

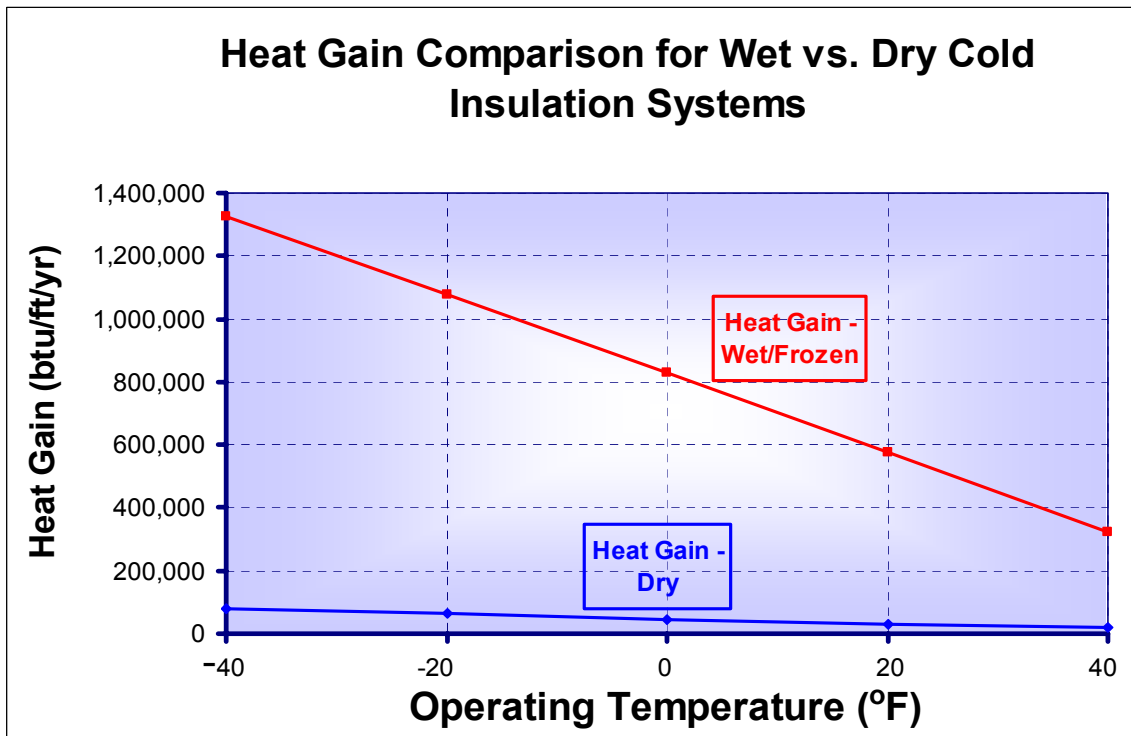
Wet vs. Dry Insulation Systems – Cold Service

This chart demonstrates the energy inefficiency of allowing insulation systems in cold service to become and / or stay wet or frozen. A closed cell insulation system is represented since the heat gain (energy wastage) is less than open cell systems. As a result, this chart represents a conservative projection of energy waste for a wet or frozen cold service insulation system.

The chart is based on two scientific design criteria:

ASTM 680 which is the test method and mathematical model for industry accepted insulation energy tools such as the 3E PLUS computer program developed by the North American Insulation Manufacturers Association (NIAMA); and insulation condition level criteria developed by the E. I DuPont Company.

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Physical Characteristics	
Base Material	4" Sch 40 Carbon Steel Pipe ¹
Insulation Material	4" Polyisocyanurate
Jacket Material	Oxidized aluminum
Process Temperatures	-40 °F to 40 °F
Average ambient temperatures	65 °F
Average wind speed	7.5 MPH

Note 1: allows comparisons for linear foot or square foot since 1 linear foot of 4" Sch 40 Carbon Steel pipe is approximately equal to 1 square foot.