

Refrigeration

- ◆ Use water-cooled condensers rather than air-cooled condensers.
- ◆ Challenge the need for refrigeration, particularly for old batch processes.
- ◆ Avoid oversizing -- match the connected load.
- ◆ Consider gas-powered refrigeration equipment to minimize electrical demand charges.
- ◆ Use "free cooling" to allow chiller shutdown in cold weather.
- ◆ Use refrigerated water loads in series if possible.
- ◆ Convert firewater or other tanks to thermal storage.
- ◆ Don't assume that the old way is still the best -- particularly for energy-intensive low temperature systems.
- ◆ Correct inappropriate brine or glycol concentration that adversely affects heat transfer and/or pumping energy. If it sweats, insulate it, but if it is corroding, replace it first.
- ◆ Make adjustments to minimize hot gas bypass operation.
- ◆ Inspect moisture/liquid indicators.
- ◆ Consider change of refrigerant type if it will improve efficiency.
- ◆ Check for correct refrigerant charge level.
- ◆ Inspect the purge for air and water leaks.
- ◆ Establish a refrigeration efficiency-maintenance program. Start with an energy audit and follow-up, then make a refrigeration efficiency-maintenance program a part of your continuous energy management program.