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INTERVIEW

How Bry-Air can resolve spoilage issues in cold chain sector?

By TCBU Editorial
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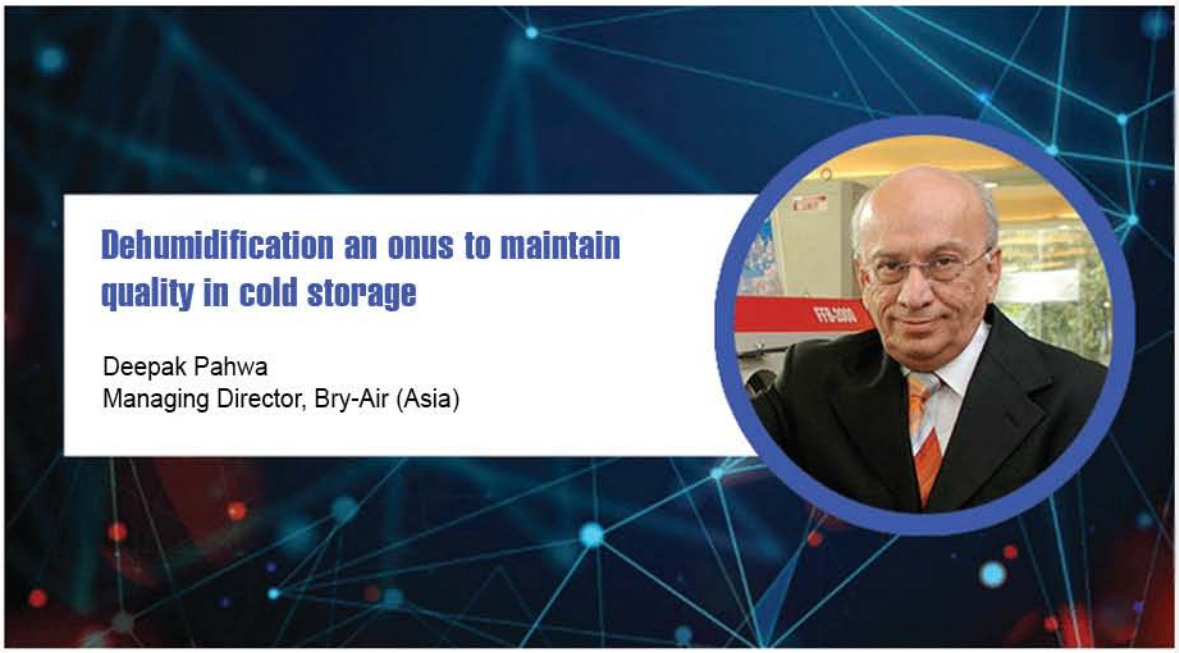

Deepak Pahwa, Managing Director, Bry-Air (Asia), in an interview with TCBU, talks about the significance of dehumidification in HVAC and cold chain sector. Noting the mounting humidity concerns towards cold chain and cold storages he feels Desiccant Dehumidifiers is the need of the hour.

How are present global trends affecting Bry-air's market? What is the need of the hour for HVAC-R market according to you?

While people are steadily getting to work with more precautions and safety measures than before, the need for intelligent HVAC products is increasing day by day. Technologies such as Artificial Intelligence (AI), Internet of Things (IoT), remote control access, automated control systems are transforming the HVAC&R and Dehumidification market. Customers are looking for real-time information and effective means to improve efficiency and reduce maintenance/ production costs.

In the last one decade, HVAC&R market has witnessed a significant jump due to contributing factors like rapid industrialisation, growing investments in the infrastructure sector, unpredictable climatic conditions and inclination towards comfort and indoor air quality. The rising need for energy-efficient HVAC&R systems, surging dehumidification (moisture control) and growing replacement demand for HVAC&R systems is expected to drive the industry growth in the near future.

India HVAC&R (Heating, ventilation, air conditioning and refrigeration) market is expected to attain a size of $5.9 billion by 2024, progressing at a CAGR of 7.0 percent during the forecast period (2019-2024).

Under Pahwa Group, we have been effectively focusing on quality air solutions, environment control solutions, Indoor Air Quality, and Ventilation to offer green and sustainable solutions, intending to strengthen our position in the HVAC&R industry. Bry-Air has practically become the only Indian player in the HVAC&R industry whose products are equally sought after in the international markets, as they are in the Indian market. . . . . .

Read the full article, visit www.bryair.com

How to secure servers from airborne contamination?

The backbone of IT infrastructure is the server.

Recently, IT services have been tagged as an essential service across the nation. It helps us to remain connected with the world even after the physical distancing. The backbone of IT infrastructure is the Server. It maintains smooth operations and record-keeping across industries including banking, telecommunications, manufacturing, IT, railways, hospitals & healthcare.

Considering its role in the day-to-day operations across industries, servers should be given prominence to maintain a high level of functionality. The IT personnel should ensure that all servers in Data Centers perform at full capacity 24x7.

For its crucial role, servers should be kept in a carefully controlled environment. While planning for the server room, one should consider the overall location of the server room or data Centre. Since servers generate heat but need a cooler and cleaner environment to function.

