ARMSTRONG

ENERGY EFFICIENT PLANT RECEIVES AWARD

A HEALTHCARE FACILITY INSTALLATION

Despite the complex structure of the Mater Dei hospital in Betim, Armstrong was able to deliver a reliable, energy efficient solution with the IPC 9511 installation. The project was recognized with a 2022 ASHRAE Technology Award in the category of New Healthcare facilities.

Mater Dei Health Network, Betim, Brazil.

The Armstrong Integrated Air-Cooled Chiller Plant Control System (IPC 9511) boosts performance of new and existing chiller plant installations to deliver optimum efficiency and occupant comfort. Along with the Design Envelope 4300 pumps, an IPC 9511 reduces installation costs, operating costs and performance risk.

Background

The Mater Dei Network is an integrated network of 9 hospitals across Brazil. It stands as a benchmark for excellence in the healthcare industry and is recognized by medical professionals across the world.

When the Rede Mater Dei opened its newest healthcare facility in Betim, in 2019, the HVAC results did not fully meet expectations. The Mater Dei Network wanted their newest hospital to have an HVAC system that was both reliable and efficient. JAM Engenharia de Ar Condicionado and Armstrong had previously together worked on a shopping mall installation in Brazil and managers at JAM had been impressed by the expertise Armstrong provided.

Analysis showed that the system at the new Mater Dei Hospital operated with a low Delta T, a condition typically caused by excess flow – more water than the heat exchanger could transfer. Armstrong adjusted the Bypass control system of the variable primary system, using the Design Envelope pumps and the IPC9511 controller.

Design Envelope pumps modulate the flow rate according to system requirements. The IPC9511 works using pump flow information to optimize the operation of the chilled water plant. This project eliminated the need for a secondary pumping system. This simplified the overall HVAC system, reduced the space required and reduced implementation costs. Using data from Design Envelope pumps, the IPC9511 controller maintains chiller efficiency.

The ASHRAE Technology Award recognized the excellent work done in applying technological innovations to improve user comfort, indoor air quality and energy efficiency. The new hospital in the Mater Dei Network also received an award from the Sheet Metal and Air Conditioning Contractor's Association (SMACNA) in 2023.

Tech-info

- Integrated Chilled Water Plant Control System for Air Condensation (IPC 9511)
- Design Envelope 4300 Pumps

TORONTO
+1 416 755 2291

BUFFALO
+1 716 693 8813

DROITWICH SPA
+44 121 550 5333

MANCHESTER
+44 161 223 2223

BANGALORE
+91 80 4906 3555

SHANGHAI
+86 21 5237 0909

BEIJING
+86 21 5237 0909

SÃO PAULO
+55 11 4785 1330

LYON
+33 4 20 10 26 21

DUBAI
+971 4 887 6775

JIMBOLIA
+40 256 360 030

FRANKFURT
+49 6173 999 77 55

FILE NO.: 9.5034
DATE: JULY 2024
SUPERSEDES: NEW
DATE: XXXX XXXX