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Green Buildings on High Rise

Today, manufacturers are focusing on developing new products for commercial and light commercial markets to deliver comfortable environment to building inhabitants, cost-effective performance and environmental sustainability.

The ever-increasing urban population and the subsequent need for housing and commercial buildings are driving companies to turn to sustainable building solutions. This is accelerating the demand for such technologies especially in terms of heating, ventilation, air conditioning (HVAC) products. In India, currently the per capita HVAC spend is \$ 1, while it is \$ 7 in China, which is an indicator of the growth potential for the sector. In this context, ACREX India show offers an ideal platform for exhibiting a wide range of upcoming technologies, solutions and ancillary products that will be beneficial, not only financially but environmentally as well, for such projects.

Director - Marketing & Strategy, Climate, Controls &

Security, United Technologies, Amit Maheshwari states, "We have been closely associated with ACREX India for the past several years and see it as an exciting forum for fruitful exchange of ideas, learn the latest trends in innovation and establish strong business alliances."

Raising the green quotient

As per a 2013 study by McGraw-Hill, the construction cost of a green building is 5-8 per cent higher for a platinum building than a conventional building, but the green building delivers substantial reduction in operational costs. "With buildings in India consuming about 20 per cent of India's total electricity, incremental higher cost of a green building gets paid back within three to four years, and in subsequent years the

building delivers absolute savings in operating costs. This makes good business sense," Maheshwari asserts.

India is also making great progress in the green building arena. Indeed, with a modest beginning of 20,000 sq ft of green built-up area in the country in 2003, today there are over 2,362 green building projects representing over 1.813 billion sq ft of green building footprint, according to the Indian Green Building Council (IGBC).

Energy-efficiency

The benefits of climate control technology can be derived for new green buildings as well as for existing buildings through retrofits and renovation projects. Less energy consumption translates to reduced

operating cost. For instance, the ITC Royal Gardenia hotel in Bangalore has deployed Carrier's Evergreen 23XRV chiller that have reduced the building's energy consumption by up to 40 per cent over industry standards. Also, the Terminal 3 of Delhi Airport has deployed 20,000 tons of energy efficient refrigeration, which has facilitated the building to be rated Leadership in Energy & Environmental Design (LEED) Gold by the US Green Building Council.

R&D and innovation

Innovation in technology and systems has resulted in smarter, energy efficient products that consume less energy while delivering a comfortable environment to building occupants. R&D plays a crucial role in transforming innovative ideas into products. The company is displaying some of its latest products at ACREX India. "The latest products on display include light 3-ton & 4-ton commercial HVAC systems under the Carrier brand, Variable Refrigerant Flow and Variable Water Volume systems, and a new range of floor standing air-conditioning systems. We are also showcasing the indigenously developed 11-tonne & 17-tonne packaged systems for applications that require higher air quantity. Under the Carrier and Toshiba brands we have made sustainable products available in India, which are being exhibited at the show."

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EVENTS TODAY

Workshop

Aiming at sharing valuable knowledge with the industry, ISHRAE is organizing the following workshops today:

- Technical Director, Low Carbon Design Consultants – LCDC, and ASHRAE Course Instructor, Frank Mills will enlighten the audience about Hospitals & Critical Healthcare Facilities – HVAC systems design
Venue: Conference Room 1, Hall 8
- CEO, VMC Group, USA, John Wilson will brief on Seismic Considerations in Building Design
Venue: Conference Room 2, Phoolwari
- Chief Executive, Pinnacle Infotech Solutions, Bimal Patwari will give insights into BIM- Revolutionizing Construction Industry
Venue: Conference Room 3, Phoolwari

Source: Vogel Business Media India



▶ Director - Marketing & Strategy, Climate, Controls & Security, United Technologies, Amit Maheshwari

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A Great Platform to Interact with all Industry Stakeholders

Knowledge and technology sharing determines the growth prospects of any industry. This holds true for the HVAC&R sector too. And ACREX India exhibition offers a platform for disseminating information on the latest trends and technological advancements emerging in this sector.

While industries across the globe realize the significance of reducing carbon footprint and curbing greenhouse gas emissions, very few are able to actually achieve these goals. The reasons are many – lack of resources and knowledge about how to initiate the process acts as a major deterrent. And here lies the importance of ACREX India show organized by the Indian Society of Heating, Refrigerating and Air conditioning Engineers (ISHRAE).

Role of trade shows

ACREX India features several exhibitors from developed countries who showcase new developments in the field of HVAC&R, which are highly beneficial to all industry players. The event comprises workshops, technical sessions and panel discussions on the emerging trends in the industry, thus

disseminating knowledge to the participants. It also acts as a great platform to interact with all the industry stakeholders at one place and share ideas to develop the industry further.

Technology trends

According to National Secretary, ISHRAE, and CEO, Aircon India Inc, Amitabha Sur, technologies to reduce energy consumption and conservation of natural resources will soon take precedence over others. “The theory of reduce, reuse and recycle shall be driven hard by the HVAC&R industry in the years to come. Low ozone depletion potential (ODP) and low global warming potential (GWP) refrigerants would replace the present halocarbons. I foresee a steady shift towards natural refrigerants,” he says.

Sur further adds that the design engineers of HVAC&R industry will have to take a

more holistic view while designing systems and closely coordinate with architects and other stakeholders of building design to consider the usage of energy-efficient building materials; introduce sensors and controls to monitor the performance of systems; and reduce the overall energy footprint of buildings.

