



ASHRAE QATAR ORYX CHAPTER

Advancing HVAC&R to serve humanity
and promote a sustainable world

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November 2011



Hassan Sultan
President 2011-2012
ASHRAE Qatar Oryx
Chapter

President Message

ASHRAE Advancing HVAC&R to serve Humanity & promote a sustainable World here we start, ASHRAE Society since more than one hundred years is serving the whole world thru its research and promotion plans, ASHRAE standards, guidelines, handbook, energy laws, etc...

ASHRAE society chapters are to liase with all engineers, engineering bodies, universities, research centers and Governmental departments to spread the awareness of the ASHRAE Standards and guidelines to assist whenever needed for the green and sustainable society & Sustainable World.

ASHRAE Qatar Oryx Chapter which has been chartered at 2008 with 35 members it grows up to be 169 members this year with great achievement in Research Promotion, Membership Promotion, Chapter Technology Transfer and others, we are here to serve the Humanity in Qatar to spread the awareness of the ASHRAE Standards and assist to issue the Qatar Energy Law and for Qatar to be green, sustainable, Energy efficient and clean environment with low CO2 emission and less heat emission.

We are available at our Website to answer all questions and to provide the help, so please don't hesitate to ask us, to ask the experts.

www.ashraeqatar.com

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Cooling, a Historical Necessity, and an investment for the Future

In search for the story that made Air-Conditioning what we know it today, I was impressed when I learned that Man's quest for cooling went more than 2000 years back! It is know that the concept of Air Conditioning was been applied in **Ancient Rome**, (300BC) where aqueduct water was circulated through the walls of houses to cool them.

The quest continues with similar techniques in **medieval Persia** where they used cisterns and wind towers to cool buildings during the hot season.

Forwarding in time, in the 2nd century **Chinese inventor Ding Huane** of the Han Dynasty invented a rotary fan for air conditioning, with seven wheels 3 m in diameter and manually powered. In 747, Emperor Xuanzong of the Tang Dynasty had the Cool Hall built in the imperial palace, which is described as having water-powered fan wheels for air conditioning, as well as rising jet streams of water from fountains.

In modern history, the milestones are:

In 1758, **Benjamin Franklin and John Hadley**, a chemistry professor at Cambridge University, conducted an experiment to explore the principle of evaporation as a means to rapidly cool an object. Franklin and Hadley confirmed that evaporation of highly volatile liquids such as alcohol and ether could be used to drive down the temperature of an object past the freezing point of water.

In 1820, British scientist and inventor **Michael Faraday** discovered that compressing and liquefying ammonia could chill air when the liquefied ammonia was allowed to evaporate.

In 1842, Florida physician **John Gorrie** used compressor technology to create ice, which he used to cool air for his patients in his hospital in Apalachicola, Florida.

He hoped eventually to use his ice-making machine to regulate the temperature of buildings. He even envisioned centralized air conditioning that could cool entire cities. Although his prototype leaked, and performed irregularly, Gorrie was granted a patent in 1851 for his ice-making machine. His hopes for its success vanished soon afterwards when his chief financial banker died; Gorrie did not get the money he needed to develop the machine. Dr. Gorrie died impoverished in 1855 and the idea of air conditioning faded away for another 50 years.

In 1902, the first modern electrical air conditioning unit was invented by **Willis Haviland Carrier**, (doesn't that name sounds familiar?) in Buffalo, New York.



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Cooling, a Historical Necessity, and an investment for the Future (Continued)

After graduating from Cornell University, Carrier, found a job at the Buffalo Forge Company. While there, Carrier began experimentation with air conditioning as a way to solve an application problem for the Sackett-Wilhelms Lithographing and Publishing Company in Brooklyn, New York, **when the first "air conditioner", designed and built in Buffalo by Carrier, began working on 17 July 1902.** .

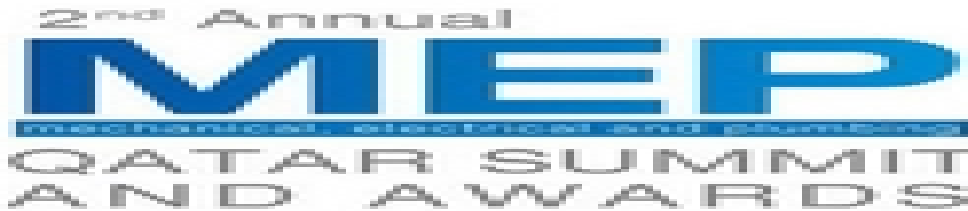
That is the story of the evolution of Air conditioning, from its birth back in the darkness of time to its modern history milestones.

At Present, cooling has transformed itself from a rudimental luxury to an inevitable necessity in a region where, one day, natural resources such as oil and gas will diminish, but the need to cool will remain. Now if air-conditioning does not sound like a solid long-term business investment, what does?



Fadi AbouJamra
Board of Governor 2011-2012
ASHRAE Qatar Oryx Chapter

The 2nd Annual MEP Qatar 2012



Third Annual Middle East District Cooling Summit to take place in Qatar

Fleming Gulf is proud to host the 3rd Annual Middle East DC (District Cooling) from 28-30 November 2011 in Doha, Qatar. With the participation of over 30 leading district cooling technology, solutions and service providers, this consortium of industry experts and leaders aims to achieve various purposes.





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Launching of Website of Qatar Oryx Chapter

President of ASHRAE Qatar Oryx Chapter and Chairman of Qatar Society of Engineers announce to all ASHRAE members and all other engineers & engineering bodies on 31st of October at Millennium Hotel that our Web Site www.ashraeqatar.com is officially launched.

This event sponsored by: Faisal Jassim Trading Co., Gess & DRI, International Engineering Supplies, Jersey Group, Jumbo Electronics, KBE Air Movement Products, Leminar Air Conditioning Co. W.L.L., Metco Qatar, Maico Gulf (Dynair & Elicent), SPC, Thermobreak & FTC Qatar and Takyeeff Electromechanical W.L.L.



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