History Of A PERSON

VICTOR BERTHENE

Introduction

This History of a person Interview with Victor Berthene was prepared by the Minnesota Chapter of ASHRAE, Gary Grenzer, Historian. April 2005

Personal and Education

Victor spent his childhood in New York City where he attended Brooklyn Technical High School. He then spent 4 years in the Air Force, 3 of them stationed in Germany doing ground communications work in radio, teletype and cryptography. He was discharged in July 1952.

Having qualified for the Korean War GI Bill Educational Benefits he applied at the University of Illinois because Illinois had won the Rose Bowl that year. He was accepted in their College of Engineering at the Urbana/Champaign campus.

During his senior year Victor took a refrigeration course taught by Professor Will Stoecker. That subject and Will's teaching really grabbed Victor's interest. Will eventually became Academic Advisor to the International Institute of Ammonia Refrigeration (IIAR) which was founded in 1975. Victor's name has been included among other recognized industry contributors in the preface of Will Stoecker's 1988 first edition of "Industrial Refrigeration" textbook.

Victor met and married his wife while at the university of Illinois. He graduated in 1956 with a BSME. Victor and Sandra have been married 51 years. They have three children, five grand children and one great grand child.

Career

Victor began his career at York Corp in 1956. The company assigned him to train as a sales engineer in Philadelphia, and then they transferred him to their Richmond office. His job was to call on refrigeration users, consulting engineers and mechanical contractors in Virginia and North Carolina. Some of his work at York was ammonia process cooling and storage system equipment applications, but mostly it was centrifugal compressor, central station Air Conditioning systems

In 1960 Victor left York to join a small company in Richmond that made and installed prefabricated cold storage buildings using built-up ammonia or packaged HCFC equipment.

In January of 1962 a Seattle firm, Lewis Refrigeration Co, a mechanical contractor, needed an engineer with ammonia experience for field installation and start-up work. They had to deliver and install 5 of their new Fluidized Bed Freezers. They hired Victor and he learned a lot in a short time that summer and started up a new belt freezing system for the Green Giant Co. in Belvedere, IL.

Since Green Giant of LeSueur, MN was a prime customer for their freezing systems; they located Victor in Minneapolis to work the mid-west for prospective vegetable freezing business. He was with Lewis for the next thirteen and a half years. During that time, he sales engineered all types of systems in addition to belt freezers including cold storage buildings, packaged product plate freezers and the then new E.l.du Pont Company's Freon Immersion Freezers that sprayed R-12 @ -22 deg F on food product at atmospheric pressure.

The company also was selling their belt freezers in Europe through a sales rep firm in England, and a couple of systems in Bulgaria needed start-up service, He had relatives in Hungary so he asked for the assignment and went to Bulgaria in late May, 1967. On the way home he made a side trip into Hungary to meet his aunt and cousin for the first time.

In1970 Victor acquired his PE license in Minnesota, Iowa and the state of Illinois license at the same time. In addition to cold storage systems, Victor also got involved in some of the company's work for ice rinks, and ground freezing using large brine chillers, and a variety of other secondary refrigerant applications including ice making, cold storage and agricultural ammonia storage tanks that hold 30,000 tons of product and need 400Tons of refrigeration to load, unload and maintain the liquid ammonia.

In 1972 a Canadian company bought Lewis and changed things enough so that Victor left the company in 1975. His wife was in law school at the time and they had two kids in college. He spent the summer trying to relax and even thought about changing careers. Then he got a call from Frigoscandia Contracting, Inc., a Swedish firm that had a US office. They wanted to open a sales office in mid-west for their food freezing systems. Victor went to Sweden for 2 weeks of orientation then opened their new office in Hopkins, Minnesota. Their equipment was of very high quality. It included a variety of spiral freezers and some other interesting continuous conveyorized freezers and even a system for freezing a slurry product into a slab.

A significant industry change during his career was the growth of cryogenic freezing using liquid nitrogen and CO2. Frigoscandia felt that mechanical refrigeration freezing systems with less operating cost could counter the more expensive cryogenic non-recovered gas systems. They did but the low first cost of cryogenic systems had its appeal, especially to new users, because it offered a less expensive investment if the frozen product wasn't profitable.

