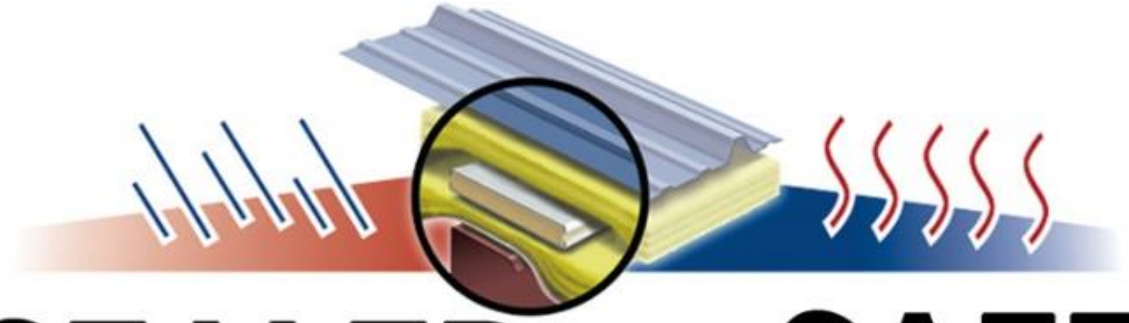

SEALED "N" SAFE®

PATENTED

CONTINUOUS INSULATION SYSTEM

Case Study

Featuring
SNS Thermal Bridging
In a Roof Application

Uintah Training Facility vs Morgan Athletic Gymnasium

Building Design

Project Inception: 1-22-2013
Building Uses: Education/ Gyms
Architect: Kevin Madson & Associates, Inc.
Contractor: Westland Construction
Manufacturer: CO Building Systems

Width: 150’
Length: 293’
Height: 30’ Sheeting

Standing Seam Roof Panel: TS-324

Windows:
- 4 each 17’ x 4’
- 20 each 22’x 4’

Louvers:
- 0

Doors:
- 2 each 12’x 10’
- 2 each 6’-4” x 7’-4”

Hvac:
- 0

Insulation System:
- Roof: 10” with WMPVR facing
- **SNS Continuous Insulation System featuring SNS Thermal Bridging in the Roof**
- Wall: 6” with WMPVR facing

Project Inception: 4-6-2011
Building Uses: Education/ Gyms
Architect: Design West Architects
Contractor: Westland Construction
Manufacturer: CO Building Systems

Width: 150’
Length: 293’
Height: 30’ with a 7’ CMU Wall
23’ Sheeting
Standing Seam Roof Panel: MBCI Ultra-Dek

Windows:
- 4 each 17’ x 4’
- 20 each 22’x 4’

Louvers:
- 4 each 7’ x4

Doors:
- 1 each 14’ x 14’

Hvac:
- 1 each 10’ x 8’
- 1 each 12’-4” x 4’-6”

Insulation System:
- Roof: 10” with WMPVR facing
- Styrofoam Block in Roof
- Wall: 6” with WMPVR facing

Uintah Training Facility

Thermostat Settings for Gym: 64°F w/ no set back

Average (high & low) daily temperature an average over the month

April 2014	47.33 °F
May 2014	58.19 °F
June 2014	67.33 °F
July 2014	75.65 °F
August 2014	68.52 °F
September 2014	62.90 °F
October 2014	51.22 °F
November 2014	33.77 °F
December 2014	28.81 °F
January 2015	27.55 °F

Morgan Athletic Gymnasium

Thermostat Setting for Gym: 65°F – set back 60°F

Average (high & low) daily temperature an average over the month

45.03 °F	April 2014
54.94 °F	May 2014
61.47 °F	June 2014
71.61 °F	July 2014
65.26 °F	August 2014
60.37 °F	September 2014
48.68 °F	October 2014
33.93 °F	November 2014
30.74 °F	December 2014
29.55 °F	January 2015

Inside & Outside Temperature Conditions

Heating Results

Units of Natural Gas Consumed: ($.86 per CCF)

Became Operational		**Savings**	**Difference**		
April 30, 2014	**1025 CCF**	$167.00	16%	**1219 CCF**	April 21, 2014
May 23, 2014	**338 CCF**	$266.00	48%	**648 CCF**	May 21, 2014
June 25, 2014	**39 CCF**	NA		**84 CCF**	June 20, 2014
July 29, 2014	**3 CCF**	NA		**1 CCF**	July 22, 2014
August 27, 2014	**2 CCF**	NA		**1 CCF**	August 21, 2014
September 29, 14	**8 CCF**	NA		**19 CCF**	September 22, 2014
October 27, 2014	**145 CCF**	$190.00	60%	**366 CCF**	October 21, 2014
November 21, 14	**975 CCF**	$517.00	60%	**1577 CCF**	November 20, 2014
December 22, 14	**1359 CCF**	$185.00	14%	**1575 CCF**	December 19, 2014
January 23, 2015	**2307 CCF**	$396.00	17%	**2768 CCF**	January 22, 2015
		$1720.00			
Averages			**38%**		

This case study of two high school gymnasiums, identical in size, 150’ wide x 293’ long and 30’ high, both are standing seam roofs, they both have 24 windows along the top of the walls, both have the same insulation system, one thermostat was set at 64 degrees and other 65 degrees with a set back at 60 degrees at night. The outside temperature differences were on average between 2 to 3 degrees. The gymnasium with the SNS thermal Spacer, experienced a 38% saving on their heating bill. We have found that the more extreme the conditions, the better the performance will be.

In conclusion, living in Death Valley, California or in the North Pole, heating and cooling conditions are applied in either keeping heating or cooling in or keeps it out. By placing the SNS Thermal Spacer continuously on every purlin and/or girt, it isolates the outer shell from the inner frames thus creating a Thermal Bridging Technology. The SNS Thermal Spacer with traditional MBI insulation blankets, create a Continuous Insulation System that will double the energy performance of a metal building, saving energy, that accrue, year after year for the life of the building.

SNS Thermal Spacers are proven safe and effective, tested per AISI, ASTM, ICC and U.S. Energy Codes and structurally sound and watertight. SNS Systems provides solutions for standing seam panels, through-fastened panels, wall panels and complete building envelope systems for metal buildings.