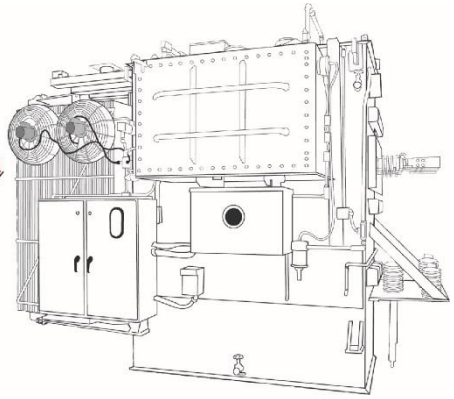


Legacy of Excellence in Power Transformers



CEO, PRABHAT K. JAIN Communication #1, 8/13/2019

Robust Engineering



VTCR Roanoke

Virginia transformer was started in 1971 by an engineer named Max Hill in 1971. He came from California to Virginia to serve the coal mining industry in this region. He first developed variable speed drive transformers that could handle high harmonics.
In 1983, Max hired Tom Knight, an electrical engineer from University of Virginia, who designed a **4000A, dry type rectifier transformer** with interphase transformer for a copper mine application in Mexico. And later in 1987, he designed the **first LTC transformer at VTC**.



Tom Knight (center)

Tom Knight introduced our first computer design optimizing program in 1984. He built a team of engineers and developed them into a confident group that would provide solutions for high current, high impedance, harmonics and industrial load applications.

Moving into 90's, VTC acquired Chihuahua, Mexico plant (VTCW) to extend into small power and pad mount units' range. In the same time frame, we hired a batch of engineers from India with power transformer **experience in designing EHV Units up to 800 kV.**

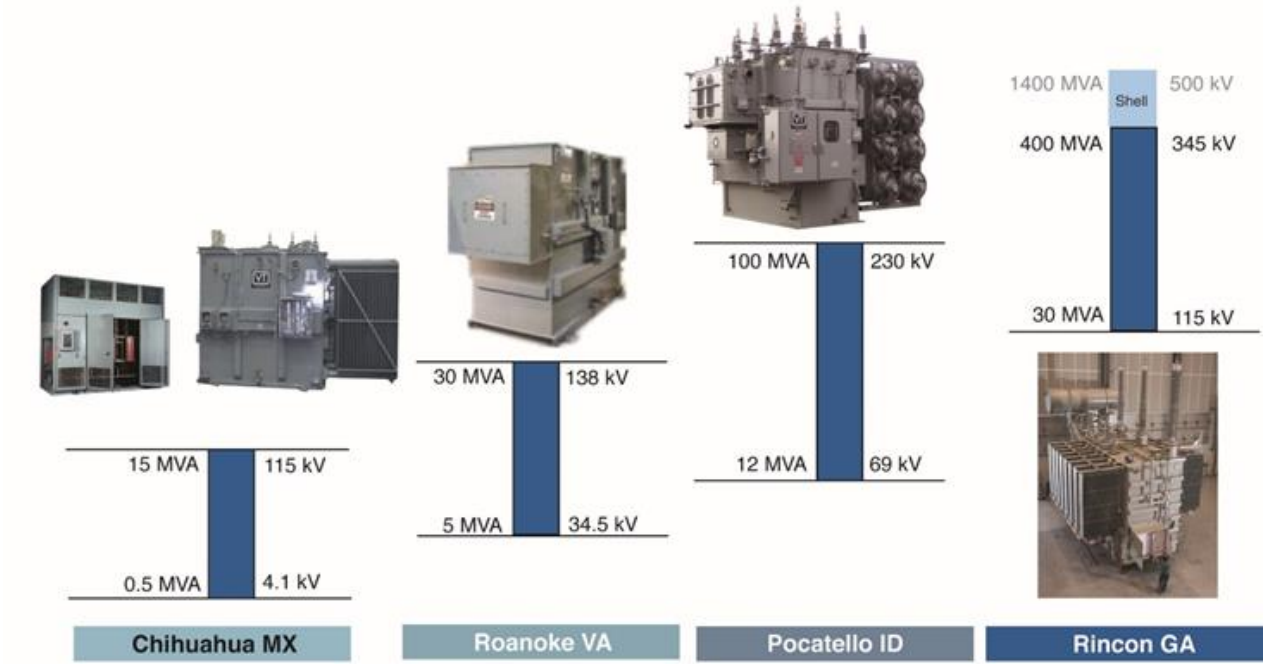


VTCW Chihuahua



VTCU Pocatello

VTC at this stage began transitioning into the utility arena. The engineering team started tackling complex utility specifications. Analytical tools to verify impulse distribution and losses, coil compression in shop were developed to meet engineering designs. Several transformers were Short circuit tested while the design capability grew to 230 KV 750 BIL. Auto transformer were added to the repertoire with Pocatello (VTCU) acquisition in 2003.



Major investments were made in design software and digital simulators - Anderson, Maxwell and Ansys program were added for 3D FEA while several engineers from GE were added to the team at VTCU. Computer design program and Design manuals were updated in 1999 – continued to revise & update every five years. The first 150 MVA, 230 KV transformer was delivered in 2009. Our Technical team in shop empowered with a **can-do attitude** built each new design successfully under the leadership of the engineering team.

Efacec technology was added in 2014 extending engineering capability to 500 **kV, 1000 MVA.**



GT Rincon

Engineers and technicians have delivered many **345 KV since 2017** while **500 KV units are spotted for 2021**. Confident engineering and technical teams of over 190 engineers with BS, MS and PhD's continue to deliver resilient and reliable power transformers to utility, industrial and renewable sectors.