Now the equipment applications were exclusively for food cooling and freezing. But there were some more varied applications than he had with Lewis, like continuous conveyorized cart tunnels, and complete spiral freezer systems. But cryogenic freezing in our industry had carved out a significant share of business and he again was confronted with a management decision to relocate.

In 1984 after eight and a half years he left Frigoscandia, stayed in Minneapolis, and again wondered about changing careers. He tried "head hunting" engineers and was "Shocked! Shocked!" to realize that people who were looking for jobs were not marketable. The "head hunter" business is based on finding people who were employed and convincing them to change jobs. He didn't think engineers should be manipulated like that so he quit.

Victor liked refrigeration engineering work, and because he had a variety of experience

and three PE licenses, he decided to try being an independent consultant and/or contract engineer to users of ammonia refrigeration systems. At that time SuperValu needed a project engineer for their new cold storage installation going into Hammond, LA. They hired him on an hourly basis and he did a variety of refrigeration work for them out of their Eden Prairie office including convincing them that their CO2 pelletizing system in Indianola, MS was wasting money by not recovering most of the gas that went to atmosphere. He sketched out a system to recover the wasted gas from the pelletizing process and got 3 bidders for a CO2 recovery system.

The calculated pay-back time on their investment was 9 months. They figured that even at 18 months it was a good investment. They installed the system and the actual pay-back time was 10 months. In the course of doing other work for SuperValu he got his Wisconsin PE license.

So as of 1984 Victor became a consulting engineer, primarily for ammonia systems. “My experience made me appreciate the popular reference to ‘Plan B’, so I chose it for my business name. And over the next 20 years I had the opportunity to participate in a variety of work for many different clients.”

One project was to survey a unique system in France for drying seed corn using refrigeration with only an occasional addition of gas fired heat, compared to the completely gas fired systems used here in the states. For another client he arranged to generate heated water needed for clean-up. It was no trick tapping the 230 deg. F. source of hot gas from an ammonia reciprocating compressor. The dilemma was how to store 5,000 gallons of 140 deg. F. water without endangering the employees, and the answer was to put the storage tank underground.

He has done a variety of trouble-shooting work on systems that needed tweaking or discovering the need to replace some refrigerant flow component. Victor has designed retro-fit additions to existing systems as well as drafting performance specifications for new facilities for bidding and installation by qualified contractors.

He’s championed the use of penthouse evaporator systems to insure that maintenance of the equipment can be accomplished without interfering with the warehouse product flow in and out of the storage racks, at any time. He made it specific with his designs that all refrigerant controls, including stop valves, be located outside the building. This absolutely prevents a possible ammonia leak inside the building except for the externally remote failure of a pipe or an evaporator coil.

He’s calculated the refrigerant charge in numerous ammonia facilities, including one that was built in 1943 near Tacoma, WA, which prompted his Washington PE license. Victor has been a presenter for seminars and conducted training for operating engineers. He has performed Mechanical integrity Audits on existing ammonia facilities, and given expert witness testimony involving ammonia refrigeration systems.

Victor continues to be an innovative designer of ammonia and HFC refrigeration systems and is still interested in doing more. “More changes are coming, and I'd like to take this opportunity to encourage young engineers and other interested persons to consider working in the refrigeration industry. In it you gain a working knowledge of more than just the mechanics of refrigeration systems. You learn to use considerations for the principles of civil, structural,

chemical and the electrical disciplines, and of course the electronics for controlling refrigeration systems. Refrigeration is a business that's always looking for more personnel, for designing, contracting, installation and maintenance work".

Victor is a practicing Consulting Engineer specializing in Ammonia Industrial Refrigeration. He has current PE licenses for Minnesota, Iowa, Illinois, Washington & Wisconsin and maintains Professional Liability and Worker's Compensation Insurance for his client work.

Associations

ASHRAE Victor joined ASHRAE in 1987

RETA Refrigerating Engineers and Technicians Association

ASME American Society of Mechanical Engineers

Activities: Victor is the current Chair of the Minnesota Chapter's Refrigeration Committee. He arranged for eight presenters for our chapter's Refrigeration Seminar that was held in February 2005.