PaCT Partnership for Cleaner Textile | AN INNOVATION OF IFC International Finance Corporation WORLD BANK GROUP

Cleaner Production Case Study
Air Leakage Repair and Pressure Reduction
Bay Footwear Limited (BFL)

This series showcases success stories of PaCT (Partnership for Cleaner Textile) partner factories in the Bangladesh textile sector that have implemented cleaner production projects.

Air compressors are mechanical devices that compress and pressurize air to convert it into usable power for various applications. Nowadays, air compressors are used for a wide range of applications and considered a support system for many industrial sectors.

Factory Status

Bay Footwear Limited (BFL) is a renowned manufacturing facility that specializes in the production of high-quality footwear. In 2019, the facility recorded a whopping average production of 15,722 pairs of footwear a day, a testament to its efficient manufacturing process and advanced technology.

BFL primarily relies on three sources of energy to power its operations: electricity from captive generation using natural gas (46.9%), electricity purchased from the grid (38.1%) and diesel (15%). Diesel engines serve as a standby power generation source, ensuring uninterrupted power supply during unforeseen power outages.

Energy Efficiency

Energy consumption is a significant concern at BFL, and particularly the use of air compressors. Compressors account for approximately 11% of the facility's total electricity consumption. Air compressors operate based on specific pressure set points, and those that operate at full load often have trouble maintaining pressure at the user end. This occurrence signifies air leakages during the manufacturing process. To maintain optimal efficiency levels, it is essential to conduct regular leakage tests.

Implementation measure

To increase cost-savings at BFL, PaCT experts recommended the reduction of pressure buildup through adjustment of the required pressure as per production, regular monitoring of leakages of air compressors and prompt repairs. Following implementation of these measures, the total cost of repairs were $249, while generating savings of $13,580.

Environmental Benefits

166,440 kWh/year saved

94 tCO_2 /year greenhouse gas avoided

> "The PaCT program identified suitable areas of improvement. We are grateful to the experts for their assistance. Energy efficiency is very important to us, and we are working on improving our processes every year." – BFL Factory Management

IFC led Advisory Partnership for Cleaner Textile (PaCT) *is a holistic program that supports the entire textile value chain – spinning, weaving, wet processing and garment factories in adopting Cleaner Production (CP) practices and engages with brands, technology suppliers, industrial associations, financial institutions, government to bring about systemic and positive environmental change for the Bangladesh textile sector contributing to the sector's long-term competitiveness and environmental sustainability.*

WHAT PaCT DOES:

- *Cleaner Production Assessment*
- *Water & Energy Management*
- *Energy Efficiency & Productivity Assessment*
- *Rooftop Solar PV Pre-feasibility Study*
- *Rooftop Solar Calculation*
- *Online Resource Monitoring*

DEVELOPMENT PARTNERS

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IMPLEMENTING PARTNER

BGMEA

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