

AS

the year 2014 is coming to an end, we wrap up another successful year at Safid. This year marked a major enhancement of organizational efficiency thanks to the “new blood” of which our departments benefited. Our new colleagues, filled with motivation and enthusiasm did not take long before leaving a positive impact.

Focusing on its set strategic goals, SAFID is again proving itself as a major player in the GCC HVAC construction business; a continuous improvement and fine tuning of the product as well as the production techniques are always key to our success.

All the efforts exerted throughout the year, are crowned by the set-up of our new Air Handling Units and Fan Coil Units (AHU & FCU) section, powered by KLIMAK of Italy. The production of these units will kick-start within the coming weeks. SAFID, in light of this new development, will be able to provide a complete HVAC ENGINEERED AIR SOLUTIONS. The concerted effort of our R&D and Business Development Departments and all who supported the project, made this new business unit up and running in a record time.

We are ready for new challenges, new projects, for a new year joyful to provide the ultimate products and services that our clients deserve. We have a vision to keep coping with the needs and requirements of our society and environment, and a clear message that we can cater for any project that is given to us.

We would like to grasp this opportunity to thank all Safid stakeholders, Clients, Business Partners, and Colleagues, and wish you a new prosperous year.

And finally, as the famous Former Chrysler Chairman (and Former Ford President), Lee Iacocca once said:

In the end, all business operations can be reduced to three words: People, Product and Profits. Unless you've got a good team, you can't do much with the other two.

Happy New Year!



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Happenings

Big 5 Show – Dubai 2014

Another great show for SAFID - the BIG 5 Show – Dubai was really big. Key buyers and industry leaders were present in this show as exhibitors or visitors.

As an annual event, the Big 5 – Dubai is the best event in its field and an ideal place for new products and services in addition to networking with the world market leaders in the construction industry.

Safid participated under the Saudi Pavilion set by SAUDI EXPORT DEVELOPMENT AUTHORITY (SEDA), where all the Saudi participants had a unified display stands, and then each company added its own touch and displayed their products and services.

Safid showcased its products and services and how it is continuously developing to provide the clients with a high end – high quality Engineered Air Solutions.



Construction Week's Saudi Arabia Design & Build Awards

Safid Company Limited was named Air Distribution Manufacturer of the Year at Construction Week's Saudi Arabia Design & Build Awards 2014 at a ceremony held at the Al Faisaliah Hotel in Riyadh last night (29 October).

Mr. Jamal Jawhari, Safid CEO, were attending along with our Major Clients and Safid management Team to receive the prize. Mr. Jawhari said: "If it wasn't for our clients and partners, it wouldn't have been possible to get this valuable prize. This award is the result of 35 years of experience, continuous improvement, and commitment at all SAFID Company managerial levels.

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Interview with Our Chairman – Sh. Mohamed Al Rahbani - Arabian Business Magazine



Cold comfort: Sheikh Mohammed Al Rahbani As Saudi Arabia wilts under increasing demand for electricity, the products manufactured by SAFID are becoming ever more important. In a rare interview, Sheikh Mohammed Al Rahbani, SAFID's chairman, talks about why his company is making a difference in the kingdom.

If you were under the impression that the air conditioning market isn't vital to Saudi Arabia's future, think again. As a rapidly growing population - with a propensity for more modern comforts, including larger homes and vast shopping malls - builds up in the kingdom, demand for power is skyrocketing. In the heat of the Gulf summer, air conditioning takes a particularly heavy toll on Saudi Arabia's grid.

And as demand for electricity and water increases, by around 8 percent every year according to local estimates, Saudi Arabia has to siphon off more of the crude it would ordinarily export, and use it instead to fuel power and desalination plants at subsidised rates. The cost to the Saudi economy runs to not far \$100bn a year, with Citigroup warning in 2012 that the kingdom could become a net oil importer by the end of this decade.

So where does Sheikh Mohammed Al Rahbani fit into all of this? As the chairman of Saudi Finn Ducting Company Ltd (SAFID), and one of the Middle East's richest men, he owns perhaps Saudi Arabia's largest manufacturer of air distribution products.

