



# The Mulvaney Pipeline

## The Incredible Shrinking Workstation

Individual workstation square footage is being slashed dramatically. Cubicles are now typically less than half the traditional size. This trend allows organizations to devote more space for meetings and informal interaction. To afford more conference and meeting space, you need to get the workplace more dense. Workstation cubicles used to be eight feet by eight feet, or even eight by ten, but it has slowly shrunk to six by six according to Haworth, a prominent interiors manufacturer. Technology miniaturization has been a factor in allowing for this change. Laptops with built-in flat screens take up way less space than bulky desktop computers. Desktop phones are rapidly being replaced by cell phones and Bluetooth devices. Digitization of many documents, techno-savvy organizations have been able to reduce, if not completely eliminate, paper files, catalogs, and other printed material.



The result of all this compression is to create more informal employee networking areas and meeting spaces. Along with this trend, the day of the high partition cubicle wall is over. The move to more modern collaborative spaces has dictated the use of low partitioning rather than taller panels. The day of the old fashion newsroom type open space design is back, but with a modern twist. Low partitions and natural design for sound control is the new trend.

A 60% increase in ice covered ocean water as compared to last year has lead some scientists to believe that our planet is actually undergoing a "Global Cooling" event, not global warming.

## Psssst... you wanna buy some nice low mileage R-22 ????

Even though there are only seven years to go before the complete phase-out of hydrochlorofluorocarbon (HCFC) R-22, current inventory of the industry's most popular refrigerant remains plentiful, despite the fact that production and importation are down more than 40 percent. Reasons for this excess supply are due to a spike in production which was allowed by the U.S. Environmental Protection Agency (EPA) for 2013 only. Add the recent mild weather trend, less R-22 equipment coming to market, and use of hydrofluorocarbon (HFC) alternatives in retrofitting existing R-22 equipment and you have more R-22 than the market requires.



The supply of R-22 for contractors in 2013 has greatly exceeded demand which has led to lower prices. Although manufacture of new equipment using R-22 has been banned, many manufacturers have found a loophole which allows them to continue production of "dry shipped" R-22 equipment. As long as new equipment is shipped "empty" or dry rather than the traditional R-22 pre-charged state, manufacturers can continue to sell R-22 systems. Currently we see a great increase in the switch to alternative products. For new equipment, clearly the main choice is R-410A as well as other HFCs. However, for retrofit work, there are newly introduced HFCs and others that have also reduced the demand for R-22. Given the prohibition of HFC's to the atmosphere, far more R-22 is being reclaimed which naturally remains available to the service market. The lessons learned during the move from R-12 to R-134a has resulted in more proficient ways to reclaim refrigerants and better recycling rates now that most technicians have accepted this as part of their normal service routines.

Presently most refrigerant suppliers will not argue that R-22 systems are built for R-22 refrigerant, but many are also urging contractors to continue retrofitting with R-22 alternatives as the phase-out inches closer. Regardless of your position on the countdown to phase-out, the bottom line is there is no reason to panic about the R-22 supply. There is a sufficient amount of R-22 available now and in the near future to meet servicing requirements for the installed base of R-22 equipment. As the larger main chiller machines installed during the late 1990's as so called "Green Chiller" alternatives to older CFC chillers begin to be replaced we will see massive amounts of reclaimed R-22 hit the market to support those machines remaining on R-22.

- The HAPPIEST people are those who are too busy to notice whether they are or not .
  - A little fire that warms is much better than a big fire that burns.
  - The world need more warm hearts and less hot heads.
- Some people stay so far in the past that the future is gone when they get there.

## Facts, Trivia and Interesting Stuff

- More people die playing golf than any other sport. Leading causes: heart attacks and strokes.
- When you walk down a steep hill, the pressure on your knees is equal to three times your body weight.
- About one in five humans has no reaction to the toxic oil in poison oak or poison ivy.
- The phrase "weapons of mass destruction" was coined in 1937 during the Spanish Civil War in reference to air bombing.
- About 27 people die each year in the U.S. of suffocation from a dry-cleaning bag.
- England's King James I wrote about the hazards of smoking in his 1604 treatise "Counterblaste to Tobacco."
- A fever can cause brain damage if it goes above 107.6 degrees F.
- One out of every ten Americans spends one day a year in the hospital.
- Morphine addiction became known as the "soldier's disease" after the U.S. Civil War.
- Studies show feeling guilty may depress your immune system.
- About 1,500 New York residents are bitten every year . . . by other New Yorkers.
- Detection dogs have been trained to sniff out pirated CDs and DVDs.
- The first Band-Aids were 2 1/2 inches wide and 18 inches long.
- Based on the name of a real badly burned bear cub that survived, Smokey Bear's name was copyrighted by Congress in 1952. He died of natural causes at age 24.
- People with facial piercings are 23 percent more likely to order vegetarian pizza than average.
- Day of the week most Americans call in sick: Friday (18 %). The day fewest do: Tuesday (11%).