“We have progressed considerably in terms of designing energy-efficient products. Of course, it is a continuous process, and here comes the importance of a better system design. Not just independent product efficiency but better system efficiency and lower lifecycle cost would be the way forward for engineers,” opines Sur. Moreover, quality and on-time delivery is critical for companies in this arena to gain a competitive edge in the market.



Source: Aircon India Inc

► National Secretary, ISHRAE & CEO, Aircon India Inc, Amitabha Sur

On-time delivery and high quality of products

“At Aircon, we have laid down processes for monitoring the quality and progress of projects through reputed software program and skilled manpow-

er. Our internal project auditors work independently to ensure timely delivery. We undertake regular reviews to monitor these processes and ensure maximum efficiency,” he adds.

‘ACREX India has Served the HVAC&R Industry Well’

With several new technologies and green concepts emerging globally, events like ACREX India serve to bring them to the fore for the benefit of the masses. This will give end-users, contractors and system designers an excellent exposure to the latest energy-efficient and environment-friendly designs, which is the need of the hour.

The HVAC&R industry has grown almost 20-fold in the last two decades. But along with the size of the industry, there has been a tremendous change on the technology front too. This is where exhibitions like ACREX India play a vital role.

Boosting industry growth

ACREX India 2014 is witnessing a large number of exhibitors not only from India, but also from several countries displaying their best products.

Till 2008, ACREX India show was held every two years. But in tune with the rapid techno-

logical changes taking place in building systems design, ISHRAE decided to make ACREX an annual event from 2010, and it has served the HVAC&R industry well.

Introduction of new concepts

There is general awareness about the damaging effects of CO₂ emissions on the environment. “Carbon neutrality deals with neutralizing these effects, for instance, by planting trees that absorb CO₂. Enhanced awareness about this concept will lead to its better implementation by concerned stakeholders and will enable them to undertake countermeasures to reduce such emissions and earn carbon credits. Extensive efforts are being made by the organizers to make ACREX India 2014 a carbon neutral

event. This is a laudable effort as it sends the right message to the society at large,” asserts National Past President, Indian Society of Heating, Refrigerating & Air conditioning Engineers (ISHRAE) & Managing Director, Blowtech Air Devices Pvt Ltd, Sushil K Choudhury.

Meeting energy-efficiency goals

Blowtech Air Devices Pvt Ltd strives to indigenously design and develop fans and ventilation products with the highest energy efficiency standards. “We have launched a new range of backward curved and tube axial fans with the highest possible efficiency levels. We are also displaying energy recovery ventilators (ERVs), which provide an economical and energy efficient means to introduce fresh air

inside conditioned spaces. We have also commissioned a state-of-the-art fan test laboratory (one-of-its-kind in the country) to ensure that our product designs meet the highest standards of energy efficiency,” he states.

Inspiring young talent

The building sector is growing at an unprecedented pace and there is a move towards green thinking. “India already has a sizable number of green buildings and with active promotion by the Indian Green Building Council, India is poised to have the second largest stock of green buildings, after the US, in the world. So the HVAC&R sector offers exciting career opportunities for young professionals,” concludes Choudhury.



Source: Blowtech Air Devices Pvt Ltd

► National Past President, ISHRAE & Managing Director, Blowtech Air Devices Pvt Ltd, Sushil K Choudhury

Excellence Awards @ ACREX India



Caire Consult
Green Product - Winner



Caire Consult
Indoor Air Quality - Winner



Kirloskar Brothers Limited
Energy Saving - Winner



Emerson Network Power (India) Pvt.Ltd.
Innovation - Winner



Smoke Solution India/ S.N. Global
Indoor Air Quality - Runners Up



Ingersoll Rand-Trane
Green Product - Runners Up



Edgetech Air Systems Pvt. Ltd
Innovation - Runners Up



Ruskin Titus India Pvt. Ltd
Innovation - Special Mention



Armstrong Fluid Technology
Energy Saving - Special Mention

Glimpses....



Intelligent Pumps for Significant Energy Savings

Reducing energy consumption brings down both input costs and CO₂ emissions for industrial organizations. The need to increase operational and energy efficiency contributes to a gradual shift in considering total lifecycle costs, rather than just initial purchase and installation costs of equipment. Here, the energy consumption of an asset – such as an industrial pump that is energy-intensive – whether or not it is actually in use represents a significant component.

According to the US Department of Energy, industrial pumps consume between 25 and 50 per cent of the total energy used by electric motors in industrial applications. This represents a huge expense to users – one that will only increase as energy costs trend upwards. Expenditures on energy are one of the largest cost contributors to most industrial processes and plants. By increasing the efficiency of a pump, manufacturers across industries have the opportunity to cut down costs.

Improved pump efficiency

From a lifecycle cost perspective, the purchase cost of a pump system represents just 10 per cent of the entire cost. According to the US Department of Energy, after the initial purchase of the pump, the remaining cost breakdown include 7 per cent for installation; 5 per cent environmental costs; 3 per cent for costs associated with the pump when not in use; 10 per cent operating, 25 per cent maintenance and 40 per cent energy costs. These data clearly reflect the huge cost-saving potential from implementing energy-saving intelligent pumps in place of conventional pumps.

Intelligent pumps

Today, pump suppliers offer an array of features designed to improve energy efficiency. These include the addition of a variable frequency drive (VFD) that enables pump speeds to closely match the actual flow demanded at a specific time. This means a pump can be ramped up at times of high demand and pulled back when lower flow rates are needed. This saves energy and keeps pumps from working harder than they need to, thereby extending pump life.

