Bry-Air

# dry facts

...from BRY-AIR

ISO 9001 Bry-Air ISO 14001

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## Are you Somewhere Near New Delhi !!

### "Airgineering Showcased"

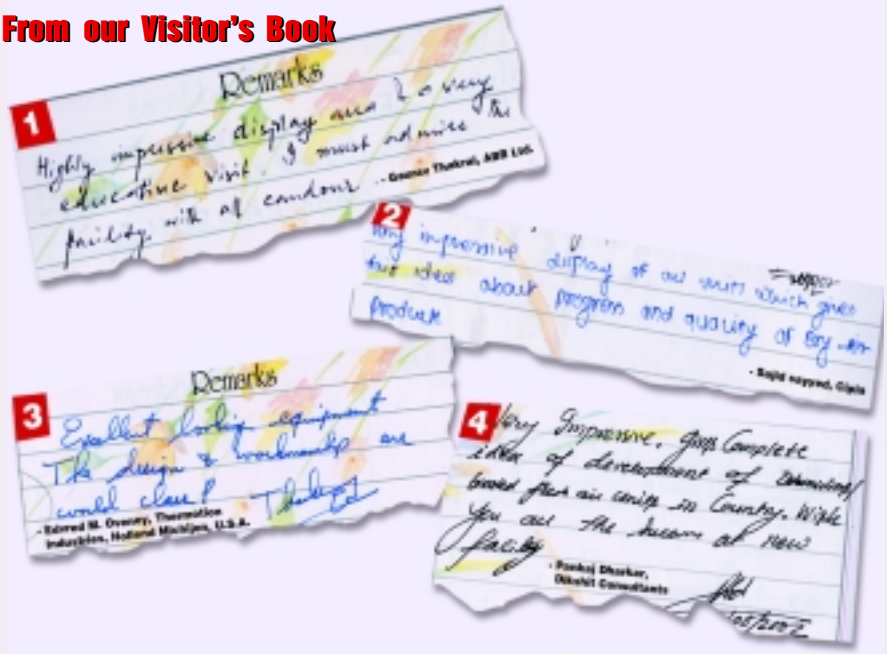
Whenever you are near India's capital-New Delhi, do not forget to check out our

**Display area for our entire product range. We will be glad to have you with us.**

**Glimpses of the display area at our corporate office . . .**

**. . . at Udyog Vihar, Gurgaon, India**

**From our Visitor's Book**




## Widening Network


### Opens Office in U.S.

DRI now has an office in the U.S. Mr. Craig Fillmann is at the helm of affairs at DRI US office. The office cum warehouse has become operational in Portsmouth, NH, US since August 15th 2002.

DRI US will support DRI customers in N.America. Please log on to www.drirotorsusa.com for more information. We also look forward to seeing you at our **Booth #4142 at AHR Expo 2003 (27-29th Jan. 2003), Chicago, USA.**


### Opens another office in China

Bry-Air China opened its second office in Guangzhou, in addition to its existing office in Shanghai to support its increasing customer base in China.

Meet us at **Booth #12-054, China Refrigeration 2003, (9-11th April 2003), Beijing, China.**

# *Did You Know ?*

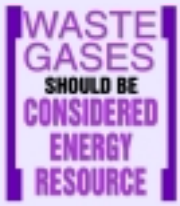
## Almost 25% of the energy consumed by the Industry is wasted.

Plant operations consume and often waste substantial amounts of energy !!

A large portion of this waste is discharged from the plant as gases which range in the temperature from less than 38°C (100°F) to well over 94°C (200°F). These **waste gases** should be **considered** as an **energy resource** by the plant engineer and must be **recovered** instead of being discarded from the facility.

### The value of waste heat recovery

The primary value of waste heat recovery equipment is in the area of economics. Heat Recovery Equipment reduces the plant's fuel requirements by atleast 5% to 20% in most cases. Secondly, heat recovery systems often cut the expenses for major capital equipment such as boilers or chillers by reducing the size needed.






**The Bry-Air air-to-air Heat Pipe Heat Exchanger helps to recover almost 60% of the waste energy from hot waste gas streams.**

The economics of the Bry-Air system are as under :

- Reduces heating fuel consumption.
- Can be applied from process to process, process to comfort and comfort to comfort applications.
- Payback periods are as low as 6 - 12 months.
- Unique integrated fin construction providing significant advantage over plate fin or duplex fin design.
- Suitable for air-to-air heat recovery for exhaust temperatures upto 500°F (260°C).
- Bry-Air Heat Pipe Heat Exchanger finds wide application in

  - Textile Industry
  - Food Industry
  - Process Industry
  - Biscuit & Sugar Industry

Additonal advantages are that the Bry-Air heat pipe heat exchangers are

- Compact
- Operate with low temperature differentials
- Have no moving parts to malfunction.

