



dry facts

...from Arctic India Sales

Jan-Feb-March 1986

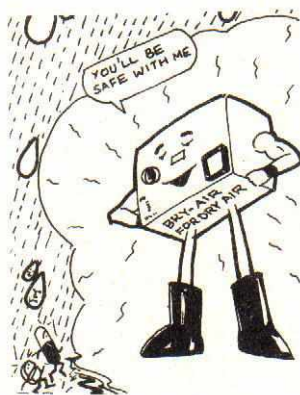
Vol. 6 No. 1



A SOLUTION FOR EVERY PROBLEM

Rust, Mildew, Mold, rot, decay, warping, stretching, dripping, spotting and other types of damages prompted by excessive moisture are not confined to any one industry alone.

Did you know that paper when exposed to moisture stretches, thus hindering printing, binding and packaging operation. In the electrical industry there are instances when the humidities must not exceed 1% RH at room temperature. The air for cooling spray



dried powder milk must have a humidity of 40% RH and a temperature of 10°C, Katha dries better and faster at 50°F and 55% RH. For seeds to retain their germination

potential must be stored at 40°F and 40% RH.

The problem in every industry due to excessive moisture may be unique and different but the solution is the same; the control of humidity in the environment to desired level. Over the years Bry-Air dehumidifiers have proved their worth in industrial applications of dry air.

What are the requirements of your processes? Maybe we have a workable solution to your problem too.

DON'T LET THE HEAT ESCAPE!!!

Saving in the Dairy Industry

In Dairy Industry, large quantities of hot air is required for Spray Dryers for drying. The hot air requirement depends on the capacity of the dryer, higher the dryer capacity, higher is hot air requirement.

The quality of the final product is affected by the air entering the dryer. It should be dry, free from contamination, foreign particles and odourless. In order to meet these stringent requirements the normal practice is to heat the air drawn by a fan to 180-185°C by passing over a steam coil/thermic fluid coil or similar indirect heating source. This hot air dries the product and when coming out of the dryer is hot and moist. The moist air discharged from the dryer at 90°C-95°C is carrying a lot of thermal energy which can be gainfully recycled.



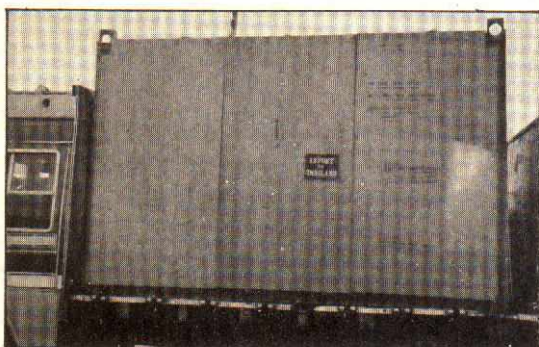
Bry-Air air to air heat recovery system can successfully recover this wasted energy from the dryer. Based on the principle of heat pipes, these pipes transfer the ther-

mal energy from the exhaust to incoming make up air thus heating it upto 65°C-70°C. This air is then passed over the indirect heating source and is heated upto 180°C-185°C. Hence Bry-Air heat exchanger when installed with a spray dryer can reduce consumption by 30-35%.

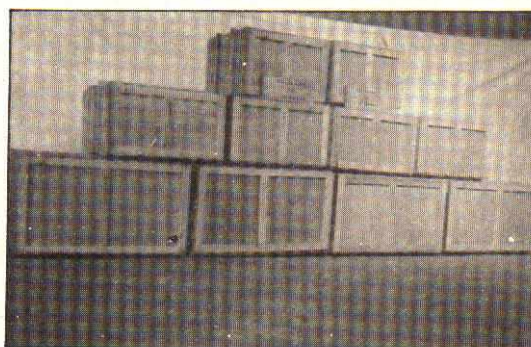
Hot air and make up air are carried in two separate ducts and are not allowed to come in physical contact with each other when passing through the exchanger by means of air tight partition. The preheated air is clean, unaffected by the powder dust laden exhaust air and thus is ideally suited for the process.

