



INDUSTRIAL PROCESS COOLING

Cimco Meets Mexican Challenge



Recently Cimco Process Cooling successfully completed the design, manufacture and installation of a large automotive manufacturing cooling plant in Saltillo, Mexico on behalf of one of its major Canadian customers.

General Project Requirements

- design clean water system
- cool hi-tech laser spot welders
- provide 500 tons of chilling capacity, and be expandable by 50%
- provide 1,500 tons of cooling tower capacity, and be expandable by 50%

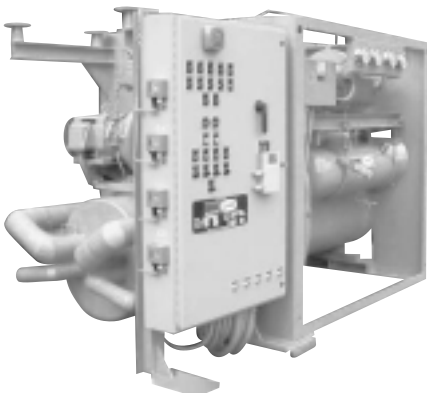
The size and complexity of the project required extensive design and engineering capabilities. In fact, the complete process cooling design and system specifications were produced exclusively by Cimco engineers.

Another unusual challenge facing the Cimco project team was the shortage of experienced installers available in Mexico. As a solution, Cimco fabricated and shipped a series of sub-assemblies that could then be easily put together by local installers. This process ensured that the customer realized excellent quality control, as well as shorter start-up time and significant cost savings.

This “state-of-the-art” facility is now up and running, meeting all current production requirements and ready to expand to accommodate future needs.

For more information, see “Challenges and Solutions” on page 3.

Looking for a new energy efficient chiller system?



The new Compact Series™ chillers combine outstanding performance with unmatched energy efficiency. Utilizing high quality screw compressors, the Compact Series™ chillers are highly reliable, economical to operate and have lower maintenance costs.

Packages are available from 40 –100 tons to meet virtually any process application.

TOROMONT
REFRIGERATION

CIMCO

VOLUME 2, ISSUE 1

Inside this issue:

Are You Up To Code? **..2**

Product and Service Tips **..2**

Cooling Equipment Seminar **.....2**

Mexico “Challenges and Solutions” **.3**

Product Showcase “Portable Chillers” **.....3**

Products, Service and Support **..3**

Cooling Equipment Seminar

PAGE 2



ARE YOU UP TO CODE?



Did you know that the Technical Standards & Safety Act of Ontario (TSSA) now allows the use of large horsepower chillers?

For many years the Operating Engineers Act of Ontario limited processors in Ontario to how large their chiller compressors could be, going back to antiquated laws that created higher equipment costs in the belief that smaller compressors were safer.

That may have been true in the early part of the last century, but no longer. Some plants had as many as ten or more 30 HP chiller compressors, just to appease the old Ontario laws. Newer designs are available that require fewer compressors, are more energy efficient, take less floor space, and have a lower purchase cost per ton.

For more details contact CIMCO.

TOP TEN: Code Issues

- 1 Pressure safety relief valves must be replaced or re-certified at regular intervals, as required by jurisdiction.
- 2 Pressure safety relief devices must discharge to the outside of the building for systems which exceed maximum refrigerant charge.
- 3 Pressure limiting safety devices must be tested regularly for setpoint accuracy and for properly stopping the equipment.
- 4 All power and control electrical terminations must be checked regularly and tightened as required.
- 5 Periodic visual testing must be performed.
- 6 Periodic refrigerant leak testing must be performed.
- 7 Leak detectors must be tested on a regular basis.
- 8 All machinery rooms must have minimum ventilation requirements.
- 9 All moving machinery must comply with Workplace Safety & Health Regulations.
- 10 Refrigerant piping must be installed using properly qualified procedures and a qualified welder or brazer with a valid ticket.

PRODUCT & SERVICE TIPS

COOLING SYSTEM SEMINAR

Compressor Failure

Recently a customer called concerned that he was losing compressors on his chillers because of cold starts. We recommended adding a thermostat that would sense the temperature of the compressor sump. This would not let the compressor start if the temperature in the sump was below the set point. The thermostat was installed with a yellow indicator light that was located in the chiller panel. This has saved the customer a great deal of money in compressor replacement.