## OZED LIMITED Bry-Air Representative in Nigeria

Ozed Limited

Ozed Limited is a major innovative technology and service-oriented supplier of a wide variety of equipment to many well-known industrial clients especially those in the food and beverage, pharmaceuticals, chemicals and healthcare sectors in Nigeria.

With Mr. Tony Ofoman at the helm of its affairs and an entire team of trained engineers to support our customers, Ozed Limited has effectively developed and supported the Nigerian market from Bry-Air Dehumidifiers and Plastics Auxiliaries.

Contact Ozed Limited team for all your requirements of Moisture / Humidity Control and Plastic Auxiliaries in Nigeria @:

Telefax : 234-1-4938204
Fax : 234-1-4971015
Email : ozedintl@metrong.com

# 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.**

## Protectors of the Defenders

### *Dehumidification in the Service of Defence*

**Moisture** silently **damages** defence equipment, **impairing it's reliability** and **delays availability** in an emergency.

Temperature fluctuations can produce wide ranges of humidity leading to condensation which provides a base for :

- Rusting and corrosion of steel and metal parts.
- Spoilage due to mold, mildew, fungus on uniforms, parachutes, leather boots, tyres, maps, film and microfilms.
- Electrical pitting, arcing, reduced electrical resistance.

Most materials and equipment are not **Temperature-Sensitive** but are **Moisture-Sensitive**. Thus, maintaining storage areas dry, through dehumidification, is more effective and simpler than maintaining heated or cooled, thermally insulated stores.

After extensive experimentation, it was found that most of the materials could be preserved indefinitly in a humidity controlled environment, ideally between 30-40% RH.

Dehumidification systems are being increasingly employed and adopted by the Army, Navy and Air Force all over the world.

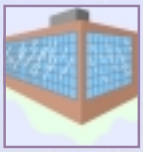
### Ammunition Storage

Storage of steel or metal products presents major problems

where air is humid and there is a big variation in temperature during the day causing condensation which results in corrosion. To prevent corrosion, relative humidity should not exceed 35-40% in warehouses where such sensitive equipment is stored.

### Missile Assembly and Storage

The ASHRAE Guide and Data book lists the standards for



temperature and humidity as 27°C (80°F) & 25% RH for missile assembly and at 2°C (35°F) and 35% RH during purging and cooling. These conditions can be achieved by installing a desiccant dehumidifier at the assembly and manufacturing areas and also separately for missile storage areas.

### Explosives Storage

Gun Powder and solid fuels deteriorate when exposed to humid condition. Ammonium Nitrate in presence of humidity and hydrocarbons becomes explosive.

### Negative Film / Archival Storage

All documentation in microfilms must be stored at 20°C (70°F) and 30% RH in fireproof vaults. Colour films must be stored at 23-18°C (73-64°F) and 30% RH to prevent mildew formation.

### Research Labs / Equipment Rooms

Humidity and temperature control are standard operating procedures when using highly sophisticated electronic test

measuring instruments in R & D Labs.

Desiccant Dehumidifiers are commonly used to simulate these conditions in environmental chambers.

### Food / Ration

The food research laboratories are engaged in R & D

work involving standards in procurement, processing, packaging and supply of food items. Dehumidification equipment is essential in (1) Storage (2) Production (3) Packing and (4) Processing of food products.

### Mothballing

In order to preserve ships from the damaging effects of moisture, the Navy resorts to "Mothballing" through dehumidification, which :

- Reduces downtime to reactivate ships.
- Safeguards missiles and torpedoes.
- Protects instrumentation and electronic system from corrosion.
- Prevents rodents and vermin being harboured aboard.
- Prevents organic corrosion due to fungus, mildew etc.

### Marine

When ships are in use, at sea or in port, dehumidifiers are

used for humidity control of cargo, hygroscopic materials and in shaft alleys and pipe galleries where moisture builds up and for protection of sensitive instruments and electronic equipment.

### Paint Shop

Paint spraying and lacquering requires a temperature of 27°C

(80°F) and 50% or less RH. Bry-Air dehumidifiers are extremely useful for powder coating plants where the make up air to the spray booth is dehumidified; sometimes it is necessary to dehumidify the entire coating room.

### Drying of uniforms / Flying Suits / Parachutes

Mold, mildew, fungal growth due to condensation of moisture on stored uniforms, leather boots etc. damages the material irretrievably. Dehumidifiers are extensively used to pre-dry items like parachutes, uniforms etc.