

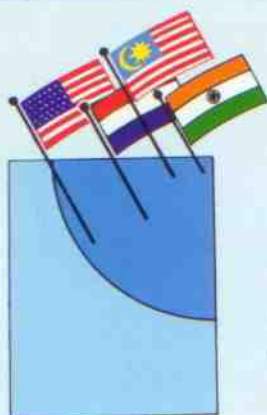
dry facts

...from BRY-AIR

JAN-FEB-MAR '96

VOL 6. NO.1

1996... A GOOD BEGINNING... AND AN EVENTFUL QUARTER



"BRY-WORLD" GETS TOGETHER!!

It was time again for the marketing and engineering executives of Bry-Air USA, Holland, Malaysia and India to interchange notes, formulate strategies and brainstorm to support the customers, worldwide, with better product, technologies and increased service.



The venue was the India Plant. Highly interactive, the meeting helped to strengthen the ties within a group.

It was apt that Bry-World 5, the International Newsletter was also released at this forum.

ON ROAD WITH TRADE SHOWS

It was a busy, hectic schedule for the marketing team. Some snap shot of participation in the above shows.



An Invitation to Bry-Air Booth
Booth no.: 1001
Plastics Malaysia
Venue: Putra World Trade
Centre, Kuala Lumpur.
Date: 25th to 28 th July '1996.



TOWERING SUCCESS ... for Bry-Air Malaysia

Petronas Twin Towers - A landmark in Malaysia. Acknowledged as the "Tallest Building" in the world, the twin towers is a part of the Kuala Lumpur city centre (KLCC) project launched barely 15 months ago. The topping out ceremony, officiated by Yab Dato Seri Dr. Mahathir bin Mohamad, was a moment of glory for every Malaysian . . . especially for all those connected with the project.

We are proud that Bry-Air Malaysia was able to participate in this great project . . . all Heat Wheels installed with Aircon System to conserve energy and provide better Indoor Air Quality were supplied from Bry-Air Malaysia. (More about the wheels on page 4).



30%

30% increase in cycle time.

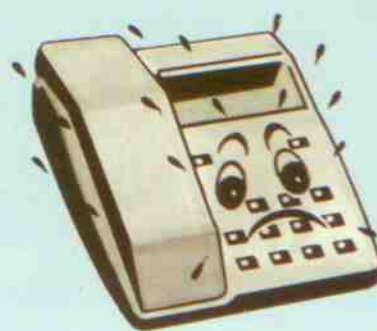
**Don't
let
Mold
Sweating
Slow
You
Down!**

Can simple mold sweating cost as much as 30% in increased cycle time? **Y**es, when a mold sweats, so does the molder. Chilled water, commonly used to significantly reduce the cycle time of a job can cause parts to be imperfect, structurally or cosmetically, thereby increasing scrap.

The usual method for correcting this condensation condition has been to raise the mold temperature, thereby increasing the cycle time and decreasing production - an unattractive solution to a continuing problem.



THE BRY-AIR MDS



WHAT'S THE SOLUTION?

An eminently attractive alternative is to blanket the mold surface with a constant supply of dehumidified air at an appropriate dewpoint, below that of the mold surface.

This is achieved with the help of Bry-Air mold dehumidification system (MDS) during high humidity periods resulting in greater safety, shorter cycle times, less scrap and, therefore, increased profitability.

Did you know ?

Glass, though hard is brittle, while plastics is soft but flexible.

Glass is made of many small molecules firmly bonded together, and the bonds between them will not stretch significantly. If submitted to sufficient force, they will break. These properties make glass hard, but brittle.

Transparent plastics, on the other hand, are polymers made by loosely bonding together very large molecules. The bonds are not very strong, so the molecules will slide over each other, making plastic flexible.

PLASTICS IN AUTOMOBILES

Bry-Air makes plastics handling easier

The usage of engineering plastics in automobiles is on the rise because of its characteristics of high rigidity, heat resistance, toughness, lightness in weight and metal like properties.

To ensure that the top grade plastics resins are molded into quality final products, the processing needs to be supported by a host of auxiliary equipment to dry, convey, dose/blend, maintain accurate mold temperature, prevent mold sweating, etc.

BENEFITS OF USING AUXILIARY EQUIPMENT:

- Automation
- Reduced material handling
- Increased efficiency
- Cost reduction
- Better quality finished products.



WHEN MOISTURE IS TORTURE

In this column we will share with you regularly our experience on major application areas where usage of dehumidification is both extensive and essential.

BOWLING ALLEYS

Bowling an extremely popular sport in the west is fast catching up in Asia, Middle East, Indian subcontinent - Bowling Alleys are coming up with almost all Holiday Resorts Hotels-Clubs

The Problem

Modern state-of-the-art bowling alleys are totally airconditioned and handle at least 50 or more 'bowlers' at any given time. Bowling though a pleasure sport is extremely strenuous. It's common for bowlers to sweat profusely even though the bowling area is conditioned. Sweating makes 'bowler' uncomfortable.

Another, more serious and long term damaging problem for the owners is the general damage to structure and furnishing of the area itself. Since the bowling area has a lot transient human load, the sensible heat load has extreme peaks and valleys. Thus, while the sensible load fluctuates, the moisture loads, on the other hand, remain constant, because fresh moist air is brought in constantly.