"Saudi Arabia is our heartland, and we have a very successful track record in the kingdom," says Sheikh Mohammed during a recent interview in Dubai. "In fact, if you take the road from Riyadh's airport to our headquarters in the city's industrial area, many of the buildings that you will pass contain our systems."

As power demand rises, the heating, ventilation and air conditioning (HVAC) market in the Gulf is similarly hotting up. According to industry analyst TechNavio, the sector is set to grow annually by an average of 7.4 percent between 2012 and 2016, with local vendors like SAFID posing a huge challenge to the established international players. Saudi Arabia is by far the biggest market, largely due to its fast-growing 28 million-strong population. Another analyst, TechSci Research says that the sectors' compound annual growth rate between 2013 to 2018 will hit 10 percent.

All this, of course, is good news for SAFID. Founded in 1979 as a joint venture between the Rahbani Group and Finnish tech giant Nokia, with just 60 people making a single type of duct, the firm has quickly grown to become one of the largest providers of air distribution products in the kingdom. As a private company, SAFID keeps its numbers close to its chest, but Sheikh Mohammed says that turnover grew by roughly 10 percent in 2013, while he expects to see "low double-digit growth" for this -year. The firm's performance is also being driven by the kingdom's colossal infrastructure spending plans, which involve billions of dollars being spent yearly on new houses, new schools and new hospitals.

Right now, SAFID is currently working on at least 35 projects in Saudi Arabia. These aren't just any projects either; included in the roster is work on the King Abdullah Financial District in Riyadh, King Abdulaziz Airport in Jeddah and last, but not least, the expansion of the Masjid Al Haram (Grand Mosque) in Makkah. In fact, you would be hard pressed to find a major Saudi ministry or developer that doesn't rely heavily on SAFID's products for its projects.

"We have a very strong pipeline of projects and our current order book is also looking very healthy," says Sheikh Mohammed. "We are confident that 2014 will be a landmark year in our history. Construction in Saudi Arabia continues apace, and SAFID is well-placed to capitalise on that growth in the wider economy."

The firm is working hard to build the kind of products that will help keep the use of electricity demand to a minimum, thus also helping to reduce Saudi Arabia's carbon emissions, which are some of the highest, per capita, in the world. To that end, SAFID has developed its own research and development facilities, including a state-of-the-art acoustic laboratory.

"One example of innovation is the development of cylindrical ducts as opposed to rectangular ducts," says Sheikh Mohammed. "Not only does this prevent stale air from being trapped within the system, it also allows a more efficient flow of air. While, of course, we don't control the energy usage in buildings, it is up to us to ensure the most efficient delivery systems possible."

Sector Focus: HVAC Controls

No matter where you are in the world your building requires heating, ventilation or air conditioning (HVAC) to provide a comfortable productive environment for your occupants. So making sure your system is running as efficiently as possible is critical to your buildings operational costs. HVAC controllers form the brain and nerves of a HVAC system, monitoring interior conditions and responding to load changes in a coordinated fashion providing comfort and energy efficiency.

What is Control?

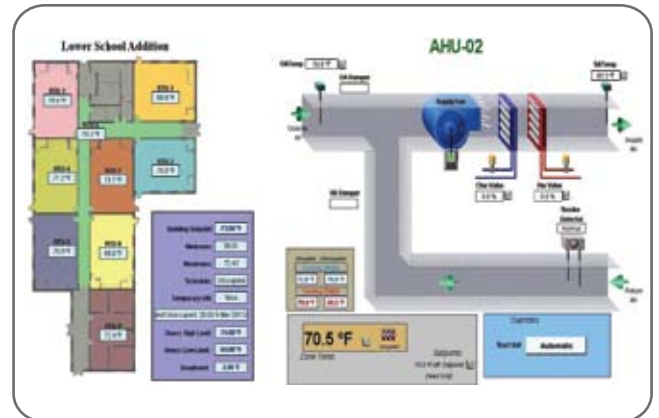
- 1) Measure a variable and collect data
- 2) Process the data with other information
- 3) Cause a control action

The above three functions are met through sensor, controller and the controlled device.

