



PROJECT SUCCESS CITY OF CLEVELAND HEIGHTS

ICE RINK CHILLER



FOCESS

ENGINEERING PROCESS

FACTS:

- INDOOR ICE ARENA
- 2-SHEET ICE RINK
- R-22 REPLACEMENT WITH AMMONIA
- DEHUMIDIFICATION SYSTEM REPLACEMENT

OBJECTIVES:

- REPLACEMENT OF EXISTING R-22 AND AMMONIA REFRIGERATION SYSTEMS WITH ONE HIGH EFFICIENCY CENTRAL AMMONIA SYSTEM SIZED FOR BOTH RINKS.
- MINIMIZE MECHANICAL & ELECTRICAL CONTRACT WORK FOR DEMOLITION AND INSTALLATION OF NEW REFRIGERATION EQUIPMENT
- REMOVAL AND INSTALLATION OF NEW DEHUMIDICATION UNIT
- STRICT ENERGY EFFICIENCY REQUIREMENTS
- MEET CITY FINANCIAL BUDGET

CHALLENGES:

- MECHANICAL ROOM SPACE CONSTRAINTS
- MECHANICAL ROOM DEMOLITION & RE-WORK
- FLOOR HEADER RE-WORK



STARTUP & SERVICE

- SYSTEM INSTALLATION & STARTUP
- SITE ACCEPTANCE TESTING
- ONGOING SERVICE AND PREVENTATIVE MAINTENANCE

ENGINEERED SOLUTION



INDUSTRIAL
CHILLER
EQUIPMENT

COOLING CAPACITY: 205 TONS

COOLING TEMPERATURE: 15°F

PROCESS FLUID: 40% ETHYLENE GLYCOL

COMPRESSOR: OPEN DRIVE 6-CYLINDER RECIPROCATING (3)

EVAPORATOR: FLOODED SHELL AND TUBE WITH SURGE DRUM

CONTROLS: ALLEN BRADLEY COMPACT LOGIX PLC WITH REMOTE MONITORING AND TROUBLESHOOTING

AMMONIA DISPERSION TANK: 3,600 GALLON SS TANK

REFRIGERANT: AMMONIA (R-717)

CONDENSER: EVAPORATIVE

ADDITIONAL PROJECT FEATURES:

- HEAT RECLAIM SYSTEM FOR SUB-FLOOR
- HEAT RECLAIM FOR SNOW MELT PIT
- DEHUMIDIFICATION SYSTEM (INTEGRATED CONTROLS)
- DEMOLITION AND REMOVAL OF OLD SYSTEM

12750 BERE RD.
CLEVELAND, OH



WWW.TEMPEST-ENG.COM
216-883-6500