Memories of Sam Mehta

I had the pleasure of working with Sam Mehta for more than 30 years. Prior to my meeting him, he had already been working at the Allis Chalmers transformer facility after graduating from UW-Madison. It was at Allis Chalmers that he became involved in the process of testing transformers. When the SPX (RTE-ASEA at the time) facility was being built, he was instrumental in selecting and verifying the performance of the various types of equipment used on a transformer test floor. We worked in Waukesha for a total of 44 years. He also trained the personnel that worked on the test floor. His training emphasized the need to get the correct test results the first time. He understood the need for using the correct set-up on each test and was able to communicate those needs to the personnel working for him.

When I first joined SPX (10 years after he had started), Sam was in charge of the test floor. At that time, one of his projects was to get better repeatability and accuracy in measuring the performance of a transformer. He would review the methods used on his test floor with methods used at other factories. He was able to get information from multiple ASEA facilities. He decided that there had to be a better way to get consistent results and he collaborated with the National Bureau of Standards (now NIST) to print a brochure titled “Calibration of Test Systems for Measuring Power Losses of Transformers” (NBS Technical Note 1204). This project required that Sam understand not only the object under test (the power transformer), but also understand the components that go into a loss measurement system. The brochure allowed customers and other manufacturers to evaluate the measuring systems that were being used in the transformer business. This was an area where he showed that he was the voice of the customer before that term became a buzzword.

One of Sam’s unusual talents was his ability to find a failure point in a transformer (or other component under test). Sam was able to find a failure point by his sense of smell. He would look at a suspect area and sniff it to determine whether this was a failure point or some dirt or other discoloration. Other people would find what they thought was the source of the failure, then Sam would look at it give it a sniff and declare, “This is the spot” if it was the failure point. During his career, he spent a fair amount of time inside of transformers.

When Sam became the engineering manager, one of the obvious aspects of his leadership was his ability to build teams based on the talents of the members of the team. Sam was quick to recognize talent and determine how that talent could best be used to improve the performance of the team. This ability made working for him both rewarding and challenging. It was rewarding because he would allow individuals to work with their talents and not necessarily try to change the individual. It was challenging because once you understood your place within the team, you would try to improve what you could do.

Following his time as the engineering manager, he became the vice president of Research and Development. In this position, Sam was no longer required to work on day-to-day issues and was able to work on more strategic solutions involving the transformer industry. He was the national representative to CIGRE for several years – representing not only SPX but also the US transformer industry as a whole. Another of Sam’s duties was to help members of the management staff understand the transformer industry. Members of the management team came from multiple industries and it was Sam’s job to teach them how the industry worked and what our customers expected from their transformer supplier.

Later in his career at SPX, Sam went to a completely new technology when he began work on the superconducting transformer. This project brought together the resources of a superconductor wire supplier, a national lab, a sponsoring utility and SPX as a manufacturer. Sam was able to build units with different types of insulation systems. The systems evaluated included high vacuum, cast coil design and finally a liquid filled transformer where the liquid was liquid nitrogen and the solid insulation was polymer based. The understanding of the heat flow and the ability of the liquid to make up for assembly issues was similar to the units that he worked with in the past.

After leaving SPX, Sam did not leave the transformer industry. He became a consultant to companies that supplied accessories to the transformer manufacturers. Once again, he was working to anticipate the needs of both of his customers – the transformer manufacturers and the customers that were the final user of the transformers. His knowledge of what the customer wanted and what could be easily incorporated during the manufacturing process led to useful components that are incorporated in the final product.