The application of Heating, Ventilating, and Air-Conditioning (HVAC) controls starts with an understanding of the building and the use of the spaces to be conditioned and controlled.

Elements of a Control System

HVAC control system, from the simplest room thermostat to the most complicated computerized control, has four basic elements: sensor, controller, controlled device and source of energy.



- 1) Sensor measures actual value of controlled variable such as temperature, humidity or flow and provides information to the controller.
- 2) Controller receives input from sensor, processes the input and then produces intelligent output signal for controlled device.
- 3) Controlled device acts to modify controlled variable as directed by controller.
- 4) Source of energy is needed to power the control system. Control systems use either a pneumatic or electric power supply.

Control Strategies

The simplest control in HVAC system is cycling or on/off control to meet part load conditions. The system runs for about ten minutes, turns off for ten minutes, and then cycles on again. One problem faced by this type of control is short-cycling which keeps the system operating at the inefficient condition and wears the component quickly. It takes several minutes before reaching "steady-state" performance. If we lengthen the time between the starts to avoid short-cycling, it leads to some discomfort for short time. The longer the time between cycles, the wider the temperature swings in the space. Trying to find a compromise that allows adequate comfort without excessive wear on the equipment is modulation or proportional control. Under this concept, if a building is calling for half the rated capacity of the chiller, the chilled water is supplied at half the rate, the energy delivery is proportional to the energy demand. While this system is better than cycling, it also has its problems. Equipment has a limited turn-down ratio.

An alternate method of control under part-load conditions is staging. Several small units (e.g., four units at 25% each) are installed instead of one large unit. When conditions call for half the design capacity, only two units operate. At 60% load, two units are base-loaded (run continuously), and a third unit swings (is either cycled or modulated) as needed. To prevent excessive wear, sequencing is often used to periodically change the unit being cycled.



Benefits of a Control System

Controls are required for one or more of the following reasons:

- 1) Maintain thermal comfort conditions
- 2) Maintain optimum indoor air quality
- 3) Reduce energy use
- 4) Identify maintenance problems
- 5) Efficient plant operation to match the load
- 6) Monitoring system performance



Safid R&D provides the best in-house recommendations when it comes to selecting and allocating the best control system for an efficient HVAC application.

A PRODUCT in SPOTLIGHT: Low Leakage Dampers

Dampers generally leak in two main places: between the blade ends and the frame, and between the blade edges. Therefore, low-leakage dampers are normally supplied with blade and special seals (Jamb Seal). However, the type of seal supplied can mean significant differences in leakage rates. There can be a 10-to-1 difference in a damper supplied with mechanically locked seals and flexible metal seals versus a damper supplied with no seals at all.



Low leak dampers with a Class 1A leakage rating (3 cfm/sqft @ 1" w.g.) not only meet the requirements in building codes, but when closed during unoccupied mode or for building pressure control.

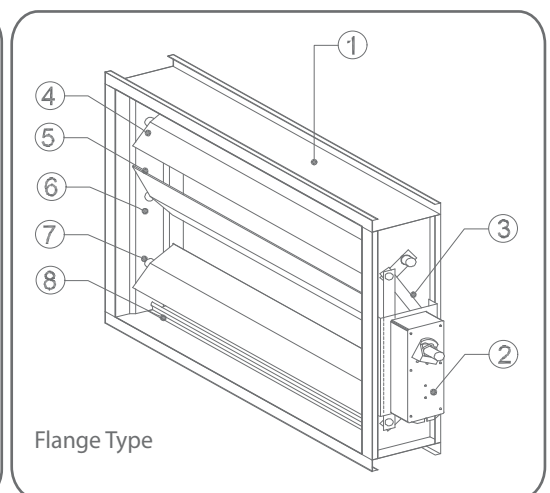
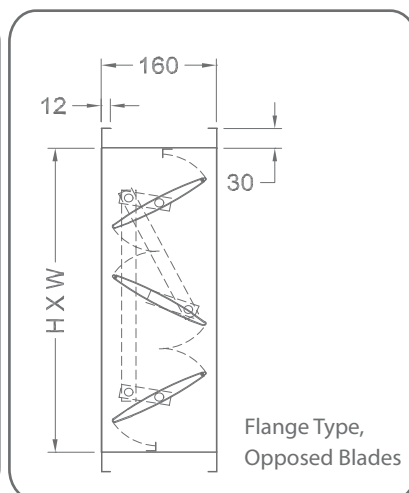
To ensure reliable proven results, damper manufacturers test their products to AMCA Standard, Laboratory Methods of Testing Dampers for Rating.

