Towellers Textile Mill- Humidification System of Terry Weaving

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: Designing, installation and commissioning of Humidification System of Terry Weaving Department.

PROJECT DESCRIPTION:
Client wants to design humidification system for Terry Weaving department to manufacture quality fabric under controlled humidified environment. Quality Air Systems partner with Advanced Buildings Solutions Inc., complete this job with the implementation of energy efficiency measures such as selection of highly efficient propeller fans, efficient spray nozzle system and efficient automatic dust collection systems in order to minimize the operating costs which ultimately reduce the energy bills.
All Evaporative Cooling Systems with two Air washers (Spray) equipment are used to maintained 82°F temperature with 70% relative humidity in the department. Saturation efficiency of air washers is 95% to maintain 70% relative humidity. The air changes of the department are 45/hr., based on local environment conditions, building materials R-Values & other factors. Evaporative Cooling process can be achieved throughout the year. Dedicated pumps are used to lift water from the air washer tank & spray it in an air steam.

In this project, Quality Air Systems supplied, installed and commissioned wall mounted highly efficient axial flow Fans, Spray water system, Rotary water system, Pneumatic Temperature Controls, Horizontal Pumps, Rotary Drum with Filter, Dust collection system, Dampers etc.
Six Axial Flow Supply Air Fans of 1200 mm size capable of flowing 16000 CFM air are used with electric motor ratings of 18.5 kw / 1400 RPM.
Three Axial Flow Return Air Fans of 1600 mm size capable of flowing 17000 CFM air are used with electric motor ratings of 30 kw / 960 RPM.
Centrifugal water pump of 80 ft head, 300 gpm with electric motor ratings of 18.5 kw is used.