Some pumps now also come with embedded sensors that detect flow rates and can automatically vary the speed of a drive to maintain required flow rates and pressures. This capability further improves the efficiency of a pumping system, and thus decreasing the amount of energy required to meet pumping demands. Based on physics-based affinity laws, reducing pump speed by just 10 per cent (resulting in a minor reduction in flow rates), will reduce energy consumption by approximately 25 per cent. Another possible use of this technology is to link two smaller pumps, with one used to meet the demands of the lower flow rates and the second pump kicking in to boost pump capacity as

required. This approach is ideal for a plant that only occasionally requires above-average flow rates. Experts estimate that a system that automatically adjusts speed to match the required flow rates can reduce the overall energy consumed by a pump by up to 50 per cent. Considering the lifecycle cost breakdown mentioned before, it can be said that this can reduce total lifecycle costs by up to 20 per cent; or twice the initial cost of the pump.

Slow adoption of intelligent systems

Despite the potential cost and energy savings, many industrial end-users have been slow to adopt new technologies. Most users still use the outdated approach of selecting a pump that can meet the highest rate demanded, thus resulting in a huge amount of unnecessary energy waste over the lifetime of the pump. Often, this resistance to implementing intelligent pumps is based partly on cultural resistance and partly on the slightly higher initial cost. However, in most applications, the slightly higher upfront costs of intelligent pumps are more than offset by the overall savings in lifetime costs. Now, intelligent pumps are beginning to gain wider popularity in at least two

HANDY TIPS

When considering an intelligent pump system it is important to:

- Evaluate current energy use
- Evaluate the total lifecycle cost of current pumps compared to a new intelligent system
- Carefully match the pump system to the application requirements and consider installing booster pumps to meet infrequent peak flow requirements

industrial sectors: building HVAC and municipal water & wastewater.

The demand in buildings stems from the new certifications and standards that need to be followed. Today's building designers strive for 'green' buildings with the smallest possible carbon footprints. And, of course, the reduced HVAC-related operating costs offered by intelligent pumps appeal to building owners and managers. In the municipal water & wastewater industry, pumps often represent the single-largest cost factor. Traditionally, municipalities install fixed-speed pumps designed to handle peak demand. As a result, at times of less-than peak demand, these pumps continue to run at the same high rate, resulting in excessive energy use and a huge build-up of pressure in the piping systems. This often

causes cracking and rupturing of the infrastructure, resulting in a massive amount of water being lost. In some cities, up to 50 per cent of water put into the system is eventually lost. As consumers, administrators and politicians become more aware of the need for increased efficiency, municipalities have increased their use of intelligent pumping systems. Besides energy-saving benefits, intelligent pumping systems also provide the ability for users to remotely monitor the health of a pump. Embedded sensors can measure leakage, vibrations, overheating, clogs, etc., and alert users to an issue long before the pump actually breaks to support predictive maintenance strategies and reduce unplanned downtime.

Recommendations

Certainly, the specific energy savings realized from adopting an intelligent pump system can vary greatly depending on the application and facility. In existing facilities, an energy audit of the current pumping systems can provide a helpful data point for evaluating the total lifecycle cost savings that upgrading to intelligent pump systems could produce. Looking ahead, rising energy prices, the need to meet new energy and emissions standards, and increasing demand by consumers for environment-friendly products are likely to further increase future adoption of such pumps across a broader range of industries.

► Source: ARC Advisory Group



► Intelligent pumping systems enable monitoring of pump health

Humidity in Ventilation Systems

Having more or less humidity in a room than the required level is not only harmful for the electronic equipment but also for human health. Hence, it is important to measure the air accordingly and take steps for maintaining the right temperature and humidity in a room.

Ventilating is the process of changing or replacing air in any space to provide high indoor air quality. In order to maintain an office building within the comfort zone, or to maintain any application-specific climate conditions, humidity plays a key role. Various modules can be added into air handling units to either remove or add moisture.

The most common way to dehumidify air in an air handling unit is to regulate the cooling coil below the dew point and remove humidity by condensation. In most cases, it is necessary to reheat air later via heating coil.

To increase humidity, a contact humidifier can be used. It works in the same way as air flowing through a wet surface. A similar principle is used

with an air washer unit where water nozzles directly insert water aerosol into the air stream. Water can also be added by an ultrasonic humidifier where a piezoelectric transducer creates a high frequency mechanical oscillation in a body of water. An extremely fine mist is emitted, which is quickly absorbed into the air flow.

All these methods require

frequent cleaning. Also, the passing air not only absorbs humidity but also loses some heat energy (adiabatic cooling). Therefore, an additional heating coil after the humidifier is usually required.

Direct steam injection is the most common form of humidifier. They require little maintenance because the steam supply acts as a cleaning agent. However, the steam production and distribution is expensive and is only cost-effective for larger buildings.

For the accurate control of humidity, the distance between the humidifier and the measurement probe must be sufficient for the air to mix properly.