This standard includes recognized and accepted standard test procedures for performance testing, including sealing performance. Should a specifying engineer or owner want impartial data, they should specify that the damper comply with AMCA Publication 511, Certified Ratings Program – Product Rating Manual for Air Control Devices.

At Safid, our Low Leakage Dampers are recommended for use in multiple Air Conditioning Units with one common air duct system on which one or two A/C Units need to be isolated during standby mode while the other A/C Unit is on operational mode. In building pressurization it can be used as an isolation damper to maintain the required pressure in the space. In office buildings where some occupants are outside most of the time, this type of damper is recommended to shut down the flow of air when the space is unoccupied on which can save energy consumption.

It is also being used as a fresh air intake damper for Air Conditioning Units where it needs a fresh air damper to be closed upon detection of heavy dust on the fresh air side. The blades with airfoil construction provide a low pressure drop in the open position for smooth airflow and reduced air turbulence.

Check out our special Dampers in our Catalogues available in our website: www.safid.com



From our PORTFOLIO – King Abdulaziz Center for World Culture

Designed by the Norwegian architectural firm, Snøhetta, the King Abdulaziz Center for World Culture is an engineering marvel that beckons visitors from afar.



The facility's multiple components have separate but complementary functions that will blend seamlessly to offer our visitors a rich and highly textured cultural experience.

The King Abdulaziz Center for World Culture will house a world-class library, innovation and lifelong learning centers, museums, exhibits, multimedia venues and historical archives. The Center will also host live events, conferences and enrichment programs for young people and adults.

Saudi Aramco began construction on the Center in May 2008, when the Custodian of the Two Holy Mosques, King Abdullah ibn Abdulaziz Al-Saud, laid the symbolic cornerstone.



The choice of site – near the famed Prosperity Well in Dhahran, where oil was first developed for commercial export – is not incidental. Where Saudi Arabia has long prospered from this natural resource, they seek to develop an additional source of wealth: a highly skilled and creative people who can propel the Kingdom to a bright and prosperous future for generations to come.

The building has a number of unique features blending new and old technology and techniques.



• Façade

The façade is made from stainless steel tubes that are intricately and individually formed and bent, then wrapped around the building.

• Interactive Technology

The world's leading technology companies are creating interactive programs and exhibits that will engage visitors of all ages

• Green

Guided by LEED's (Leadership in Energy and Environmental Design) international standards of excellence, the Cultural Center will be energy-efficient for years to come.

• Building Techniques

The modern building techniques that create the façade are complemented by one of the oldest techniques: rammed earth. A Rammed earth foundation delivers a fireproof, soundproof, well-insulated space using highly compressed natural materials such as sand, gravel and clay.

The Center's design marries structure and function in a unique way. Components below ground – including the archives and the museum – focus on the past. Components at ground level, such as the performing arts spaces, are anchored in the present. And components in the Knowledge Tower, which include the Lifelong Learning Center, soar upward into the future.

Client: Saudi ARAMCO
Main Contractor: Saudi OGER Ltd.
Safid Supplied: Sound Attenuators, Ductwork, Flexible Ducts and Accessories





Engineered Air Solutions



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