

case study

District Energy From Citizens Thermal Helps Keep Indianapolis Cool

LAKOS Separators A Key To Efficiency

System:	District Energy/Cooling Plant In Indianapolis
Solids:	Sand, Silt, Dirt, Stone, Other Organic Material from Reservoir
Liquid:	Water at 2000 US gpm (454 m ³ /hr)
Problem/Challenge:	Remove Solids from Water to Maintain Chiller Efficiency
Solution:	LAKOS Separator (RTS 1209) installed for sidestream flow

Indianapolis has one of the most efficient District Energy installations of any city in the United States. District Energy utilizes a central plant to provide heating and cooling to multiple buildings in one area so they each do not need separate chillers and other HVAC equipment. All across the downtown area in



LAKOS RTS 1209 Separator has been working at Citizens Thermal West Street chilled water plant since 1992

Indianapolis, commercial and industrial buildings utilize chilled water for cooling. Citizens Thermal is a district cooling and energy management company that services the city of Indianapolis, managing the equipment and systems that provide steam to more than 200 commercial buildings and industries, and chilled water to more than 60.

A properly operating chiller produces water at 45 degrees, and Citizens Thermal is able to produce chilled water at 40 to 42 degrees, thus eliminating uncomfortable cooling and humidity control situations. When older chillers begin to lose efficiency, they lose the ability to maintain proper temperatures. As the systems near the time of their replacement, these aging chillers can produce only 60 degree water at peak loads. This can lead to uncomfortable temperatures and high humidity. LAKOS Separators play an important role in maintaining clean water for clean chill water production at many of their plants. Clean water, free of particulates and solids, means greater efficiency for the chillers.

Capacity At West Street Chiller Plant

Citizens Thermal's West Street plant generates up to 36,000 tons of cooling capacity per day. Water from reservoirs is the source. These reservoirs can be fed by lakes, streams and other natural water sources. As a result, airborne

(Continued on reverse)



Chillers at Citizens Thermal West Street chilled water plant

contaminates such as silt, dirt and other organic materials are constantly being added into the system. LAKOS Separators are used to help remove these solids.

The LAKOS Separator

A LAKOS RTS 1209 Separator operating at 2000 US gpm (454 m³/hr) in a sidestream installation and utilizing a CRS 836 bag filter housing has been working at the West Street plant since 1992. The Separator purges to a solids recovery vessel with 1-micron bags that need to be changed weekly. The Separator, coupled with water treatment, helps to protect a bank of eight steam turbine-driven chillers and three electric chillers, as well as the pumps associated with the system. The Separator captures particulate intrusion that would otherwise impair the function of the equipment and thus the output of chilled water. LAKOS keeps all the equipment running at their highest efficiency AND with minimal water loss by keeping the water free of troublesome solids.

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