Significance of measuring humidity

Controlling not only the temperature but also the humidity levels in a building using an air handling unit will have an impact on the following:

- The humidity level plays an important role in the 'felt temperature' also known as 'heat index'. Generally, the temperature feels colder when the humidity level is lower and viceversa
- Humidity levels below 30 per cent rh that are particularly common during the heating period result in itchy and cracked skin, irritated eyes

FACTS & FIGURES

The Beverly Briley building in Nashville, Tennessee currently has the largest installed air handling unit in the world. It is capable of delivering 9,970 cubic metres per minute.

and chapped lips. Dry air also leads to drying the mucus shield in airways that protect against bacteria, viruses and airborne pollutants, thus increasing the risk of infections

- On the contrary, high humidity levels directly affect the amount of allergens in the indoor environment. In particular, high humidity causes both dust mite populations and mold colonies to grow

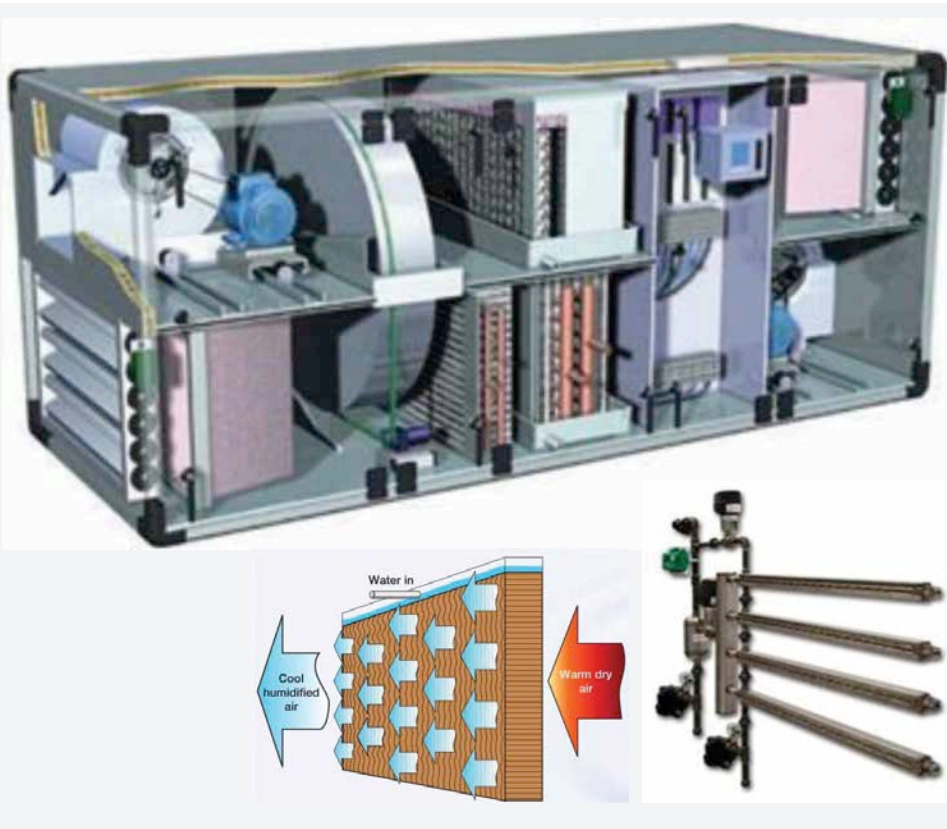
- Around 45-55 per cent rh is considered an ideal humidity level for places where people live and work

- Furthermore, dry air can cause wooden furniture to crack and paper to stick in printers, causing jams

- Moist air can cause mildew on surfaces and with time and extreme levels, even concrete will start to dissolve

- Having a humidity measurement product is the need of an hour. Various companies such as Jupiter Electronics offer the same.

► **Jupiter Electronics**
Hall 12A / Stall 26



► Latest technologies to maintain humidity

Source: Jupiter Electronics

Showcasing of Unique Pumping Solution

Kirloskar Brothers Ltd (KBL) is showcasing sustainable and space saving, innovative pumping solutions for HVAC industry at the show. Speaking about it, Business Head - Building & Construction, KBL, Vikas Agarwal said, "We have come out with new Lowest Life Cycle Cost (LLC) series pump in its Split casing and Vertical Turbine versions."

Modifications in the traditional pump designs with an objective to reduce the downtime, replacement of components and to increase the cycle of planned maintenance have given rise to LLC pumps.

Talking about the show, Agarwal stated

"With display of innovative products such as LLC, we are aiming at increasing our reach and understanding visitors' and customers' expectations for future products development."

He further added that, "It is an excellent knowledge sharing platform. Additionally, it offers an opportunity to meet various business associates such as consultants, contractors, stakeholders, end users, etc."

► **Kirloskar Brothers Ltd**
Hall 12 / Stall 12.16

Material Handling Systems for Various Industries

Kelley Material Handling Equipment India Pvt Ltd is displaying in ACREX 2014 its myriad range of products. The series of products include HVLS Fans, Dock Levelers, Dock Doors and Dock Seals and Shelters.

Talking about products that the company offers Managing Director, Kelley India, Piush Goyal said, "The world class energy saving Kelley products are designed and manufactured to enhance key operation requirements and param-

eters that are becoming more and more prevalent in the Indian marketplace."

The range of products primarily caters to the variety of sectors, including auto, engineering, FMCG, electronics, consumer durables, warehousing, retail, logistic companies, etc.

► **Kelley Material Handling Equipment India Pvt Ltd**
Hall 7ABC / Stall C6B

L&T Valves Ltd Launches Aquaseal Plus Class 150 Butterfly Valve at ACREX India 2014

L&T Valves Limited, a wholly owned subsidiary of Larsen & Toubro has launched Aquaseal Plus Class 150 butterfly valve at ACREX India 2014. A second-generation product built on the strength of the company's flow-control expertise that spans fifty years, the valve is available in wafer, lugged and flanged constructions, in different sizes ranging from 2" (50 mm) to 36" (900 mm).

A display platform

The company is confident that the visitors who are seeking high-performance valves will definitely benefit from it. ACREX India show will act as the perfect platform for creating better awareness about the advantages of Aquaseal Plus

Class 150 butterfly valve.

