Report on the Ball Technic Systems Installed at REVENUE HOUSE

Executive Summary

Water is the most widely used cooling medium for air conditioning and industrial cooling processes. Water collects airborne particles when aerated in cooling towers and these deposit on heat transfer surfaces of air conditioning chillers. Soluble salts inherent in water also deposit as scale on the heat transfer surfaces of the chillers..

These deposits reduce the heat transfer efficiency of the air conditioning chillers forcing the chiller to 'work harder' to compensate for the loss of heat transfer efficiency. When the chiller works harder, more energy is consumed. There is also greater wear and tear of the chiller components resulting in higher maintenance expenditure and effort.

The **Ball Technic System** conserves energy for air conditioning by keeping the heat transfer surfaces of the chiller perpetually clean. Six units of Ball Technic Systems were installed on the 4 x 500 ton and 2 x 180 ton chillers at Revenue House.

To ascertain the effectiveness of the Ball Technic Systems in conserving energy, a ***Before*** and ***After*** installing Ball Technic energy measurement methodology was employed. Measuring instruments were installed on Chillers 4 (500RT) and 5 (180 RT) ***Before*** the Ball Technic System was installed, and the ***Before*** energy consumption of the chiller was determined.

The Ball Technic System was then installed on Chiller 4 and 5. Using the same set of measuring instruments, the ***After*** energy consumption of the chiller was then determined.

By comparing the ***Before*** and ***After*** energy consumption of the chiller, the energy conserved by the Ball Technic System was ascertained. The energy conserved by the Ball Technic System for the 500 RT and 180 RT chillers was found to be ***16.4% and 15.2%*** respectively.