I. Drane Engineering Home

A. About Us, fairly permanent, flashier side of things

Drane Engineering is owned and operated by Randell Drane, PE. We provide mechanical engineering services to a variety of clients with a broad variety of needs from Power Plant and Process Piping design to small consumer products to Factory and Warehouse Automation. Drane Engineering has been a significant contributor to large and small teams on a variety of project scales, budgets and timelines. We enjoy pushing things that can’t be done due to budget, time or creativity constraints, into the done stack.

1. Services and Skills: (tweaked wording from original website…could use some suggestions)

a. Product Engineering (from original website)

b. Owners Engineering (from original website)

c. Visio Development (from Original website)

2. Clients Served

a. Asyst automation: Semiconductor Fabrication Automation and transport systems. Early career mechanical engineer helping the design, documentation and procurement of large wafer and reticle transport systems and their support structures.

b. Newmed: Asthma inhaler user compliance product. Provided documentation in the form of specifications, drawings and BOMs and their interface into the companies procurement system

c. QC Solutions: Designed automation nest for 300mm SMIF Pods.

d. Tri-Mont Engineering: Power Plant and Process Piping Design. Owner’s engineer support. Cost estimates, Pro-formas, bid-spec packages, piping documentation, piping support designs. Worked with Distrigas, Exxon, Sprague Energy, MATEP and many other local energy companies to develop plans and designs for new piping and power systems. Provided heat balances with in house developed VISIO software system, pipe stress analysis, flow analysis (for compressible and incompressible flows of steam, water and natural gas) and structural support designs.

e. Pelletsales.com/Woodpellets.com: System development for pellet storage, transport and in home distribution and use. Invented, prototyped and submitted provisional patents for new products for bulk pellets. Supported sales and marketing teams selling wood pellets for home heat and energy. Pushed hard to resolve chicken and egg issues in developing wood pellet industry here in the US.

f. Souhegan Wood Products: Developed and built automated flying cutoff system for their extruded wood core saver products.

g. Appollo Wind: Co-invented and supported the prototyping and patenting of isothermal compression AC system.

h. ARD: Mechanical Engineer on team inventing and producing new Braille Reader and Tactile Panel for mass market.

i. Casepick Systems: Director of Mechanical and Structural Engineering. Employee number six at startup factory automation company. Later became Symbotic. Led Mechanical team developing structural support environment and small robotic cars through two successful tranches of financing. Led team in documenting, sourcing, procuring and assembling first prototype robots and structural environments. Staffed and procured tools and tooling for in house shop.

j. Cambridge Cohousing: Support of their large ground source heat pump system. Their heating and cooling is provided by qty 8, 10 ton, water source heat pumps sourced from qty 3, 1000+ ft, standing column wells.

3. Past Projects, bloggy, easily updated to add new items

a. Atlantic Avenue Steam lines

b. MATEP Power plant gas turbine installs

c. Distrigas LNG pipe supports

d. Souhegan Wood Products flying cutoff saw

f. Refrigerator Cold Water tank and dispenser

g. Pelletsales.com Pellet Hod

h. Visio Heat Balances

i. Braille Display and Tactile Panel

B. Current Projects, bloggy, easily updated to add new items and remove old ones

1. Rebuild Honda 50

2. Carbonated Water Dispenser

3. Kiln Gas Flusher

4. Neighbors For Rational Growth

5. Sustainable Winchester

C. Wishful Thinking, bloggy, easily updated to add new items and remove old ones

1. New style engine/prime mover

2. New heat pump

3. New solar panel

4. Better Biomass utilization

5. Document fact corroboration app

6. User Agreement Checking App

D. Contact Us

1. Same us current DE contact us info