A new benchmark in performance

Operating pressure in HVAC systems has been on the rise in recent years due to the increase in high-rise and mega-scale projects. For these high pressure systems, Aquaseal Plus Class 150 butterfly valve offers high performance. A valve that meets international standards is expected to resonate favorably in an industry that is fast aligning with global best practices.

Further, Aquaseal butterfly valves are offered with insitu-molded integral elastomer liners. Compared to valves with loose liners, Aquaseal provides better sealing, lower torques and long-lasting reliability. This

new category of valves has successfully completed 10,000 test cycles, reinforcing its reputation as a 'fit-and-forget' valve.

An innovative streak

The company has a long track record of developing

innovative products that have grown to become industry standards. For the HVAC sector, it had launched wafer-type butterfly valves four decades ago

as a reliable and cost-effective replacement for gate valves and sluice valves.

► **L&T Valves Limited**
Hall 11 / Stall 11.71



► Aquaseal Plus Class 150 butterfly valve

Source: L&T Valves Limited

'INSUflex' (NBR tubing) is a FR closed-cell, flexible, elastomeric pre-formed thermal insulation tubing for pipe insulation. It is an environment & user friendly product, than conventional fibrous products.

Features: • High water vapour diffusion resistance ensures thermal efficiency during low temperature operations • Chemically inert • Low thermal conductivity • Operating temperature range from -55°C to +105°C • Light weight and flexible tubing • Fire retardant material quality ensures safety & protection • Odourless • Fiber free and zero O.D.P.

Applications: HVAC piping • Split and window A/Cs piping • Chiller pipe • Insulation of plumbing and waste water drainage pipes • Solar piping • Cold storage • Clean room piping and many more...

Suitable for: • MS Pipes • Copper Pipes • PVC Pipes • PPR Pipes

Other products from the INSU Range:

INSUshield: Non-fibrous, fire retardant (FR), closed cell, tri-dimensional chemically crosslinked polyethylene foam for thermal insulation applications

INSUreflector: Fire retardant (FR) polyethylene bubble material encased with aluminium foil on one or both sides that reflects 96 to 99 percent of radiant heat beneath slated roofs

INSUmelfoam: Unique, flexible, non-fibrous open cell foammade from Melamine resin ideal for acoustic insulation applications

Contribute to a greener planet with every HVAC insulation

Committed to the Environment

Mexichem Fluor UK Ltd has a long history of manufacturing responsibly, keeping the environment and the sustainability factors at the forefront of

all its endeavors. In face of the ozone depletion crisis in the 1980s the company pioneered the world's first commercial plant to produce an alternative to CFCs.

Export Sales Manager, Mexichem Fluor Ltd, Karen Ford expounds on the company's commitment to the environment, "Mexichem Fluor supports regulation on a global basis under an international agreement in order to contain and reduce potential growth in HFC emissions. We are a global leader in fluorine based chemistry and the only company in the world whose production chain is fully vertically integrated, right from the extraction of fluorspar to the production of hydrofluoric acid and refrigerants."

awakening to the need for environment-friendly technology and the company is uniquely positioned to promote its strength in this field through its commitment to the environment.

"Mexichem was the first company in the world to invent the 'R 134a' refrigerant (branded as 'Klea' 134a) at its production facility in the UK. Our innovative customer technical programs have supported user industries worldwide – ranging from automotive, refrigeration and air conditioning, to foam and specialist aerosol – to make the complex transition away from CFCs and HCFCs. It is this specialization we are hoping to bring to India through ACREX India 2014," avers Ford.

The company will be promoting include; hydrofluoric acid; aluminum trifluoride; medical grade HFC 134a, which is used as propellant in asthma inhaler in pharmaceutical industry.

Offerings for the Indian market

The company, while exhibiting for the very first time in India through the platform of ACREX India 2014, is very positive about the opportunities the country has to offer to international companies. "India is growing, as are all aspects of industry in the country. There is a strong growth potential for the refrigeration and air conditioning industry in the country and we expect a transition to HFC refrigerants in the near future. It is a right time for companies like ours to make a mark here," comments Ford.

She further explains that India is also

Leading the innovation trend

The company has been a leader in innovation and technology and has been recognized for this through a number of awards. Some of its notable achievements include: pioneering a major industrial refrigeration installation using ozone benign refrigerant blends; first to design a range of innovative new products for biomedical refrigeration, and many more.

"Our manufacturing sites around the world meet global environment standards. We also believe that ACREX India 2014 will promote our innovative solutions and provide a good networking opportunity for us," concludes Ford.

► Mexichem Fluor Ltd

Hall 12A / Stall 86

Source: Vogel Business Media India



► Export Sales Manager, Mexichem Fluor Ltd, Karen Ford

Bringing Global Technology to the Sub-continent

Germany-based Thermofin GmbH has over a decade of experience and expertise in the field of refrigeration and air conditioning technology. The company's clientele list comprises the 'who's who' from the global industrial arena, right from food processing companies to logistics centers. Representative, Thermofin GmbH, Willy Löffler com-

ments, "Thermofin is proud of its products and technologies. Our portfolio of products includes the very latest in innovative technology and since inception, we have been committed to manufacturing highly efficient as well as environment-friendly products."

Need for energy efficiency

The need for products that are energy efficient and do not harm the environment has been given a strong impetus in recent times. As a result, success has come to those companies, which have proactively embraced the 'green philosophy' for their manufacturing activities.

"For us, energy efficiency was not an afterthought. Right from the first day, we have been inclined towards manufacturing highly efficient engineering products, which have the basic criteria of energy saving and environment-friendliness," shares Löffler.

