

Family ties

Established in 1973, IMEC's growth has reflected the evolution of the district cooling industry in the UAE. *MEP Middle East* speaks to father-and-son team Fahed and Aslan Al-Barazi about the company's distinguished history and penchant for innovation.

Fahed attended the University of Florida's School of Engineering, whereupon he immediately set about distinguishing himself at Moore Dry Kiln Company in the US in the field of heat transfer. This was about 1964. "The batteries of heating coils I recommended were half what the manufacturers were trying to sell them. The end result was a saving of about US\$1 million." In appreciation of his achievements, 'preference status' US citizenship was secured. Fahed joined the Borg-York division in 1966 to become its youngest Middle East GM, a record that stands to this day.

"The main reason for establishing IMEC was simply that I wanted to be independent. Being GM was fine, but what was next? The fact that I had become GM at such a young age was certainly a stepping stone in my reputation and credentials," reflects Fahed. The products he started out with were non-competitive with Borg Warner/York as such, comprising allied equipment such as boilers and fans.

"This was the early 1970s, when Dubai was hardly anything at that time. Reciprocating chillers and air-cooled packaged equipment had just made their appearance on the market. The district cooling industry as we know it today was still in its infancy," explains Fahed. Interestingly, the hub of innovation during this period was Kuwait, which opted for centrifugal water-based cooling for anything over 300 TR, which meant using cooling towers, and air-cooled condensers for up to 120 TR.

CENTRIFUGAL CHILLERS

Kuwait also introduced centrifugal chillers, which the mainly British-orientated consultants in the UAE at that time were quite leery of. "Air-cooled, packaged equipment was not really viable for large projects, as you ended up with ten chillers for a cooling load of 1 000 TR, for example," says Fahed. He was quick to take note of the pioneering spirit of Kuwait.

"IMEC's first major success, now we are talking 1978, was three years after I had left Borg Warner/York. Our first major breakthrough was supplying the cooling requirements for four major naval bases in Kuwait, for which we supplied huge AHUs from the UK, a move that made the industry sit up and take notice," says Fahed. In addition to car-park areas 5 and 9, the project comprised 18 000 TR, which was a staggering size at the time.

Not content with his initial resounding success in Kuwait, Fahed then entered the Iraqi market with a new range of cooling towers, im-

“ You need to have a particular commitment to take up a possible innovation and change the market’s perception about it. ”

Aslan Al-Barazi



mediately landing a 1 500 TR project, the National Research Centre. This success resulted in various renowned manufacturers approaching IMEC to represent their products exclusively in the region. "Thus we added AHUs and FCUs to our range, for example. Our strategy was that we added products to our main range as and when we needed them, or as a result of being approached directly."

This meant that Fahed began to forge business relationships that have endured for decades. "Our client base is extensive," he acknowledges. "Many are friends and acquaintances who have known us since the inception of the business, and beyond that to our student days. We have acquired a good set of loyal clientele, which has enabled the company to survive the vicissitudes of the current global economic turmoil."

KUWAIT MILESTONES

Fahed is particularly proud of the fact that he has personally witnessed, and contributed to, the evolution of the district cooling industry in the Middle East. "The first milestone was the Kuwait Radio and Television Compound (6000 TR) and the Kuwait International Airport (7000 TR). I was the effective designer; York centrifugal chilled water systems were specified." Fahed says his success in this regard was based on rigorous equipment selection and evaluation.

"What I did was apply the principle of 'mix matching' equipment, which resulted in the

selection of a smaller compressor system, a move that immediately saved 15% in total capital and energy costs." It sounds simple, but Fahed says the engineering underpinning this decision meant looking closely at factors such as kW/t and the square feet per ton of surface area. "I got big orders on the basis of this, as consultants would normally have to approach the factory for such data, and I was much faster as well." Later in Europe, AHUs and FCUs were built for IMEC, based on Fahed's design, for which he still has the catalogued engineering details.

The next major development in the fledgling district cooling industry was the Gold Market in Kuwait, a project for which Fahed advised the Ministry of Public Works, Electricity and Water to opt for a combined system comprising centrifugal and absorption systems. (Today IMEC is continuing this trend of innovation by championing ice thermal storage, a system that employs absorption chillers.) Another major project at this time was the 1 000 TR Hilton Hotel in Jeddah, Saudi Arabia.

"These major projects were the inception of what eventually resulted in district cooling as an industry. What is important is that we are continuing to promote new technology in the industry to this very day," notes Fahed. Aslan concurs: "You need to have a particular commitment to take up a possible innovation and change the market's perception about it. For us, the process of innovation is very simply finding a gap, something that has not been used in the area but logically should be. We then fill this gap with the new technology. It takes a lot of education of the industry to change a mindset to a new way of thinking, but it is an enjoyable process in and of itself."

**25 000 TR/
100 000 TR**

A large district cooling plant in the US vs. a large plant in the UAE