



# CVA Industrial Products, Inc.

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Technical Representatives  
with Solutions for Energy Savings, Maintenance, Repair, & Operations

## About Mechanical Insulation Appraisals

A Mechanical Insulation Appraisal is an on-site audit of the presence, amount and condition of existing mechanical insulation products used to insulate pipes, tanks, process equipment and ductwork in a variety of industrial, commercial and institutional settings.

An appointment is made with the physical plant manager to discuss the scope and purpose of the project. An experienced National Insulation Association (NIA) trained Certified Insulation Energy Appraiser then performs on-site work, gathering data such as the size, location and identification of piping and equipment throughout the facility, details such as energy costs, operating temperatures, annual hours of operation, ambient conditions, presence, condition and thickness of any existing insulation systems and any other data deemed essential to the appraisal.

This process can take anywhere from few hours to a week or more depending on factors such as the size of the facility, the scope of the project, accessibility of the areas surveyed, and the availability of facility personnel familiar with the location, identification and operating parameters of pipes and equipment, such as a facility steamfitter or maintenance mechanic.

Upon completion of the site work, the data is processed using sophisticated software developed by NAIMA, the National Association of Insulation Manufacturers. A report is generated which details the energy & emissions savings currently being realized though any existing insulation, expressed in dollars and in pounds of greenhouse gases, and then compares it against potential savings available through insulation upgrades. The report summarizes the amount of potential energy and emissions savings available through insulation repairs or upgrades i.e. increasing the thickness of rigid insulation, & the use of removable insulated jackets for difficult to insulate or frequently serviced items like valves, traps, pressure reducing valves, and heat exchangers.

Investment cost depends on several factors such as the location, size and complexity of the facility, ease of access to the piping and equipment, and ease of access to information and persons knowledgeable in the systems being surveyed. Another factor affecting cost is the degree of final documentation required by the facility managers. A simple audit of a small boiler room within a given region may cost a few hundred dollars, while a large complex facility within the same region will obviously cost more. Before any billable work begins on the appraisal an initial visit and cost estimate can be arranged.

Having an audit performed can be a crucial step in determining the ability of a plant to cut it's energy consumption and increase the performance of heated and cooled processes, which in turn allows management to forecast future costs of operation. For example, we performed a project where our findings convinced the parent company that their subordinate facility could indeed solve its energy problems & remain in operation. This conclusion resulted in the salvaging of 650 high paying jobs in a rural county where this plant closing would have been disastrous. The facility was allowed to remain open, and as a reward by corporate for solving their energy problems has since been awarded \$40,000,000 in capital funding for plant expansion and improvement projects.

Not all examples will be as dramatic as this, however we frequently visit facilities and are initially told they feel they are "in pretty good shape" insulation-wise, only to discover there are hundreds or thousands of dollars worth of energy literally being lost every day, which could be avoided through the implementation of an audit and mechanical insulation upgrade program.

## The benefits of having a Mechanical Insulation Appraisal performed are:

- The creation of a summary document identifying the greatest thermal energy wasting items in the facility, the amount of energy which can be saved, and the approximate payback period if insulation upgrades are performed. This document often encourages decision makers to act in cases where utility managers or supervisors have previously gone unheard on this issue. Included in the document are calculations for reductions of greenhouse gas emissions which may allow you to engage in emissions credit practices.
- Creation of a detailed list of energy wasting items which can be used to form a corrective action plan. From this list it is possible for a plant tradesperson or insulation contractor to produce a budget figure for installing rigid mechanical insulation and for us to perform Energy Survey Services thru Shannon Enterprises, our preferred manufacturer of removable, reusable INSULTECH™ Insulation Blankets, to provide a proposal for precision fitted thermal blankets for frequently serviced items such as valves, traps and strainers. These are all items historically left un-insulated after service. The detailed survey allows you to correct the worst case items first, creating the fastest paybacks and subsequently freeing up more funds for further corrective action. Setting aside a portion of energy dollars saved is a great way to fund continuing projects.
- During the course of insulation surveys it is common for the appraiser to detect and note items such as leaking valves and flanges, inoperative steam traps and safety hazards that can sometimes be overlooked in the day to day operation of a busy facility. One leaking valve stem packing for instance can result in thousands of dollars a year in lost steam energy. Bare items running over 140°F and within 7' of the floor or 3' of a stairway or ladder are technically OSHA violations. (These items are then reported directly to the maintenance & safety managers and only included in our final report at the customer's option.)
- Greater focus on energy conservation by plant personnel. Often when employees see a plant investing the time and funds to have an energy audit performed they become more energy conscious themselves, which in turn can save even more money for the facility. Your best resources can be your own employees if they feel they have a vested interest in saving energy. If allowed, our appraiser will be glad to briefly explain to all interested parties the value of identifying and correcting steam leaks, trap malfunctions and the like.
- Evidence that your company and your specific sites are doing their part to help protect the environment. This is often viewed as a cliché until one sees a report first-hand detailing how many thousands of pounds or perhaps hundreds of thousands of pounds of carbon emissions can be avoided through the use of the simple time-proven practice of mechanical insulation upgrades. Insulation is among the quickest & most effective ways to save thermal energy. After upgrades are performed data from our report may also be used to qualify for emissions credits.
- Upon implementation of the suggested corrective actions the Mechanical Insulation Upgrades will help you save considerable thermal process energy - often 80% or more, help make your plant a safer & more comfortable work environment, reduce greenhouse emissions, help make the plant piping and mechanical systems more attractive and easier to clean, increase process efficiencies and help to maintain consistent product quality.

Why not call us today for a free initial visit? The sooner any problems are identified, the sooner you can start saving energy.

For assistance please contact:

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