He further adds that the company looks at every application in detail and finds the very best, efficient solution for it.

The company's wide array of products, which include evaporators, air coolers, condensers, dry coolers, etc, are well recognized in Europe. Löffler in particular mentions the company's insulated coolers that have received excellent reviews in the industry.

The Indian arena

The prime reason for Thermofin electing to participate at ACREX India 2014 is the event's reach in the Indian HVAC market. "ACREX India attracts large number of visitors from the HVAC industry. Since we expect many industry professionals to visit our booth, we believe that it will be a good platform to share our latest developments and innovations with the Indian HVAC professional industries. We are also confident of further strengthening our presence in the Indian market by developing our client base," avers Löffler.

The company is no stranger to the Indian arena, having already supplied its products to a number of renowned Indian companies.

Speaking on the possibilities that India offers to an international company such as Thermofin, Löffler comments, "The Indian market is a growing one and we expect a lot from it in the near future. We feel that the sub-continent, with its booming economy, is always open to adopt advanced technology and innovation."

"A lot of global players are already present in the Indian market and we expect healthy competition as well. As we have already supplied our equipment to a few leading industry players, we are confident of getting more growth opportunities and further developing our client base in due course," he adds.

Last but not the least, the company is especially looking forward to interacting with industry professionals and sharing its global experience with industry stalwarts.

► Thermofin GmbH

Hall 9 / Stall 9.13

Source: Thermofin GmbH



► Representative, Thermofin GmbH, Willy Löffler

An Environment Conducive to Good Business

ACREX India 2014 – an event which has proved itself to be the best of its kind in South Asia – serves as an ideal business destination for any company wishing to showcase its prowess in the fields of air conditioning, refrigeration and related

industries.

Managing Director & CEO, Freudenberg Filtration Technologies India Pvt Ltd, Dharendra Choudhary opines, “The uniqueness of ACREX India show lies in its ability to bring together participants from a wide array of industries, including pharmaceuticals, building and construction, food processing, healthcare etc. This august gathering provides a large number of companies the opportunity to explore business opportunities in different sectors.”

He adds, “Change and growth are essential for the success of any business. Events such as these provide each participant with an environment conducive to explore good business opportunities.”

Integration, an asset

The company takes pride in its commitment to providing an entire range of solutions for its clients. “Our integrated product range provides our customers with end to end solutions. We involve customers at the design stage and help them select the right filtration configurations, customize products, offer installation, commissioning and validation services. We also provide clean room specialized equipment,” states Choudhary.

He strongly believes that it is this aspect of the company’s mission and vision, which makes it stand out from its competitors. “ACREX is a gathering of the very best in the industry and we want our offerings and capabilities to stand out. To this end, we will be highlighting our strengths through our renowned products, which are efficient and innovative,” affirms Choudhary.

Role of trade shows

Apart from facilitating the interaction of industry stalwarts and exchange of knowledge, Choudhary also believes that such events help to identify specific problems likely to be faced by participants. “Most customers come with specific challenges to be addressed and seek answers to them. We gain awareness on such challenges and we are therefore able to focus our efforts and resources to find urgent solutions to such challenges,” avers Choudhary.

The company is looking forward to meeting consultants and technical experts in the clean room filtration field who actively participate in the exhibition. Choudhary also believes that the event will help the company strengthen the brand image of its products and services.

“It is a unique, annual opportunity to showcase our product range and solutions to our customers. We plan to share our capabilities, products and services, particularly new and proposed launches and gain valuable feedback,” concludes Choudhary.

► **Freudenberg Filtration Technologies India Pvt Ltd**
Hall 10 / Stall 10.23

Source: Freudenberg Filtration Technologies India Pvt Ltd



► **Managing Director & CEO, Freudenberg Filtration Technologies India Pvt Ltd, Dharendra Choudhary**

“ACREX is an Essential Part of our Marketing Plan!”

Mumbai-based Jupiter Electronics is no stranger to India’s premier event for the HVAC industry. Director, Jupiter Electronics, Keyur Ghelani asserts, “We have been participating at ACREX India show for ten years now, and look forward to each edition with anticipation. There is no doubt in our minds that it acts as the premier platform for the industry.”

The company deals with several products, which are regularly used in HVAC segment, BMS, chillers, clean rooms and cold storages, and thus ACREX India 2014 is the place to be in order to meet all these industry stalwarts under one roof. “The event focuses on segments that are vital to our company. Thus, being a part of the event gives us an opportunity to not only meet and interact with peers, but also increase our database for future business leads,” adds Ghelani.

Boosting confidence in the market

The recent market slowdown and economic crisis have had an impact on the Indian industry. Production has suffered as has exports, while the plummeting Rupee iced the deflating cake. Commenting upon this Ghelani avers, “Events like ACREX serve as a confidence booster to all in the industry. Knowledge sharing as well as interacting with global industries contribute towards this.”

On a positive note, he concludes, “We are looking forward to a great edition of the event, to market our brand and generate good business.”



► **Director, Jupiter Electronics, Keyur Ghelani**

► **Jupiter Electronics**
Hall 12A / Stall 26

Source: Jupiter Electronics

Synergizing for Energy Efficiency

Environment conservation and energy efficiency are among the focus areas of all industries globally. And in this context ACREX India 2014 encourages the use of environment-friendly and energy-efficient technologies in the HVAC & R sector. It therefore acts as the perfect platform for com-

panies with the same mission and vision. Intertek is one such company.

