



INDEPENDANT CONTRACTOR EXCHANGE GROUP
Innovative Chiller Plant Solutions

Innovative Project Awards 2018



ChillCo Inc. Honeywell Chemical Plant, Baton Rouge





ChillCo Inc.
Honeywell Chemical Plant, Baton Rouge LA

- Another contractor contaminated a 60,000# R-123 charge with water causing process shutdown.
- Chillco used process steam to thaw the now frozen water
- The refrigerant charge was removed and dehydrated using ChillCo's custom dehydration skid
- The plant was maintained in operation

ChillCo Inc

Honeywell Chemical Plant, Baton Rouge, LA



Honeywell Baton Rouge Chemical plant uses a large built up refrigeration skid, utilizing a Howden 255 compressor driven by a 500HP motor. The unit uses R507 as the refrigerant and R123 as the cooling medium (Brine). While ChillCo was performing maintenance on this machine, a 3rd party rental company brought in a rental chiller not realizing that the rental evaporator was contaminated with water. Once the rental chiller was started, the water traveled throughout the plant process and contaminated the brine solution and freezing in heat exchangers. Approximately 60,000 lbs of R123 was contaminated to above saturation levels of 300ppm at operating temperature of -15.

ChillCo was already on site performing maintenance work and was called in to come up with a solution to dehydrate customer's R123 brine without taking machine off line and halting production which would cause customer millions of dollars in lost revenue. The challenge was that the water was freezing in plant heat exchangers due to the high ppm and extreme low temperature of brine solution.

ChillCo service manager Thomas Mattox was able to design solution utilizing ChillCo "Ox" refrigerant dehydration skid. Using steam on exchangers to melt frozen water, ChillCo was able to clean much of the contaminated brine through online distillation process. The remaining charge was moved to ISO tank and ChillCo mechanics cleaned approximately 2000 lbs per hour, around the clock through "Ox" and ChillCo desiccant dehydration methods. The R123 brine was tested and returned to acceptable level of 30 PPM.

This job was challenging because the customer needed an immediate solution and required the plant to stay on-line throughout the entire process. ChillCo was able to mobilize all equipment to site, set up, and begin dehydration process within hours of receiving request for assistance.



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Honeywell Chemical was extremely pleased with the work performed and has since made use of ChillCo "Ox" refrigerant solutions to clean refrigerant in contaminated ISO's and rail cars. Providing this solution to Honeywell has positioned ChillCo as experts in the field of refrigerant dehydration and cleaning and led to many other opportunities at the plant. ChillCo is no longer viewed as refrigeration maintenance mechanics, but rather refrigeration "go-to" experts.