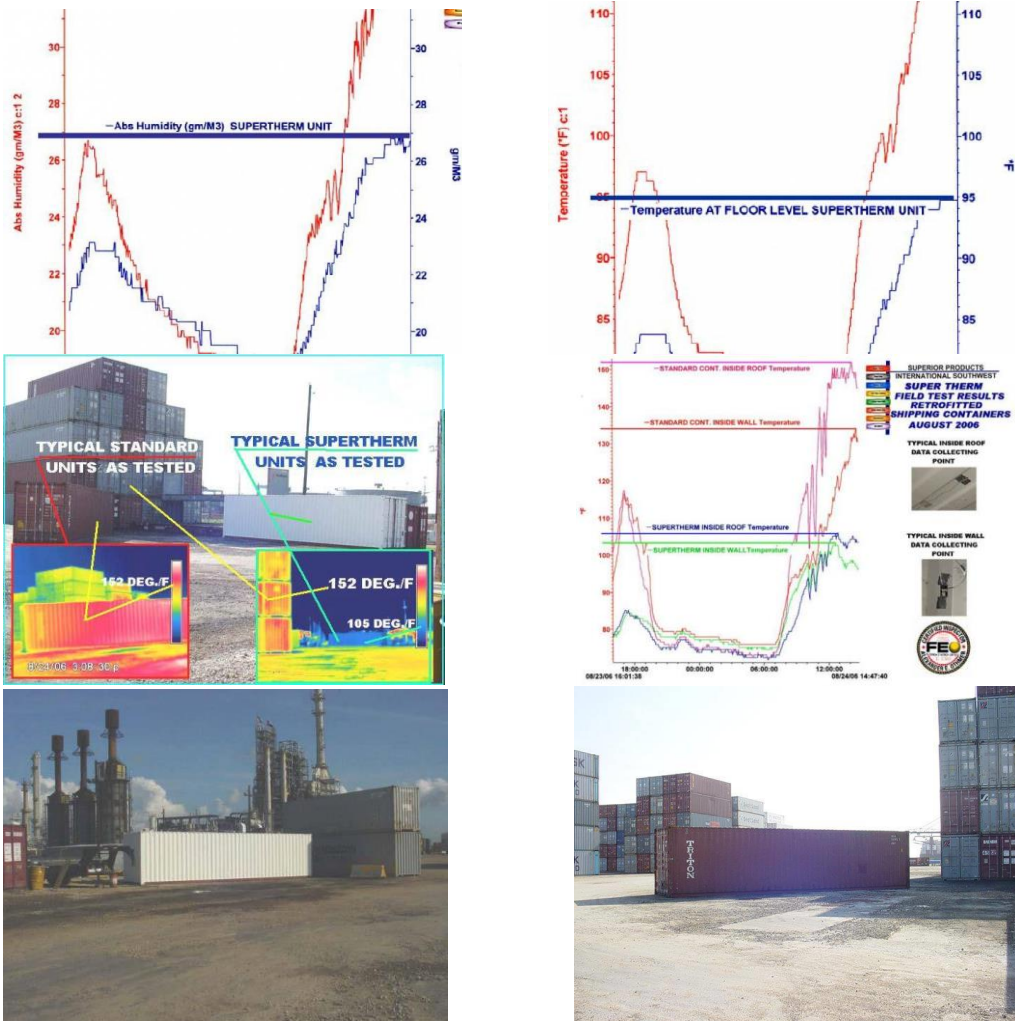


INTERMODAL FACILITY AND MAINTENANCE

40FT CONTAINER (TEST APPLICATION)



INTERMODAL FACILITY AND MAINTENANCE

- Markets: Housing & Renovation, Shipping & Transport, Warehouse & Buildings
- Country: USA
- Courtesy of: Superior Products International



Shipping & Transport Market

PROJECT DESCRIPTION

Measurement and Verification Analysis was conducted at the above facility in accordance with the Florida ENERGY CONSERVATION ASSISTANCE PROGRAMS Designation: ECAP-CUL-1-03 Method for Comparing Utility Loads in Structures and Buildings. 2 typical 40FT Standard Containers were used that each had 4,320 data points installed, which simultaneously registered data over a 24 hour test period. One container was treated and the other was not. Infiltration factors around all door seals were equal (0 CFM & 0 PA) and had no adverse effect on the recorded data. All load-conducting surfaces on both containers were analyzed with recordings at 2-minute intervals.

COATING SOLUTION

The treated test container was coated with SUPER THERM. Application was done using the standard 400 μ WFT/250 μ DFT application thickness.

RESULTS

Average SITE Weather conditions during the analysis period were as follows:

- High Temperature 97°F / 36.2 °C
- Low Temperature 74°F / 23.3 °C
- Average Wind Speed 3 to 5.5 MPH / 4.8 to 8.8 kmh
- Average UV intensity 99 A+B

THE COMBINED DATA INDICATES THAT THE THERMAL ENERGY NECESSARY TO COOL THE CONTAINER COATED WITH THE SUPER THERM PRODUCT REQUIRED 46% to 52% LESS ENERGY AT THE TIME OF THE SURVEY. RESULTS FURTHER SHOWED:

- INSIDE CONTAINER AMBIENT TEMPERATURE 22 DEGREES COOLER
- THERMAL CONDUCTANCE TO OUTSIDE ENVIRONMENT 50% LESS
- EXTERNAL SURFACE TEMPERATURE 47 DEGREES COOLER
- INTERNAL SURFACE TEMPERATURES 37 DEGREES COOLER
- OUTSIDE SURFACE REFLECTIVITY 50% HIGHER
- ULTRAVIOLET ABSORPTION RATE 92% LESS
- INTERNAL MOISTURE LEVELS 28.5% DRYER
- SIGNIFICANT REDUCTIONS IN INTERNAL MOISTURE LEVELS WERE ALSO NOTED

PRODUCTS WE USED

Super Therm®



Shipping & Transport Market