“Synergizing at ACREX India 2014 provides us an opportunity to encourage and support development of environment-friendly electronic products and helps mitigate issues of climate change and ensure energy efficiency,” shares Director, Strategy Intertek South Asia and Country Business Line Leader-Electricals, Sandeep Das.

Knowledge sharing

ACREX India provides an ideal platform to exhibit innovative products. A series of informative workshops, seminars and panel discussions will enable exchange of ideas with the leaders of the industry and share knowledge on the latest industry trends.

Highlighting the company credentials, Das states, “We are a provider of quality solutions and have set up India’s first independent ‘Refrigerator Test Chamber’ and the first ‘Balanced Ambient Calorimeter’. We have also helped in fast-tracking the Refrigerators and Air-conditioner Energy Labeling program in India by helping several companies to develop energy-efficient products, and to test and certify them.”



Source: Strategy Intertek

► **Director, Strategy Intertek South Asia and Country Business Line Leader-Electricals, Sandeep Das**

► **Strategy Intertek South Asia and Country Business Line Leader-Electricals**
Hall 11 / Stall 11.77

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Source: Thermofin

Insulated Coolers with EC Radial Fans

Thermofin, a German manufacturer of finned heat exchangers, has revolutionized the construction of insulated coolers with an innovative fan concept. Along with the conventional advantages of the insulation cell design such as the optimum usage of cold rooms and effective defrost processes without humidity and heat entry into the storage room, the new technology delivers high energy efficiency and maintainability as well as optimized air duct and improved cleanability. This is achieved by the utility model-protected mounting of compact radial fans with backward curved blades, which are directly driven by an external rotor motor with EC technology. The strong airside pressure and increase of the radial fans allow an optimum air distribution in difficult spatial situations, for example, through a canal system. With it, wheel slips, lubrication intervals and the open mechanical construction of the belt drive as well as a separate speed control can be omitted. EC fans can be regulated directly and continuously through MODBUS or 0-10 V signal over the entire speed range and thanks to their high efficiency, they allow an energy saving of approx 35 per cent in comparison to conventional belt-driven AC fans.

► **Thermofin**
Hall 9 / Stall 9.13

Air Velocity Transmitter

Jupiter Electronics is showcasing a compact air velocity transmitter designed for measurement of the lowest velocity. Equipped with a newly developed sensor head and utilizing the proven E+E hot-film element, these transmitters are less sensitive to dust and dirt than conventional hot wire elements. This is reflected in the excellent reproducibility and proven long-term stability of the measuring results. The factory calibration with a special wind tunnel for the lowest velocity ensures optimal precision and maximum sensitivity.

► **Jupiter Electronics**
Hall 12A / Stall 26



Source: Jupiter Electronics

Vacuum Pumps

REFCO Manufacturing Ltd presents new and uniquely designed vacuum pumps. It features ergonomic and protective housing. This pump is mainly for use in small air-con units or automotive industry. Apart from the excellent technical qualities of vacuum pumps, the new design give them a trendy look, make them extremely lightweight and ergonomic. The vacuum pumps also excel in terms of stability during transport due to the low point of gravity, which makes tipping over in the van nearly impossible.

► **REFCO Manufacturing Ltd**
Hall 12A / Stall 31



Source: REFCO



Source: Armstrong Fluid Technology

Intelligent Fluid Management System

Armstrong Fluid Technology has launched the Design Envelope Intelligent Fluid Management System (IFMS) at the show. This new system is a prefabricated all-variable packaged HVAC plant system that offers value to new-build or retrofit projects in both chilled-water and hot-water applications. Drawing on Design Envelope technology, the pumps in an iFMS system integrate a perfectly matched, vertical in-line pump, motor and intelligent controller. The control methodology maximizes pumping efficiency by adjusting pump speed in response to system demand. These integrated, pre-designed packaged pump solutions delivers the lowest first installed cost, reduced project risk and outstanding energy efficiency performance. The iFMS have the added benefit of offering outstanding energy efficient performance across a wider operating envelope than ever before. Designed with a built-in safety net, they continue to optimise the energy efficiency of the installation even if operational requirements change, either during the design process or after installation, without the risk of underperformance or the need for replacement and can be configured to suit the widest range of applications.

► **Armstrong Fluid Technology**
Hall 12 / Stall 12.22

Solar Module Analyzer

The Meco Solar Module Analyzer is a portable analyzer used for testing, maintenance and finding efficiency of various parameters of solar panel and cell. It can be used to design solar system to generate specific power. It can identify solar power system requirement, best angle of solar panel installation and broken/worn out cells.

► **Meco Instruments Pvt Ltd**
Hall 11 / Stall 11.28



Source: Meco Instruments Pvt Ltd

DC Inverter System

Trane brings a new generation of Trane TVR II DC inverter system, a modular system embodied with advanced architectural concepts and leading technology.

It is an ideal solution to be installed at villas, condominiums, residences, small offices, hotels, shopping malls, hospitals, retail chains, colleges, etc. The TVR II system sets a new standard in meeting the end-user's expectations with efficient DC compressor. Moreover, DC fan motor achieves an EER of up to 4.24 (8HP) thereby, offering best-in-class energy efficiency and sheer reliability.

► **Trane India**
Hall 11 / Stall 11.4



Source: Trane India



Source: LG Electronics India Pvt Ltd

System Air Conditioner

The Multi V Water IV system air conditioner is a powerful water-cooled system that provides top-class energy efficiency via LG's industry inverter technology. The new model incorporates a range of convenience enhancing features including the company's smart control. Smaller and lighter than its predecessor, the Multi V Water IV is easier to install and consumes less room. Furthermore, the versatile solution is compatible with a wide range of energy sources and indoor units, offering users incredible flexibility. Thanks to the company's fourth generation inverter compressor, the Multi V Water IV delivers the biggest operational range in the industry. It boasts of a five co-efficient of performance (COP) for cooling operation and a 5.9 COP for heating.