## PLUMBERS ARE A SCARCE BREED THESE DAYS

Each year there are more Plumbers that retire or just leave the industry to pursue other career paths than there are new people entering the trade. With the demand for skilled Plumbers now outpacing the supply, compensation levels are expected to increase as employers continue to get more aggressive in their recruiting strategies.

According to the U.S. Department of Labor, the demand for experienced Plumbers (Fire Sprinkler fitters, Pipefitter, Gasfitters and Steamfitters) is likely to increase by 10 to 20% over the next seven years. Based on the labor statistics from 2002, an additional 120,000 Plumbers could be needed by the close of 2013.

There simply aren't enough people to fill all the available plumbing jobs. Passive forms of advertising such as an employment ad in the local newspaper, job posting on a career site or a help wanted sign on the back of your trucks simply aren't enough to attract new employees, and hiring a professional recruiter to track down skilled workers just isn't within the budget for most companies.

There is a distinct difference between plumbers that specialize in residential work and those who must handle the diverse needs of process piping, fire suppression systems and other specialty piping systems. Always be certain to select the right plumber for your job. Pipefitting and process piping demand a much higher level of technical expertise. New applications in the healthcare, semiconductor, R & D engineering and pharmaceutical industries have required plumbers to become true technicians capable of handling the most demanding jobs.



Cardiff Wales UK

1806 Mellon-Griffith Water Lift Engine

## THE HISTORY OF WATER PUMPS

- **2000 BC** Egyptians invent the shadoof to raise water. It uses a long suspended rod with a bucket at one end and a weight at the other.
- **200 BC** Greek inventor and mathematician Ctesibius invents the water organ predecessor to the reciprocating pump. Archimedes invents the screw pump which is considered one of the greatest inventions of all time.
- **1475** The first machine that could be characterized as a centrifugal pump was invented by Italian engineer Francesco di Giorgio Martini.
- **1588** Agostino Ramelli introduces sliding vane water pump technology.
- **1593** Nicolas Grollier de Serviere creates an rudimentary gear pump.
- **1636** Pappenheim, a German engineer, invents the double deep-toothed rotary gear pump.
- **1650** Otto van Guericke invents the piston vacuum pump using leather piston rings.
- **1675** Sir Samuel Moreland, English academic, diplomat, spy, inventor and mathematician patents the packed plunger pump, capable of raising great quantities of water.
- **1687** French-born inventor Denis Papin develops the first true centrifugal pump.
- **1782** James Watt invented the steam engine's connecting rod crank mechanism, which made it possible to convert the piston's reciprocating motion into rotary motion.
- **1830** Modern screw pump is invented by Revillon.
- **1849** Goulds casts and assembles the world's first all-metal pump.
- **1851** British inventor John Appold introduces the curved vane centrifugal pump.
- **1859** Jacob Edson invents the diaphragm pump and founds the Edson Corporation in Boston.
- **1868** Stork Pompen of Hengelo, Netherlands, pioneers the concrete volute pump.
- **1901** Byron Jackson develops the first deep well vertical turbine pump.
- **1916** Aldrich produces the first direct motor-driven reciprocating pump.
- **1920** Viking builds its first domestic oil burner pump using a mechanical seal.
- **1939** Smith Precision Products develops the first liquefied gas transfer pump for LP-gas.



## What the heck is it ?

If you can name the item pictured, you may

## WIN A MULVANEY MECHANICAL LEATHER JACKET

If you e-mail your entry, you must write "NEWSLETTER CONTEST" in the subject line to avoid our SPAM filter. Please mail to [janette@mulvaneyinc.com](mailto:janette@mulvaneyinc.com)

**\*JUST LIKE THIS ONE!**



This is a tool whose time has passed. In the early days of electric transmission of Telegrams; messages were sent over hard wiring and printed on paper tape similar to stock market ticker tape. This scissor and roller was use to cut the paper ribbon message in sections to be glued to telegram paper and rolled flat.



We received only one correct answer. William Ruley, PE, Sr. Process Engineer CRB is our winner. We invite all readers to enter and share a guess. You may win!

## WHAT'S GOIN' ON?

Oct 18 – 21 <sup>st</sup>	IFMA Workplace 2013	Philadelphia, PA
Oct 13-15 <sup>th</sup>	NECA Electrical Trade Show	Washington, DC
Oct 15-18 <sup>th</sup>	IAQ-2013 Health in low energy bldgs.	Vancouver, BC
Oct 20-24 <sup>th</sup>	SMACNA 2013	Mauai, HI
Nov 20-22 <sup>nd</sup>	Green Build 2013	Philadelphia, PA
Dec 9-13 <sup>th</sup>	Eco Build 2013	Washington, DC
Jan 18-22 <sup>nd</sup>	ASHRAE Winter Conference	New York, NY

"Too bad that all the people who really know how to run the country are busy driving taxi cabs and cutting hair."

- George Burns



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