



# Dry facts

...from Arctic India Sales

APRIL—MAY—JUNE 1990

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## BRY WORLD ..... MEETS



The hosts for the Bry-Air Annual International Meet this year were Delair, Netherlands.

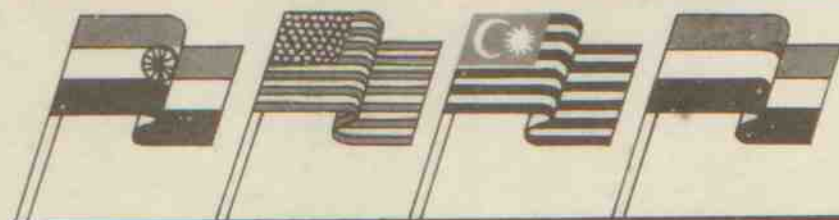
The chiefs of the three companies — Bry-Air Inc. USA, Bry-Air India and Delair, Netherlands met to discuss and analyse the implementation of strategies adopted last year.

The three companies presented their financial results for the year gone by and projections were made for the coming years. The financial controller handed a pair of shades each, to protect the eyes of the participants, as the future looked 'too bright'!

Focus of the meeting was to assess the Bry-Air position in the changing business environ of the 90's.

A treat for the international visitors, was a full day seminar, organized by Delair on "where to sell in the 90's" by the famous European Management Consultant "Claus Noeller"

As usual the tulip fields and windmills fascinated the visitors, on the drive to the ship building yards near Amsterdam, where the famous replica of 'Battavia' an old Dutch ship is being recreated for the 1992 olympics.



### A COOL ASSIGNMENT

Institute of Plant Engineers, Ooty chapter and HPF requested Bry Air for a seminar on Dehumidification.

HPF has placed an order for 5 Nos MVB dehumidifiers, the largest in the series, for its photofilm manufacture unit at Ooty. The first of these dehumidifiers are to be installed in the R&D unit of this 'state of the art' plant.

It was certainly a very welcome assignment as the cool climate of Ooty was relief from summer heat of the plains. The seminar was well attended and highly appreciated.

Later in the evening at a dinner hosted by Bry Air, the formality of the seminar session gave away to an easy camaraderie.

### POLITICS OUTPACES BRY AIR



At the inauguration of the New HSIDC Complex June 23 '90 former CM Haryana, Mr. Banarsi Das Gupta with Mr. Deepak Pahwa, MD Bry Air and Mr. Dharendra Kumar MD HSIDC



# "WOOD SAVED IS WOOD PRODUCED."

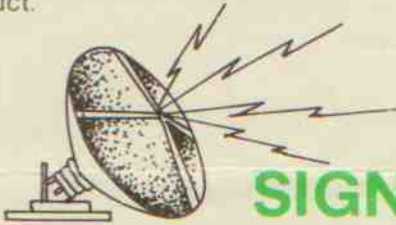
Emphasized Sh. C.P. Pandey, Inspector General of Forests while inaugurating the **third forest products conference (Jun-26-28, 1990)**, Dehradun organized by the Forest Research Institute.

Stressing the need for modern and effective methods of wood-seasoning, Sh. Pandey said that the need of the day was adoption of **"....new energy conserving processes such as high temperature dehumidification drying....."** for better utilization of this scarce product.

The conference was attended by over 300 wood product specialists from Govt. institutes, the public and the private sector.

The paper presented by our Engineers — "Wood Seasoning — through Dehumidification" generated a lot of interest and enquiries from the attendees.

Dehumidification is the simplest, fastest and most economical method of Wood Seasoning. We, at Arctic India Sales, have done several jobs on Woodseasoning using Bry-Air Dehumidifiers.



## SIGNALLING FOR DRY AIR

When the location is Thigu, near Lhasa. The weather conditions — extremely cold & wet : -15°C, even in summer. The job — to protect a sensitive piece of military signals equipment. The choice is obviously a Bry-Air Dehumidifier.

The Airgineer from our Calcutta Office worked in raging blizzard and ankle deep snow to instal a Bry-Air BA-1.5A dehumidifier, which would supply a constant flow of dry air around the signals equipment thus keeping it cocooned against ravaging effects of moisture.

**Bry-Air**

..... **CHINESE STYLE**

Chinese food is gaining popularity day by day with the urbanites. Availability of instant noodles, soups, etc lends easy accessibility to these flavours right out of our kitchens.

Manufacture of instant foods require dry air as an important prerequisite in processing, packaging and storage operations to maintain the final quality.