► **LG Electronics India Pvt Ltd**
Hall 11 / Stall 11.73



Source: Schneider Electric

Chilled Water Cooling Units and Uniflair Precision Inverter Chillers

In today's world, it is imperative to reduce the overhead costs and use space optimally. To overcome these challenges, Schneider Electric has developed a new innovative cooling solution with chilled water-based compact ultra high efficiency applications. It provides the low partial power usage efficiency (PUE) of 1.18 and high energy efficiency @EER = 32 (0.011kW/TR). Additionally, inrow units provide 60 kW cooling capacity within the lowest frame size i.e. 300 mm width. Uniflair's inverter air cooled chillers are better than VRF technology in terms of efficiency, piping length, refrigerant charge, etc.

► **Schneider Electric**
Hall 12A / Stall 102



Source: Vijay Engineering Corporation

Norma Pipe Connectors

Unique pipe connectors from Vijay Engineering Corporation are all set to replace tedious job of welding and fixing flanges to pipe lines. The easy-to-install connectors take not more than couple of minutes to get fixed. Long life and reusability are among the salient features of these connectors that offer extra value-for-money. These connectors are ideal for HVAC, heating and cooling piping requirements.

► **Vijay Engineering Corporation**
Hall 12 / Stall 12.27

Universal Handheld Test Equipment

The Universal Handheld Test Equipment (UHH) from Dwyer Instruments Inc is a versatile instrument that offers the utmost flexibility and ease of use to operators. The UHH is especially designed for professionals to reduce the number of instruments and size of cases that the engineer would need to carry on the site. It comprises a base unit and offers the option for multiple probes in wired or wireless formats. Currently, probes are available for pressure, humidity, temperature and air velocity ranges. Probes like the VP1 and VP2 offer temperature, humidity and air velocity elements within the same probe.

► **Dwyer Instruments Inc**
Hall 7 / Stall C9



Source: Dwyer Instruments Inc

Refrigerated Truck

As a part of cold chain solutions, Ic Ice Make Refrigeration Pvt Ltd offers refrigerated truck mainly for road transportation. This solution features heavy bucket structure with pre-fabricated sandwich panels with cam lock on all sides for airtight fitting of the container. As per requirement, the company offers a complete range of vehicles from small three-wheelers to large 40 feet truck. The measurement of insulated walls include 80 mm for small vehicle, 100 mm for mini truck and 125 mm for heavy loading truck. Outer surface made of PCGI sheet comes with skin thickness of 0.8 mm and inner side with an option of SS sheet with skin thickness of 0.5 mm.

► **Ic Ice Make Refrigeration Pvt Ltd**
Hall 11 / Stall 11.37



Source: Ic Ice Make Refrigeration Pvt Ltd



Source: Xtreme Cooler

Air Cooler

Xtreme Coolers is showcasing X7 series cooler at the show. This cooler is made from galvanized sheeting for anti-corrosion and resistance to deformation. Also, it is equipped with unique water distributor for smooth flow. Additional features of the cooler include double entry centrifugal fan with large airflow, low noise and large application area. It is suitable for more than 10,000 sq ft area.

► **Xtreme Cooler**
Hall 12A / Stall 71

► Thermal Insulation

The Supreme Industries' INSUshield is non-fibrous, FR, closed-cell, tri-dimensional chemically crosslinked polyethylene foam. It meets requirement of 'Class O' for fire propagation and 'Class I' that conform to surface spread of flame as per BS 476 Part 6 & Part 7 respectively as stated by Central Building Research Institute (CBRI). It is an environment-friendly insulation material with a perfect solution for all insulation needs for ducts, roofs, pipes, vessels, etc.. It is a better alternative to conventional glass wool insulation material. It has low and stable 'K' value with a wide operating temperature ranging from -40°C to +115°C. The divergent advantages of INSUshield are ease of installation, low thermal conductivity and good moisture and vapor resistance preventing microbial growth and optimum condensation protection. Furthermore, INSUshield is chemically inert, non-toxic and non-carcinogenic. It is ideal to be used in ducting insulation, underdeck insulation, pipe insulation, floor insulation and insulation joint sealing tapes.

► **The Supreme Industries Ltd**
Hall 12A / Stall 17



Source: The Supreme Industries Ltd





Helping India get Energy Efficient

Intertek has been a key partner to many Indian businesses, working behind-the-scenes helping to ensure the quality, safety and success of Indian products and processes in global markets.

Intertek is a key stake holder in the Bureau of Energy Efficiency, 'BEE' Energy labeling program. By setting up India's First Independent Refrigerator Test Chamber and India's First Balanced Ambient Calorimeter, Intertek helped in fast-tracking the Refrigerators and Air-conditioner Energy Labelling program in India by helping more companies to develop energy efficient products, and to test and certify them. Intertek is one of the main laboratories recognized by BEE to provide check-testing of refrigerators, room air-conditioners and storage water heater

Intertek Electrical lab has been accredited by World health organization (WHO) to test Vaccine Freezers/ Refrigerators and Ice Lined Refrigerators as well.

As a pioneer in HVAC / R testing in India since 2004, Intertek is proud to be the Bronze partner for ACREX . Speak to our expert solution providers at Stall no. 11.77, Hall 11 from 27th Feb – 1st Mar 2014 at Pragati Maidan, New Delhi. India

Intertek

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