WWF Low Carbon Manufacturing Programme (LCMP)

Quarterly Newsletter

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Success story

Super Performance Textile (Shenzhen) Co., Ltd. is a subsidiary factory of the HK LAWSGROUP, which specializes in the manufacture of sweaters. The factory, located in Shenzhen, integrates design, R&D, manufacturing and sales, and their clients are located all over the world. Super Performance joined the LCMP in 2010. The factory has been striving to implement systematic environmental management, promote carbon reduction measures and create a low-carbon working environment for their staff. Super Performance was awarded the LCMP Gold label in 2012 for their efforts in:

- Replacing their natural gas / electric water heater with a solar energy hot water system which provides heat to the dormitory, reducing their annual electricity consumption by more than 190,000 kwh and lowering the factory's annual carbon emissions by more than 150 tons.

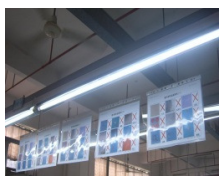
Solar energy panels for the dormitory

Solar energy water collector

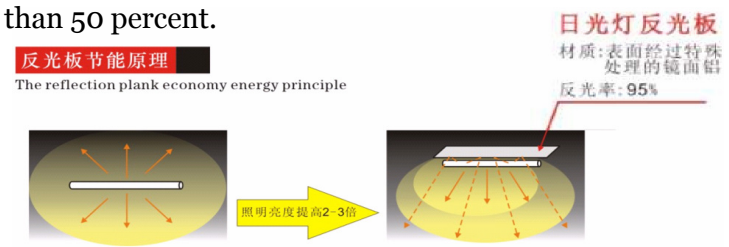
- Replacing their natural gas combustion chamber with an air-to-water heat pump, which absorbs heat energy from the air. After passing through a compressor, the heat energy is then directly transferred to water. This method of heating water has lowered their carbon emissions by more than 30 percent.

Air-to-Water Heat Pump

- Adopting mirror reflectors in their production lines, effectively reflecting 99 percent of incident light sources. With reflectors, 95 percent of light rays are emitted uniformly in all directions, meaning that a single fluorescent light tube with a reflector can be as bright as two normal tubes, cutting energy consumption by more than 50 percent.



Mirror reflector



Environmental news

Greenhouse Gas (GHG) Accounting Tool for Chinese Cities (Pilot Version 1.0)

The World Resources Institute, WWF and two other institutes recently developed the GHG Accounting Tool for Chinese Cities (Pilot Version 1.0), which aims to explore appropriate methods to measure city GHG emissions, help cities improve GHG accounting capabilities and provide decision-making support to the low-carbon development of cities in China. The tool references the NDRC's national "Guidelines for Provincial Greenhouse Gas Inventories (Trial)", and is compatible with international standards and reporting formats like the Global Protocol for Community Scale Emissions (GPC). More at: ***www.ghgprotocol.org/chinese-city-tool***

LCMP updates and activities

The LCMP is organizing a series of engagement activities in the coming months, and you are all welcome to join in!

- The LCMP SDF Low Carbon Workshop, co-organized by Intertek Testing Services Hong Kong Limited (Oct)
- Free consulting services on energy saving and carbon reductions measures (Nov)
- The 4th LCMP Labelling Award Ceremony (Dec)
- The LCMP report for 2013 accredited factories (Dec)

For more details, please contact the LCMP team at any time!

Low-carbon tips: HVAC systems

The principle of a water-curtain HVAC system is the absorption of heat in the air into water droplets through the evaporation process. A fan then draws this cooled air into an area and reduces the temperature of that area. A water-curtain HVAC system can be installed at a fixed location, or it can act as a stand-alone or portable system. As there is no compressor, it has the potential to greatly reduce electricity consumption. However, as a consequence of the water droplets, the humidity of the cooled area will be higher, and this may affect humidity-sensitive items.

Best practices: Ningbo Daye Garden Machinery Co., Ltd. - Machinery, equipment, apparatus and components industry

This company has implemented carbon-reduction measures in general utilities, production facilities and through staff engagement. These measures include:

- **HVAC system:** Installing variable frequency drive (VFD) in compressors, using thermal insulating construction materials, performing regular maintenance on heat sinks;
- **Electrical system:** Using thicker cables to prevent voltage drop during transmission, installing capacitor compensation devices;
- **Air compressor:** Installing VFD and heat recovery systems, using temperature-sensitive automatic ON/OFF controls in heat sinks;
- **Boiler:** Installing a heat recovery system, converting energy from exhaust air using a heat exchanger to preheat boiler water;
- **Injection molding machines:** Adopting servo & proportional control, adjusting cooling water temperature by automatic controls;
- **Staff engagement:** Appointing a "Person in charge" to turn the system on and off, educating staff about energy saving and the methodologies of reducing the kinds of greenhouse gases.

Heat sink cleaning

Power factor compensation device

VFD Compressor

Boiler - Heat recovery system

Injection molding - servo control

Person in charge - lighting

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