### (i) Feel Like a Soup?!! No Problem!

Preparing soup requires no great effort now with soup being available in dried powder form or in cubes, in attractive sachets. All one has to do is add boiling water to the ingredients. Water is a necessary ingredient to cook this tasty snack. However, if water happens to get into the 'Soup' in the process or packaging stage, then the dry soup powder or cube which is highly hygroscopic turns into a soggy, lumpy, tasteless mass, not fit for consumption.

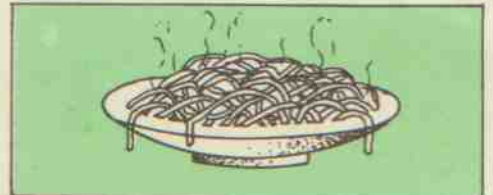
Thus, dry air is a necessity during the process and packaging stage and Bry-Air dehumidifiers can do the job effectively, easily and economically with tasteful results.



### (ii) Noodle out of the packet

Instant noodles have to be manufactured under precise temperature and humidity conditions for them to retain their taste and crispness. Humidity also has to be controlled in the packaging area for the same reasons.

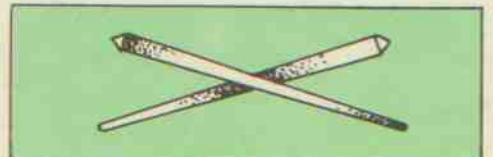
Bry-Air dehumidifiers maintain controlled humidity conditions at required temperatures to provide optimum process condition for manufacturers of instant noodles. Dehumidifiers are also being used to dry noodles and vermacelli faster.



### (iii) Of Chopsticks 'n' Bry-Air

Chopsticks made from Bamboo are liable to attacks from fungus if not packed under proper humidity controlled conditions.

Bry-Air Dehumidifiers are able to provide optimum conditions,  $35 \pm 5\%$  RH at 25°C in the packaging area to keep away the damaging effects of fungus, mould & mildew.





# WHEN MOISTURE IS TORTURE!!!

## DRY SOLUTIONS TO A WET PROBLEM

### Dehumidification in the Marine Industry

**In the marine industry, "rust" is a four lettered word. It causes damage during new construction, attacks vulnerable interior surfaces during sand blasting prior to painting, corrodes engines parts and causes crores worth of damage to the industry.**

Whether at land or sea, Bry-Air reduces humidity levels inside the ship to check rusting and helps

- ★ prevent damage to sensitive mechanical and electronic equipment.
- ★ prevent corrosion of stored components & machine parts; in shaft galleys and pipe galleries.

Aparts from checking rust, Bry-Air Dehumidifiers also help in controlling humidity so as to

- ★ reduce drying time of ship holds.
- ★ keeps air in storage hold dry when the ship is transporting hygroscopic cargo.

#### ON TIME WITH DELIVERY SCHEDULES

Better quality and faster shipping facilities are being demanded today as more and more new markets are being tapped by manufacturers and exporters. Thus, the time lag between a ship arriving at the port with the particular cargo and leaving with another is getting shorter and shorter. Shippers, however, demand that the ship holds are clean and dry before a new cargo is loaded, especially, if the cargo is, chemicals, or fertilizers or any other hygroscopic product. Weather conditions are rarely the way they should be for efficient and quick drying of tanks and holds.

Dehumidification is the only option in such conditions and should be adopted for quick drying of holds to avoid delayed schedules and loss of business.

#### CORROSION AT BAY

Ocean going vessels such as oil rigs and oil tankers etc are often stacked for long period of time and are usually damaged due to corrosion during this period. Dehumidification can effectively check corrosion and protect stacked vessels from other ill effects of moisture.

All sandblasting and power coating operation must use 100% fresh air but without moisture. Again, dehumidification is the only method for achieving optimum conditions.

#### ...AT SEA

At sea, surrounded by water on all sides, instruments in the engine room, the pipe gallery and many other parts of the ship need dry conditions to keep rust or corrosion at bay.

The cargo carried by the ship also needs to be stored under controlled conditions as the ship may load in temperate climate and unload in the tropics. The change in temperature between different climes causes condensation of water vapour in the hold which can damage the cargo. The conditions in the hold must be maintained at constant temperature and humidity levels, irrespective of the weather outside.

#### DEHUMIDIFICATION ON BOARD

Bry Air has supplied dehumidifiers to the Marine Industry for ship mothballing, gear casing, layup, sandblasting, coating and cargo hold drying.

The areas that need dehumidification are mainly —

- a) Machinery/Engine room
- b) Living quarters
- c) Midship dock housed pump room
- d) Steering room

The cool sea water in which the vessel floats leads to a difference in temperature between various sections of the ship. This leads to condensation on all exposed surfaces.