Maintenance Budgeting

You can set your annual process cooling maintenance budget with a CUSTOMER SUPPORT AGREEMENT (CSA). Inspections, preventative maintenance, equipment repairs and replacement are all included.

With a CSA program, your equipment is given a thorough inspection and brought up to factory operating standards and then continually monitored to ensure that it continues to operate at maximum efficiency.

Downtime and emergency repairs cost money. Our special one-day seminar will help you eliminate many of your process cooling maintenance problems. Highly trained instructors will provide you with technical information and practical preventative maintenance ideas.

Topics include:

- basic cooling process principles
- proper operation and tuning
- maintenance procedures
- controls and automation
- trouble tracing

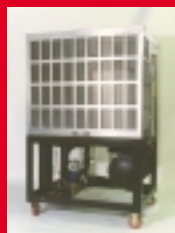
Book today for our next seminar by calling Roberto Stillisano at: (416) 465-3987.

Cimco Meets Mexican Challenge *cont'd...*

CHALLENGES	SOLUTIONS
Precise water temperature and pressure control	<ul style="list-style-type: none"> ▪ Central PLC control ▪ User-friendly remote monitoring from any PC station in the facility
Poor local water quality	<ul style="list-style-type: none"> ▪ Heat exchangers separate tower water from process water ▪ Multi-stage water filter system cleans and reclaims all circuit water ▪ Closed and pressurized chilled water system to reduce corrosion
Operating costs	<ul style="list-style-type: none"> ▪ Central PLC controls pump, chiller and tower operations ▪ Low kilowatt per ton chillers
Pumping costs	<ul style="list-style-type: none"> ▪ VFD (variable speed) chilled water pumps ▪ Automatic water control valves at processes to limit water flow and pump demand
Reliability	<ul style="list-style-type: none"> ▪ 250 ton R-134A screw compressor chillers with minimum moving parts ▪ Large water storage to minimize on/off cycling of components ▪ Standby pumps, chillers and towers ▪ PLC rotates lead/lag pumps, chillers and towers for even wear and usage

PRODUCT SHOWCASE

Now Available!



ACP 3/5



ACP 7.5/10



ACP 15/20

New Line of Portable Chillers

STANDARD FEATURES:

Frame

12 gauge stainless steel welded base frame with heavy duty castors, two swivel, two rigid.

Compressor

High efficiency Copeland or Trane "Scroll hermetic compressors with an option for dual compressors on 10, 15 and 20 hp air-cooled units, and 10 hp to 30 hp water-cooled units. All compressors are rubber mounted to reduce noise and vibration.

Condenser – Air-cooled

Large surface area air-cooled condenser with mechanically bonded aluminium fins to copper tubes operates at a lower head pressure increasing compressor life. All our chillers have top discharge propeller fans to direct the hot discharge air up and away from plant personnel, fans are direct driven by permanently lubricated bearing motors with dual fans on dual compressor models.

Condenser – Water-cooled

High efficiency copper tube-in-tube coaxial water-cooled condensers on 5 hp to 10 hp, and stainless steel brazed condensers from 15 hp to 30 hp. Water regulating valves standard on all units. Optional shell and tube condensers for all models.

Holding Tank

Insulated galvanized (inside and out) steel tank on 5 hp to 10 hp models, and insulated stainless steel tanks on 15 hp to 30 hp models. Tanks complete with side bottom drain with shut-off valve, pump suction shut-off valve, air vent line, plastic fill/water level gauge and return "Y" strainer.

CORPORATE AFFILIATES



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- PLC and Starter panels

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- 40 Engineers
- Plant Evaluations
- Plant Layouts
- Project Site Supervision and Commissioning

Since 1913 Cimco continues to be a worldwide leader in the design, engineering, manufacturing, installation and service of industrial refrigeration and process systems. Our long-term, total commitment to our customers remains unchanged. Cimco believes in

maintaining equipment to the highest standards to ensure peak operating efficiency and production. Whether you are designing, installing or servicing you can count on sound advice and economical solutions from our skilled service technicians and engineers.

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