

Editorial

Jaywant H Arakeri, Guest Editor

Willis H Carrier, founder of the air-conditioning industry and the featured engineer in this issue, had the characteristics of many great scientists and engineers – undivided passion for his work and an uncanny ability to identify important problems and find simple (on hindsight) solutions. His most important contribution, the psychrometric chart that he developed in 1904, is universally used essentially unchanged, not only in the air-conditioning industry, but anywhere where air and climate are involved. Besides, he was a leader and a visionary. He and Irvine Lyle brought together a team of engineers with different talents, and essentially started and nurtured the fledgling industry.



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The work done by Carrier best represents what is often termed as applied research. To the many practical air-conditioning problems that he encountered, he sought and obtained solutions in a most fundamental manner. Unlike a pure scientist, an engineer has to evaluate what the ‘solution would mean to engineers, to industry, and to business’. Today, an engineer or an engineer-scientist has to also evaluate what the solution means to the environment, which is often not easy. Who would have thought that the miracle refrigerants, the chloroflourocarbons, would burn a hole in the ozone layer? So the hunt is on for new refrigerants, as is elucidated in an article in this issue.

The American free enterprise system, which identified and nurtured such giants as Edison and Carrier and is practiced in many parts of the world, is increasingly being viewed with scepticism and disillusionment. Decision-making and growth seem to be more driven by economists and bankers, rather than by engineers and by considerations of societal good; the aim is to create ‘wants’ more than to fulfill ‘needs’. Carrier himself had “a dim view of bankers”, perhaps with good reason! Market-driven and ‘needless’ growth is best exemplified in the IT capital of India, Bangalore, also once known as the air-conditioned city, where temperatures rarely crossed the 10–35 °C range. It is going from an ‘air-conditioned’ to an ‘air-conditionered’ one with glazed buildings (no doubt copies of designs for cold climates) storing solar heat which is then removed by tons of air conditioning. (Contrast these buildings with the majestic Vidhan Soudha in Bangalore, which lets in air and light, but no direct solar radiation.) Carrier would have certainly disapproved of such misuse, even if it meant a financial loss to the air-conditioning industry; one can imagine him saying, “Just leave the damn windows open!”.

