

Las Vegas Desert Heat no Match for MagnaDrive Technology

BELLEVUE, Washington, 05/13/2008 – Las Vegas is known for stage shows, creatively themed casinos, and triple-digit summer temperatures. Now, magnetic technology from MagnaDrive Corporation is helping one top Vegas hotel chain beat the heat.

Inside the city's resorts, huge water chillers work 24 hours a day, seven days a week to keep visitors cool with air conditioning. Energy Managers say up to 40 percent of energy bills go toward keeping cold air pumping through the buildings. The Energy Manager for one of Las Vegas' most popular hotel chains says he installed MagnaDrive technology on one of his chiller pumps this spring to reduce wear and tear on the system and maintenance costs. Normally, the pumps connect to the motor driving them, but MagnaDrive couplings use magnetic energy instead, allowing space between the parts and eliminating vibration and shock to the system during start-up and operation.

After the unit was in, they realized that MagnaDrive's technology was a royal flush when it came to savings in other ways as well. MagnaDrive engineers custom tuned a constant speed coupling to offer the performance needed while also significantly reducing the energy needed to run the system. The resort was able to put a big dent in those hefty electricity costs, which can total millions of dollars during the summer months.

"My initial motive was to cut down some of [the shock created by vibration in the system] and save a little electricity, now I'm saving a lot of electricity and [eliminating] the shock as well, so it was an experiment that turned out extraordinarily well," he said.

Lowest Total Cost of Ownership

This major Las Vegas hotel has some of the most automated mechanical systems in the United States to keep close track of costs. Because of the intense automation, Energy Managers could immediately see the savings take shape with MagnaDrive technology installed.

Before their first MagnaDrive coupling installation, the pumps at the hotel used 17-kilowatt hours of electricity. Electricity usage dropped below 14-kilowatt hours on the first pump installed with a MagnaDrive coupling. Not only was it an immediate 20 percent drop in electricity, but adding MagnaDrive technology to the pump will reduce future maintenance costs as well. In addition, MagnaDrive's "green" technology achieves all those benefits while being environmentally friendly.

"That's pretty phenomenal," said the resort's Energy Manager.

Because of this success, the hotel plans to put several MagnaDrive couplings on all six of its giant chiller systems. MagnaDrive CEO Alex Deriugin says the technology's growing popularity is more than just a touch of Vegas luck.

“We are very excited about the continued success of our magnetic technology and products in the Las Vegas area,” said Deriugin, “We have had several hotel/resort installations with wonderful results and look forward to many more.”

How the Technology Works

MagnaDrive products eliminate vibration and misalignment complications between motors and loads because they are a disconnected technology. In a typical application, a MagnaDrive Coupling is installed between a motor and the load the motor is driving, in this case a pump. The coupling consists of two independent components that have no physical contact.

One component, a precision rotor assembly containing high energy, rare-earth magnets, is mounted on the load shaft. The second component, a copper conductor assembly, is installed on the motor shaft. Relative motion between the magnets and the copper creates a magnetic field that transmits torque through the air space between the components. The magnets allow the motor side to rotate the load side without actually touching it, making alignment problems and maintenance because of misalignment a thing of the past.

About MagnaDrive Corporation

MagnaDrive Corporation was founded in 1999 and is based out of Bellevue, WA. The company's breakthrough magnetic technology provides a cost-effective “green” solution to increase reliability and lower maintenance expense while achieving energy savings and process control. MagnaDrive serves many markets, including power generation, mining, oil and gas, maritime, the U.S. Navy, water and wastewater, HVAC, and general manufacturing. The impact and potential of this magnetic, world-wide patented technology was recognized by Industry Week magazine, which selected MagnaDrive as Technology of the Year in 2001. MagnaDrive was selected by Inc. Magazine as one of the 500 fastest growing private companies in the United States. Recently, Deloitte named MagnaDrive one of the 100 fastest growing technology companies in North America. MagnaDrive offers a family of products to accomplish a broad range of operating objectives: Reliability, Speed Control, Torque Management, Cushioned Start, Vibration Control and Misalignment Tolerance.

Deloitte.
Technology Fast 100

Inc.
500

IndustryWeek 
Technology of the Year

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