Discovering the cause

The air quality performs a crucial role in maintaining the servers life. The Airborne Molecular Contaminants and Atmospheric particulates are omnipresent in the server room. It is a form of chemical contamination generated due to the vapour of gases. These gases are highly corrosive in nature and continuously emanate from nearby pollutant sources which can easily seep into the air-conditioned server rooms. These containment gases along with high humidity affect the operational capability, reliability and longevity of servers. They lead to micro-electronic corrosion and equipment malfunction which further paralyse servers and other IT infrastructure. This may lead to loss of data, server breakdown and shortening the life span of Servers adding the cost of maintenance and IT infrastructure.

Sulfur-bearing gases, such as Sulfur Dioxide (SO_2) and Hydrogen Sulfide (H_2S) are the most common gases causing corrosion of electronic equiment. SO_2 and H_2S alone are not very corrosive to silver or copper but the combination of these gases with gases such as NO_2 and Ozone is extremely destructive. The corrosion rate of copper is a strong function of relative humidity, while the corrosion rate of silver has lesser dependence on humidity. If corrosive gases and contaminants are overlooked, it creates an unhealthy environment for employees too

Especially, data centres and server rooms located in industrial areas or polluted areas are more prone to gaseous contaminants. Also, when the servers rooms are located near landfill sites, sewerage/drains, high-density traffic, process industries, etc., the corrosion problem accelerates.

Protecting servers in data centre from electronic corrosion.

The ideal solution to corrosion is Gas Phase Filtration, where clean air provided to the sensitive servers. Bry-Air DataCenter Air Purifier (DAP) keeps the corrosive gases away from damaging the hardware by effectively removing the airborne gaseous through the process of adsorption and chemisorption This helps in protecting the servers from the threat of electronic corrosion and abrupt failures.

Also, excess moisture can also adversely affect the servers and their performance. Bry-Air Desiccant Dehumidifier can effectively maintain the recommended humidity levels inside the server room and secure them fromfailures.

The ideal solution is DataCenter Air Purifier DAP series

When *moisture* is Torture

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

Together with इसरो ISRO Bry-Air touched the sky

Bry-Air is honoured to support ISRO for over 30 years. In these years, Bry-Air has been providing critical humidity control equipment for the assembly of satellite and launch vehicles. Together with ISRO satellites, Bry-Air touched the sky. Space exploration through satellites has improved man's ability to observe and understand the behaviour of the earth and its atmosphere. While revolving around earth's orbit, it offers countless benefits like it helps in navigation, communication, TV signals, data collection, weather forecast, monitor movements in universe, monitor environmental changes, tracking flights, ships and on-road vehicles, explore movements of asteroids, comets in universe, measure gases in the atmosphere. It also helps scientist in evaluating the scope of natural disasters like wildfires, volcanoes and how to respond natural disasters.

Recently, Bry-Air provided dehumidification solutions to ISRO for the launch of Brazilian satellite Amazonia

Need to maintain perfect climate

When the countdown for the launch begins, the meticulous final tests on all instrumentation are carried out to certify that it can withstand the rigors of take off and journey into space. The last 24 hours are crucial to the final launch. As the various hardware used in satellite are transported from various parts of the world, they are further assembled and shifted from the conditioned environment of the assembly bay into the ambient environment. The temperature variations and uncontrolled levels of humidity during transportation causes condensation. The condensed moisture leads to erratic behaviour of the highly sophisticated and sensitive microprocessor based controls and instrumentation. Even the slightest error could jeoparadize the lift-off schedule. The uncontrolled humidity tend to damage the critical instrumentation and other components of satellite or the Satellite Launch Vehicle (SLV), which is used to place the satellites in their specific orbits. In addition to this, moisture control is utmost for all the launch stages from sending satellite to skyward to SRB separation from vehicle to final payload launch.

The satellite hood which houses the instrumentation needs to be protected against moisture damage. The solution lay in flushing the hood with a continuous supply of cold dry air. Thus, Dehumidification is essential for humidity sensitive equipment, critical parts, PCB, modules & packages of the space craft payloads

The Bry-Air solution

During the mission, Bry-Air Dehumidifiers helps achieve the final test for instrument certification and withstand the rigors of the take off, journey and separation of the spacecraft and its expandable rocket.

The dehumidifier maintains the desired RH conditions at the assembly area and launch pad, even as the zero hour approaches. For the vehicle, in which the satellite is transported from one station to its launching station.

Being industry leaders in innovative air technologies and products, Bry-Air has been providing Dehumidification solutions in the mission critical areas for various space research projects.

Made with pride in India, Bry-Air has been providing critical humidity control equipment for assembly of satellite and launch vehicles to ISRO for over 25 years.

Looking forward to the launch of the following *ISRO projects.

2022 ● Chandrayaan 3 ● Aditya L1

2023 ● Shukrayaan 1

2024 ● Mangalyaan 2

**Disclaimer: informaten compiled is based upon web research. Project schedule is subject to change.*

Enter Bry-Air... exit moisture™