



WWF Low Carbon Manufacturing Programme (LCMP)

Quarterly Newsletter

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Success Story

Spintec Precision (Shenzhen) Ltd., a wholly-owned subsidiary of Spintec Precision Ltd., specializes in the manufacture of worms, gears, motor shafts and other metal fittings with an annual production output of more than a hundred million pieces. The company joined WWF-Hong Kong's LCMP (Low Carbon Manufacturing Programme) in 2012 and received a Platinum label in both its 2014 and 2016 verifications. The company has implemented a number of measures and achieved impressive results. The measures include:

- Replacing its traditional manual cleaning method for gears and worms with a hydrocarbon vacuum, which reduces polluting emissions, saves 5,400 litres of cleaning agent annually and increases productivity by a factor of 3.8.



Hydrocarbon vacuum cleaning machine

- Installing harmonic filter in its electrical system, which reduces harmonic waves and power loss, increases power factor and reduces electricity consumption by 9.7 per cent (or 240,000 kWh) annually.



Harmonic filter

- Installing intelligent power saving devices in its high powered motors, which provide best-fit voltage and current through real-time tracking, perfectly matching the output power and real-time loading and achieving an energy-saving rate of 4 per cent.



Intelligent power saver

China has made a breakthrough in mining “combustible ice”

China has become the first country to successfully extract “combustible ice” and achieve a steady production of natural gas. Combustible ice is methane hydrate mixed with silt. To form combustible ice a certain amount of natural gas must be at a low temperature state (between 0-10°C) and under high pressure. According to current levels of resources and consumption, combustible ice can meet China's energy demand for nearly 200 years. China also has a commercial extraction plan for methane hydrate by 2030. The world's total amount of methane hydrate is estimated to be 2,100 trillion cubic meters, it could be an alternative energy source of fossil fuels, but WWF still hopes that the market will rely entirely on renewable energy applications in the future. Find out more here:

<http://www.ccchina.gov.cn/Detail.aspx?newsId=67649&TId=59>

LCMP updates and activities

The LCMP is organizing a series of engagement activities over the coming months:

- Factories conducting LCMP verification (July – Sept)
- Webinar on energy efficiency and carbon emissions (Sept)
- Environmental, Social and Governance Workshops (Sept)

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

Biofuels combat climate change

Biofuels refer to any fuel derived from biomass which is the product of living organisms or its metabolites. They include plants, such as trees or crops, and microorganisms. In general, the amount of carbon dioxide of biomass absorbed during the growth process can offset the amount of carbon dioxide emitted in the combustion process, so that there is no effect to carbon dioxide concentration in the atmosphere. According to the “Greenhouse Gas Protocol”, direct CO₂ emissions from biofuel combustion should not be counted towards its scope of direct emissions. Different from traditional fossil fuels, biofuels can be regarded as renewable fuels.

Best practices: Dongguan Shatin Lake Side Textiles Printing & Dyeing Co., Ltd. - Textile Industry

Dongguan Shatin Lake Side Textiles Printing & Dyeing Co., Ltd., a subsidiary factory of **Fountain Set (Holdings) Limited**, specializes in the manufacture of knitted and dyed or printed fabrics. Lake Side was a pilot LCMP factory, and this year completed its fifth LCMP verification. Over the years, it has adopted a series of carbon reduction measures, including:

- Replacing its “chain grate boilers” with “circulating fluidized bed boilers” which have more efficient energy usage, desulfurization and NO_x emission reduction capability
- Installing setting machines with a heat recovery feature, reducing annual energy consumption by more than 15 per cent and standard coal consumption by 300 tonnes
- Installing a new continuous shrinking machine, which increases annual production capacity while reducing steam consumption and standard coal consumption by 450 tonnes
- Shortening printed rib fabric production process, reducing annual standard coal consumption by 1,042 tonnes
- Replacing traditional lighting with more than 5,000 LED lamps, reducing annual standard coal consumption by 350 tonnes



“Circulating fluid bed” Boiler



Energy saving setting machine



Continuous shrinking machine



Shrinking machine in printed rib fabric process



LED lamps