cool down they are the same temperature, but it is three to four hours before the treated panel cools down to the same temperature as the untreated panel.

I am getting ready to have the media come to see my house and Nansulate will be one of the many items featured. If I did not have the Nansulate I wouldn't have been able to heat my house since 1/1/08 till today (11/24/08) without using natural gas or wood pellets. I have included some pictures and your product is in every one of them. Thanks for a great product, patience, and your support.”

-Kevin Lagorio
CEO and Founder
Universal Energy Group, Inc.



Solar array on house includes the combination of evacuated tube panels and flat plate panels. Nansulate® improved the overall performance of the solar system by reducing heat transfer from the flat plate panels.



The first Nansulate® coated solar panel. The interior case is coated with nine coats of Nansulate® Solar

