

# leading off



## Keeping Pace With Racing Industry Changes

Reading an article about how the auto industry is making improvements to the basic 4-cylinder engine to provide horsepower ratings that rival some V8 engines while greatly reducing fuel consumption reminded me of a conversation I had with a group of young and energetic engineers from Kawasaki. These engineers were responsible for developing and testing of a dihydrogen-oxide refrigerant centrifugal chiller which has been operating for almost five years in their corporate headquarters. Old reliable technology with the flair of new technological improvements. Talk about pressure!

Our discussion progressed into the technologies they had incorporated into the chiller, which included a variable speed motor (inverter) that is directly coupled (no gear box) to the impeller of a redesigned two-stage impeller with an intermediate inter-cooler (economizer), while being oil-less. Beyond the mechanics of a typical dynamic-compression system, it was using R-718 (water (dihydrogen-oxide)) with an evaporator pressure of 0.9 KPa (29.65 in. Hg vacuum) and a condenser pressure of 6.3 KPa (28.06 in. Hg vacuum) to provide the refrigeration effect with a Coefficient of Performance (COP) of 5.1. The best part of the conversation was that they shared all the information they had on hand. For a minute I thought I was at an RSES conference and then imagined the number of spin-off seminars that could be developed!

Putting this all together, whether the design of this unit is for reasons of performance, efficiency, environmental concerns, corporate responsibilities, national/international mandates, or a just plain common-sense approach to equipment design, it shows that training necessities in the HVACR industry

continue to change and grow. And this is where the RSES Educational & Examining (E&E) Board comes into play as it continues to keep pace with the industry's racing changes and advancements.

As the E&E Board continues to work with sister organizations, manufacturers, contractors, educational institutions, subject matter experts and Members to develop new materials and fill in the gaps to improve existing materials. I encourage everyone to pass on any topics or areas of improvement or technological advances so that the E&E Board can continue developing materials for the HVACR industry and especially for Members.

With the planned promotions from headquarters to celebrate RSES's 85<sup>th</sup> year of educating the HVACR industry, we continue expanding the exposure of our ever-growing RSES educational materials to the rest of the industry. These materials have been developed by a society that has been the industry leader for 85 years. All of this is combined with the knowledge and skill that only our thousands and thousands of Members can provide. So, thank you all for your continued support of the many benefits that RSES has to offer. And please send a suggestion or two towards the E&E Board for future consideration. After all—Service Through Knowledge—sums it up. ☺

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