

PROFILE



Kenneth Morse
Mechanical Engineer
CU Boulder - Utility Services
8th Great Grandson of Samuel F. B. Morse

Maintaining and cleaning any piece of equipment, whether it's a \$10 household blender or a \$4.5 million combustion turbine from a power plant...the wear and tear on the parts from daily use and the periodic cleaning with chemicals will affect the age of the device and ultimately the way it functions. Although there is not a significant change at each maintenance cycle, over time, the yearly required care will eventually wear the machines significantly and will require replacement and or repair. This is where we meet Kenneth Morse, the 8th great grandson of *Samuel F. B. Morse*.

Ken, as he is referred to by co-workers and friends, is the intellect behind the scenes knowing when, what and how to maintain turbines, generators and boilers for the Power House at the University of Colorado, Boulder campus.

“This year is one of the largest outages the University has ever experienced”, Morse

said in a recent interview. “It not only is the longest in duration but the most expensive”. This year, not only does the generator require major maintenance, the turbine will need to be completely disassembled down to its nuts and bolts being cleaned, inspected and put back together; undergoing what Ken terms as a ‘life analysis’. This requires crucial schedule coordination with multiple vendors each performing an important piece of the work; and Ken knowing details of each portion. “The companies I hire to do the work know what is required and will consult me if there an unusual situation.

Our vendors specialize in turbomachinery and generator maintenance. Ken states that through our detailed contract specifications and bidding process we get vendors that understand the complexities of how turbine blades in power stations pick up deposits while in service; this coating of scale upsets the delicate dynamics of the blades, creating an imbalance which slows the turbine. In extreme cases this imbalance can lower output and increase power plant maintenance and operating costs. Knowing how to clean and maintain those delicate blades is vital in the preservation of the life of the equipment for optimal use.

Again, this is where Ken Morse steps in. Ken’s job at the University for the last 17 years has been to get as much life out of the equipment as possible and to insure reliability of service bringing cooling, heating and electricity to the CU Boulder campus.

In 2006, Ken and his co-worker, Victor Ferriera Mendez laid claim to the University’s first Power Plant patent, for a segmented plate assembly.

When Ken is not concerned with the daily maintenance and care of the Power House

equipment, he enjoys skiing, boating, building hot rods, 4 wheeling, relaxing and spending time with his family and most recently, his 3 month old grandson, Austin, the 10th great grandchild of Samuel F. B. Morse.

When asked what it means to him to be the 8th generation grandson of “The” Samuel Morse, Ken replied, “For the most part I feel lucky to be born into such an awesome family with a relative who made an important contribution to the world. I’m very proud to be part of that Morse family and that I have made my contribution and putting another mark in the history books (although not as grand an impact) in the Morse legacy.

5 Questions for Kenneth Morse

1) Since few people grow up with becoming an expert in turbine maintenance, what career path brought you to this type of work?

I got started in the construction of power plants and then focused on working with rotating equipment.

2) How did you come to create the first patent for CU Facilities Management?

It started as a reoccurring problem with a deaerator having stress cracks that required welding on the internal plates due to lack of thermo expansion. A segmented plate was designed to allow for thermo growth and could be installed through the existing manway. This recurring problem, along with my desire to fix things right the first time, led me to create a solution that was not only achievable but practical.

3) What is the most harrowing experience you have had working on the plants equipment?

Taking over the plants turbine maintenance contract from the original equipment manufacturer. Being the only two turbines like it in the US made it a on the fly learning experience for me.

4) I would imagine that your job can be high stressed at times, how do you cope with that?

To de-stress from all the hard work involved with maintaining the Power House, I play equally as hard. From building a Mustang to making my Super-duty Ford F-250 move a little faster.

5) What is your favorite thing about your job here at CU?

The daily challenge of the Power House and the people I work with...and my location, location, location.