Bry-Air heat pipe heat exchangers can recover energy from waste hot exhaust upto 500°C and are especially suited for low temperature recovery.

EXPORTS TO THAILAND



Bry-Air exported the largest number of units in the month of February to Thailand. The consignment of ten compact units included four 300 cfm units, four 150 cfm units and two 50 cfm units. The pic-



ture shows two large units loaded onto the truck; a MVB 45 DG destined for Kunthan Kirby for pharmaceutical application and a BA. 5A for T.C. Pharmaceutical.

WHEN MOISTURE IS TORTURE!!!

Dehumidification in the Manufacture of Polyester Chip

The manufacture of Polyester chips is an intricate process. The final product must have a very low moisture content and entails chip drying under controlled temperature and low humidity and dew-point conditions.

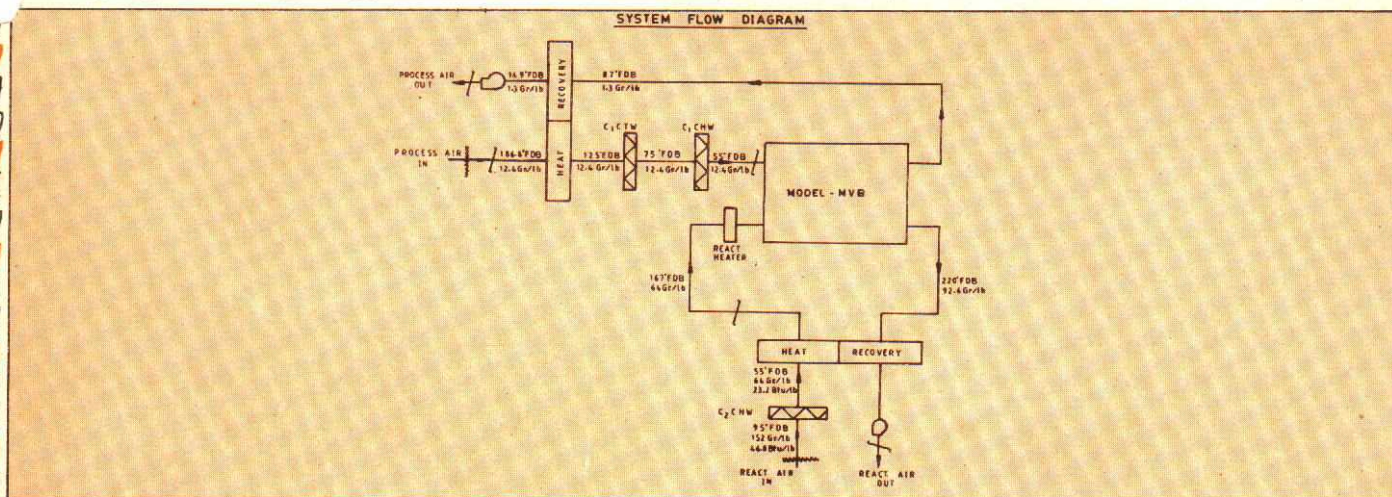
The conventional method entailed passing dry air through hoppers or

tunnels filled with the raw material. Compressed air dryers of large capacities had to be used to ensure high static pressure for the dry air to flow uniformly through the product to dry it. The large size of the system involved, proved to be too costly.

With the introduction of the MVB

air dryers, based on the principle of dehumidification using atmospheric air, a new dimension has been added for drying of polyester chips.

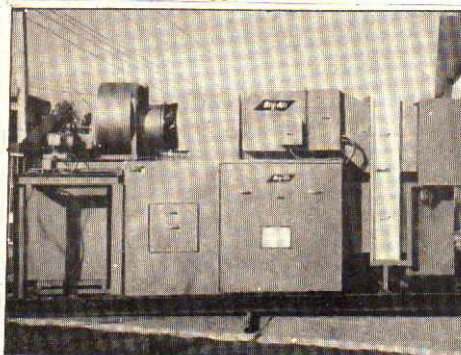
The new method is best indicated through a typical flow sketch/line diagram for plastic drying shown below.



