Toweller Textile Mill- Mechanical Systems Upgrades

LOCATION : Towellers House, WSA 30/31, F.B. Area, Block 1, Karachi, 75950, Pakistan

CLIENT : Towellers Limited

TEAM MEMBERS :

Mechanical & Electrical Consultants
Quality Air Systems
Advanced Buildings Solutions Inc.
Canada.

Construction and Project Managers
Quality Air Systems

SCOPE OF WORK: Rectification of Humidification problems in Fabric Weaving Department.

Replacement of insulation of Steam piping for Curring Machines and Thermal Oil Boiler.

PROJECT DESCRIPTION:

Client wants to rectify the humidification problems in Fabric Weaving department in order to minimize the production losses. Quality Air Systems partner with Advanced Buildings Solutions Inc., to resolve not only humidity issues but also implement energy efficiency measures such as highly efficient propeller fans and efficient spray nozzle system in order to improve efficiency of humidification systems that ultimately reduce the energy bills.

All Spray Humidifiers Systems with Air mist equipment is used to maintained 80°F temperature with 75% relative humidity in the department. Saturation efficiency of air washers is 95% to maintain 70% relative humidity. The air changes of the department are 35/hr. based on local environment conditions, building materials R-Values & other factors. Evaporative Cooling process can be achieved throughout the year. Dedicated pump is used to lift water from the air washer tank & spray it in an air steam.
Six Axial Flow Supply Air Fans of 1100 mm size capable of flowing 18000 CFM air are used with electric motor ratings of 11.5 kw / 1400 RPM.
Centrifugal water pump of 60 ft head, 20 gpm with electric motor ratings of 1.5 kw is used.

In this project Quality Air Systems partner with Advanced Building Solutions complete this job and supplied, installed efficient spray humidifiers. That system formed mist due to high speed axial flow fans.

Due to outstanding heat insulation and fire resistant properties, Quality Air Systems supplied and installed Rockwool (wired mesh) with density of 60 kg/cu.m and suitable for 450 degree Celsius. Steam pipes sizes were 2", 4" and 6". G.I sheet was installed for jacketing purpose for the protection of Rockwool.