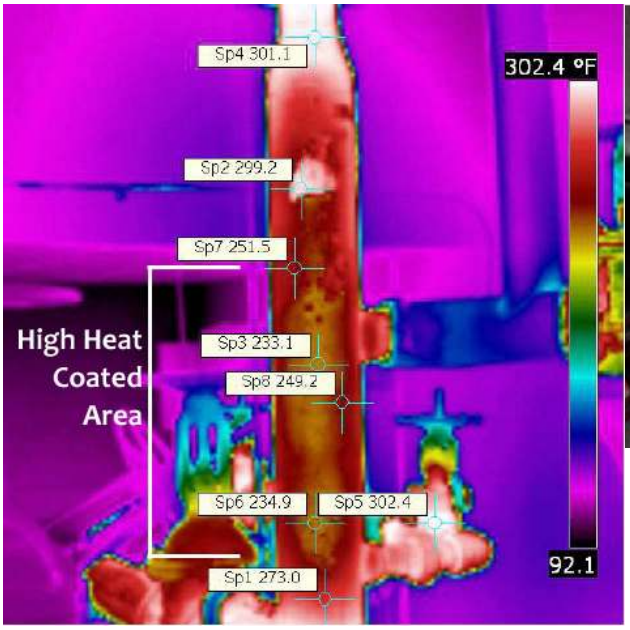
Syneffex™ Effective solutions

Sustainability Simplified.™ Very Simple.

CASE STUDY
Fort Wainwright Army Base Alaska - Pipe Insulation

Award Winning Energy Saving and Asset Protection Coatings



The measurement area was painted black to avoid any mis-reading by the thermal imaging equipment.

GEOGRAPHICAL AREA:
Fairbanks, Alaska

ISSUE:

Steam pipes and cold water pipes were running side by side in an underground utilidoor (compartments built to house piping to protect it from the freezing conditions in Alaska). They needed a thin film thermal barrier that would provide effective pipe insulation for both hot and cold pipes.

SOLUTION:

Heat Shield™ High Heat thermal insulation & corrosion prevention coating.

Coverage: 3-coats

RESULTS:

- ✓ Surface temperature reduction on steam pipe of 68F (from 301.1F to 233.1F).
- ✓ Helped keep the cold water running cooler to the recipients on base
- ✓ Lowered energy consumption.
- ✓ Reduced the heat radiating from the steam pipes to the cold water pipes
- ✓ Space saving and moisture resistant

Fort Wainwright is the home of the United States Army Garrison and units of the United States Army Alaska (USARAK) including the 1st Stryker Brigade Combat Team, 25th Infantry Division, also known as the 1-25th SBCT; the USARAK Aviation Task Force and the Medical Department Activity-Alaska. Fort Wainwright is co-located with the great city of Fairbanks.

Due to the frigid cold, underground tunnels, called utilidoors, are often used to house piping to ensure that they don't freeze during the cold Alaskan winters.

The issue they had at Fort Wainwright was that cold water pipes were within close proximity to steam pipes, all housed within the underground utilidoor. Because of the extreme temperature differential between the two and the small space housing the pipes, traditional fiberglass insulation was not optimal because it both took up too much space and degraded quickly due to moisture and condensation, causing corrosion of the pipes and becoming ineffective in a very short timeframe.

The maintenance personnel choose Heat Shield™ High Heat coating in 2009 as an effective thermal pipe insulation that would not only withstand moisture, but that would also be easily coated onto both the cold water and hot steam pipes, taking up nearly zero space.

The coating exceeded expectations for pipe insulation, **providing a 68 degree Fahrenheit difference on steam pipes, reducing the temperature from approximately 301F (149.5C) down to approximately 233.1F (111.72C) in just a thin 3-coat coverage.**

The coating also provided the same excellent insulation for the cold water pipes. It allowed cold water to be delivered to the homes and buildings on base without the steam causing it to be luke-warm or warmer. Significant energy was also saved from reducing the heat loss from the steam pipes.