For the flow diagram listed above, the product was required to be dried at a dew point of -24°F at a temperature of 356°F . The unit is so linked that the return air (air coming out of the tunnel containing polyester pellets) which is at atmospheric pressure is made to pass through a Bry-Air MVB air dryer. The air is dehumidified and dewpoint lowered. The dry air at atmospheric pressure is passed through high pressure roots type blower to increase the air pressure substantially to offset the pressure through the product in its tunnel. This dry and hot air passing through the products absorbs the moisture from the chips, leaving them dry.

The air coming out of the tunnel is hot and moist. In this particular instance the temperature has dropped to 186°F and dewpoint in-

This unit has been specially designed for Century Enka for the above application.



creased to 17°F . To utilize the exhaust heat, the sensible energy of return air is transferred to the process air by passing it through an air to air heat exchanger. Thus the reheat requirement of process air drops considerably, so does the energy requirement for cooling the return process air.

It has been observed that the above method of drying is not only lower in first cost but also energy efficient in operation.

Currently there are 7 such dehumidification systems in operation under commissioning with Century Enka Ltd. for PET drying and JCT Ltd. for polyester chip drying.

"NEW DIMENSION IN CORROSION PREVENTION"

This was the theme of the paper presented by our engineer Mr. Ramesh Arora on the occasion of the National Symposium on the role of coatings in corrosion prevention of metals. The symposium was organized by the 'Defence Materials and Stores Research and Development Establishment', at Kanpur on 12-13 March 1986.

The Paper stressed on the role of controlling humidity in the environment to pre-

vent condensation on a surface and hence corrosion. Corrosion prevention by dehumidification finds application not only in the industry for storing finished products as well as in defence for storing rockets, armaments, ammunition and fire arms. Not only does this 'New Dimension' go along with the process of anticorrosion coatings to achieve the desired end result but also serves as an alternate to coating for corrosion prevention.

IN THE NEWS

Paul Griesse, President Bry-Air Inc. was in India in March for the Indo-US Joint Business Council Meeting. Mr. Griesse, who is also the Vice President of the joint business council was also carrying tiding of a proposed sister state relationship between state of Ohio and state of Haryana.

In keeping with the steady strengthening of business

relations between the U.S. and India, Governor Celeste on his visit to India in September '85 had expressed his interest in furthering relationship between the state of Ohio and an Indian state.

Mr. Griesse himself is a great believer in India and its business potential and feels that everything falls into place if the two partners have mutual understanding.

FORM IV—STATEMENT OF OWNERSHIP & Other Particulars of 'Dry Facts'. 1. Place of publication, 20, Rajpur Road, Delhi-110054. 2. Periodicity of publication-Quarterly. 3. Printer's, Publishers & Editor's Name &

Address—Vinita Pahwa, 20, Rajpur Road Delhi-110054 4. Name and address of owner—Arctic India Sales. I, Vinita Pahwa, hereby declare that the particulars given above are true to the best of my knowledge and belief.

A TRIBUTE



The Management and staff of Bry-Air (India) Pvt. Ltd. and Arctic India Sales, feel grieved at the sad demise of Mr. Yashpal Joshi, Director Engineering, who passed away on 3rd March 1986 after being involved in a serious car accident.

We are proud of his significant contribution to the heat recovery programme of the company. To commemorate his good work, the management has instituted an "annual outstanding employee" award.

THE SECOND BRY-AIR INTERNATIONAL MEET

Sunbury, Ohio the headquarters of Bry-Air Inc. is the venue of the Second International Meet of Bry-Air executives for 22nd, 23rd of May 1986.

This meet will provide an opportunity to reassess the achievements and set out policies for global marketing for the coming years.

Bry-Air India will be represented by Mr. Deepak Pahwa, Managing Director, Mr. Arun Bhatnagar Vice President, International Sales and Mrs. Vinita Pahwa, Director for Advertising and Promotional Activity.