Design condition of 40% RH is a safe condition at which the main elements of destruction — corrosion, rot and mildew — are inhibited.

Upon layup, a dehumidifier takes about three weeks to dry the ship to design conditions and then needs to run 2-3 hours per day to maintain conditions.

The dehumidifier is controlled by a humidistat which is adjusted according to the relative humidity to be maintained.

Where permanent installations are not possible due to constraints of space, **Bry Air portable dehumidifiers** can be brought in for maintaining required conditions.

**Bry Air has hundreds of dehumidifiers aboard ships, preserving them for years until they are restored to service. The interior of the ship looks as clean and fresh as on the day the ship was mothballed!!**

Enter Bry-Air... exit moisture





# QUALITY AIR ... FROM delair

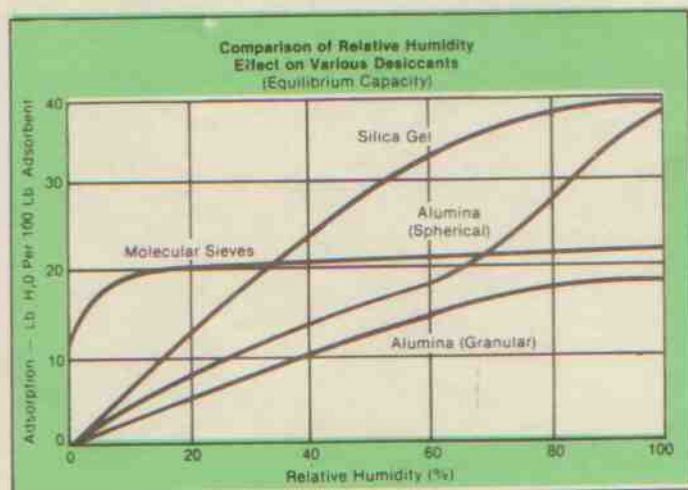
Delair offers the widest range of compressed air drying systems to optimize one's selection.

In our last issue, we talked about 'How to choose the right dryer'. In this issue we will talk about different types of desiccants, since desiccant selection is one of the most important components in designing a compressed air drying system.

## ADSORBENT DESICCANTS

Proper selection of desiccants leads to a more efficient and economical air and gas drying system. The most commonly used desiccants are **Silica gel**, **Molecular Sieve** and **Activated Alumina**. Generally the desiccant selection is based on the relative humidity of air & gas stream.

In specific applications, other variables must also be considered. Some of these are, air streams inlet temperature and pressure, flow rate and quantity of contaminants. Once the air stream enters the desiccant bed, it is important to note its velocity through and contact time with the desiccant and the method of regeneration.



**Silica Gel** : The desiccant performs best when the relative humidity of the air stream is 40 to 80% RH. It has a pore size of 4 to 20 Angstroms. It is a low cost desiccant.

Silica gel has a violent reaction to liquid water. The desiccant fractures creating desiccant fines and particulates that can restrict air flow thus causing excessive pressure drop. It is best for atmospheric air drying.

**Sieve** : High grade molecular sieve performs best as a drying desiccant when RH is 40% or below. Its pore size is extremely small between 3 to 5 angstrom. Its uniform structure allows easy air passage keeping pressure drop low.

It is best for high temperature very low dew point drying.

**Activated Alumina** — This desiccant performs best as a drying desiccant when the RH of the air stream ranges between 80 to 100%. It has a pore size of 4 to 20 angstrom.

It does not fracture like Silica Gel in presence of liquid water.

The spherical shape allows easy air passage and hence very low pressure drop.

It is relatively expensive compared to other desiccants.

It can achieve very low dewpoint, even upto-100° F.

This desiccant is the best for compressed air application.

## The delair Choice

Delair has over the years, through research and continuous testing, developed a specially graded desiccant '**Delsorb 10**', which is ideal for compressed air drying.

A highly efficient desiccant, it is specially graded for size to give maximum performance. It allows a homogenous air flow and gives very low pressure drops. It also regenerates at very low temperature and has a long life.

"Delsorb 10" is relatively more expensive than other desiccants but its payback is quicker in terms of performance, less attrition and long life.

## ERRATA

In the **ABC** for dryer selection in our last issue **Pressure dew points applicable to our range of dryer were misprinted. The correct figures are.**

Model	Pressure dew points
DI	2° C to 10° C
DC	-20° C
PDPA	-40° C
DA	-40° C
DB	-40° C
DBM	-40° C
XD	-25° C

We apologize for the error.