The conventional cooling system typically switches off after lowering the temperature causing moisture/humidity to build up, resulting mold growth which not only damages the furnishing and structure but also gives out unpleasant odour.

The solution

Dry makeup air with desiccant dehumidifier, so that moisture/humidity levels are controlled and the conditioned space is maintained at -16°C and $30\pm 5\%$ RH and sweating is prevented.

This provides comfort condition for the "bowler" as well as reduces maintenance cost for the owner.

Needless to mention, Bry-Air dehumidifiers have been used to solve this problem 'comfortably'.

BOWLING ALLEYS OR LIBRARIES

. . . MOISTURE - A COMMON ENEMY

It is a strange comparison - bowling alleys and libraries . . . two absolutely different areas in every possible way seem to share one common enemy - moisture - humidity. Let's investigate more.

LIBRARIES

Libraries, archives, museums . . . and all similar areas face one inherent problem

Preserving books, historic documents, paintings, photographs from the ravages of time.

Books, historic documents, photographs and art works are all hygroscopic because they have paper as the organic base material.

When they absorb moisture, they provide a base for micro-organisms to multiply and

breed, causing irreparable damage. Bry-Air dehumidifiers provide a low humidity environment which prevents microbial attack. The dry air is often enough for preservation without necessarily involving temperature control.

Large and famous museums, churches and libraries use only dehumidification without temperature control to save and preserve the priceless treasures of the world. Two recent examples where Bry-Air compact dehumidifiers have been used effectively to preserve books and archival material are: University Islam Antarabanga - the Int'l University Islamic University at Malaysia has installed 26 Bry-Air Compact Dehumidifiers to maintain low humidity inside the library to protect books.

Similarly 35 compacts have been installed at the Royal Princess Library in Thailand where the princess's vast collection of books, some dating back

200 years are being preserved with the help of dehumidifiers.

Bry-Air Malaysia has handled both these prestigious projects.



Thus, whether you exercise your muscles or brains, Bry-Air Dehumidifiers play a role in both.

BUILT ENVIRONMENT ... TRENDS AND CHALLENGES

HEAT WHEELS PROVIDE THE SOLUTION

The period of rapid economic growth of early 1970s witnessed many commercial buildings designed with very strong emphasis on energy conservation. IAQ consideration were of little significance. Adverse impact of poor IAQ only came to surface after number of cases of health complaints escalated. Sick Building Syndrome (SBS), Tight Building Syndrome, Building Related Illnesses were the terms coined to describe effect of poor IAQ on health.

The last twenty years have witnessed the development of a number of IAQ guidelines by governmental and professional institutions. ASHRAE standard 62, Ventilation for Acceptable Indoor Air Quality specifies ventilation standards which are four times more than prevailing standards.

The recent IAQ guidelines have resulted in improved indoor environment but higher utility bills.

The challenge thus for the designer, consultant and owner is to have Indoor Air Quality (IAQ) at lower energy cost, resulting in a big wish list

... for an equipment which will ...

- Manage increased % of outdoor air along with humidity control.
- Minimise first, operating and maintenance costs.
- Decouple the outdoor air load to effectively use packaged HVAC equipment.
- Retrofit into existing system design.
- Maintain space humidity between 30% - 60% RH all year.
- Curtail peak electrical demand charges.
- Reduce/eliminate the use of CFCs.



To meet all these needs of humidity control, energy and IAQ; only one equipment will meet the challenge; that is the heat recovery device using the enthalpy wheel.

SO ... HOW DO WE MEASURE IAQ?

In order to evaluate excessive indoor air pollution and its health effects, it is important to

identify which pollutants are present in a building.

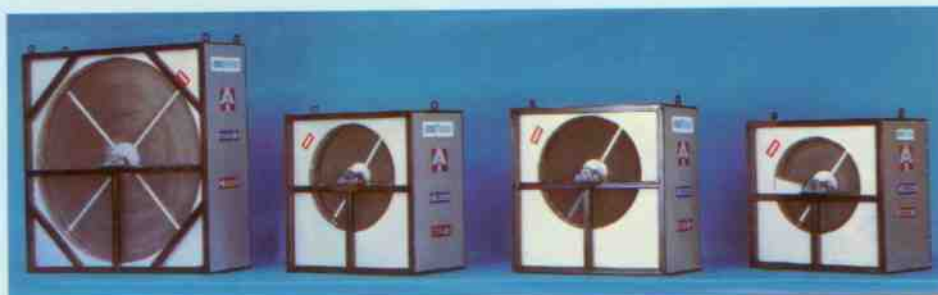
It is expensive to test for a broad spectrum of possible pollutants and indoor air contaminants. ASHRAE has however recognised CO₂ as the reliable surrogate index for bioeffluents from occupants and therefore CO₂ levels in an airconditioned room form a good **indicator** and **correlator** of occupancy and ventilation rate within a space. CO₂ itself is not considered a contaminant but elevated CO₂ concentration occurs at the same time other pollutants build up. ASHRAE standard 62-1989 recommends that indoor CO₂ levels should not exceed 1000 ppm.

THE 1050 CO₂ MONITOR ...



... Is an accurate and rugged hand-held carbon dioxide monitor with a digital readout which allows immediate measurement of indoor ventilation rates.

Write in for more details.



ECO-FRESH HEAT WHEELS ... IAQ + ENERGY SAVING

Bry-Air

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