



HUMIDITY CONTROL SYSTEM

File No. 36

Section 9

OPERATION:

Humidity control is very important in a number of industries. Stabilizing moisture in wood products prevents warping, joint separation and shrinkage while reducing dust in the working environment. In the textile industry, humidity controls static electricity and increases tensile strength of the natural fibers. In the printing industry it decreases curl and provides evaporative cooling.

The system designed by American Moistening Company electronically measures the humidity level and either initiates operation if below or terminates operation if above the set point. When activated, the CAT PUMP Model 270 delivers high pressure water through a 3/8" line to special atomizer nozzles. This micro mist is quickly absorbed into the atmosphere until the set humidity level is achieved.

The system has dual filters to prevent dirt, rust and scale from clogging the nozzles and a baffled water reservoir to prevent turbulent water from entering the pump. The system also has a low water and low pressure cut off. All these features assure a low maintenance system.

PROBLEM:

To find an effective method of controlling humidity in various businesses to reduce static electricity or control moisture levels.

SOLUTION:

Develop a micro misting system which responds automatically to changing atmospheric conditions.

SPECIFICATIONS:

CAT PUMPS Model	270
Pressure	1500 PSI
Flow	3.5 GPM
Temperature	Ambient
Fluid.....	Water
Duty Cycle.....	Continuous/Intermittent
Drive	5 H.P. Electric

BENEFITS:

- Controls plant humidity within $\pm 3\%$.
- Uses pressurized water, no compressed air.
- Produces micro mist which is quickly absorbed into the atmosphere.
- Economical, low maintenance operation.

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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