
PROFESSIONAL PROFILE

Position: Mechanical Design

Education: MSME, Polytechnic University of Bucharest, Romania, 1991.

Work History:

Design Engineer – 5/2001 to present

Pantech Consulting Engineers, Columbia Division, Columbia, South Carolina

Senior Engineer – 8/1991 to 1/2000

Research and Development Center of the Energy Research and Modernization Institute, Bucharest, Romania.

Technical Designer – 8/1988 to 8/1991

Research and Development Center of the Energy Research and Modernization Institute, Center for Electrical Power Generation Technologies-Nuclear Division, Bucharest, Romania

Control and Instrumentation Technician – 8/1982 to 8/1988

Research and Development Center of the Energy Research and Modernization Institute, Center for High Power Testing, Bucharest, Romania.

Design and Process Projects:

Design and specification development for numerous industrial processes, a few of which are noted hereinafter:

Pantech Consulting Engineers: Design and detailing on structural, electrical and mechanical projects.

Cayce Wastewater Treatment Plant Cayce, SC – Electrical drafting for power and communications upgrade for 25MGD treatment plant including new Headworks, Aeration Basins, RAS, WAS pump stations, Membrane Thickener Tanks, Digesters, Centrifuge, new 10,000sf Laboratory building, with total connected load of over 6000kVA and total construction cost of over \$52M. Largest motor, 400HP with 18 pulse Variable Frequency Drives (VFDs).

Dillon Wastewater Treatment Plant Dillon, SC – Electrical drafting of power distribution and communications upgrade for Dillon and Cypress Pond Wastewater Treatment Plant including new Bar Screen, new Aeration Basins, new Chlorine Contact chamber, new 10,000sf building, replacement of existing 250HP Reduced Voltage Autotransformer (RVAT) starters with new Variable Frequency Drives (VFDs)., new motor control centers, and new emergency standby generation to serve approximately 3MGD addition to plant treatment process.

Water Treatment Plant #1 City of West Columbia, SC – Electrical drafting of power distribution and communications upgrade for Water Treatment Plant including new Blowers, Lime Silo, New Disinfection system, upgrade of Flocculators and Sedimentation Basins, new Trac-Vacs, and new motor control centers.

Greenhill Standpipe City of West Columbia, SC – Electrical drafting for new emergency standby

PROFESSIONAL PROFILE

generator and automatic transfer switch, new service entrance, modifications to existing SCADA system.

Research and Development Center of the Energy Research and Modernization Institute:
Designed the geothermal heating infrastructure system for the town of Calimanesti, Romania. Designed needed heat exchangers, entrained gas separators, distribution mains and feeder pipes, gas expansion coils. Specified necessary valves, filters and regulators. Other projects included the design of heavy water to industrial process water heat exchanger including scale model testing of welds. Also designed a steam turbine effector, a special heat pump, a die casting mold (designed on Autocad) many cutting tools.

Research and Development Center of the Energy Research and Modernization Institute,
Center for Electrical Power Generation Technologies-Nuclear Division:
Helped design control panels used in the main control room. Helped design mobile laboratory, mounted in a van, which was used for emergency data collection. These control panels and equipment were used in the CANDU nuclear power facility in Cernavoda, Romania. Helped write Romanian version of nuclear maintenance and installation procedures. Helped write equipment installation manual for seismic requirements. Helped design special machine for relieving residual stresses in heat exchanger tube end connections.

Research and Development Center of the Energy Research and Modernization Institute,
Center for High Power Testing:
Cycle testing of mechanical and electrical contacts on low voltage equipment. Tested fuses for standards compliance. Performed dynamic transient voltage tests. Tested oil-filled transfer switches, industrial bus bars, terminal blocks. Used control transformers, shunts, power transformers, thermocouples, etc.. Similar testing as Underwriters Laboratory performs in the U.S. Moved progressively from low to medium to high voltage equipment