



History of the *Doulton Ceramic Filter* *Candle*

John Doulton founded his first pottery in 1815 at Lambeth, England on the banks of the Thames river. The main products of the original company were ceramic busts, figurines, canning jars and tableware. Influenced by the unrelenting progress of the Industrial Revolution, Doulton placed equal emphasis on industrial applications for ceramic technology. As early as 1827, this fine china manufacturer was in the water treatment business, using various earth and clay materials in the first Doulton water filters.

In 1835, Queen Victoria recognized the present health dangers in her drinking water and commissioned Doulton to produce a water filter for the Royal household. Doulton created a gravity fed stoneware filter that combined the technology of a ceramic filter with the artistry of a hand crafted pottery water container. In consideration of her pleasure with the new device, Queen Victoria bestowed upon Doulton the right to embellish each of its units with the **ROYAL CREST**.

John Doulton's son, Henry, introduced the *Doulton Manganous Carbon* water filter in 1862, the same year that Louis Pasteur's experiments with bacteria conclusively exploded the myth of Spontaneous Generation. This more advanced understanding of bacteria made it possible to direct Research and Development efforts to the creation of a porous ceramic capable of filtering out these tiny organisms.

By 1901, King Edward knighted Henry Doulton and honored the company by authorizing it to use the word *ROYAL* in reference to its products. In 1906, Doulton introduced a filter that proved to be equal to the one Louis Pasteur had developed in France. It was rapidly adopted by hospitals, laboratories and for use in domestic water filtration throughout the world. The popularity and effectiveness of even the early 20th century designs has resulted in their continued use in Africa and the Middle East. The range and efficiency of Doulton domestic water filters has been widely extended over the years to meet the demands of increasingly sophisticated uses.

At the core of the Doulton ceramic filter element is the most basic of elements ...**EARTH**. This is the same substance which artisans, first in Asia then in Europe, refined into exquisite porcelain and pottery of the Shoguns and Kings. This material is Diatomaceous Earth [D.E.], a fossil substance, made up of tiny silicon shells left by trillions of microscopic, one celled algae called diatoms that have inhabited the waters of the earth for the last 150 million years.

Diatoms have one property that sets them apart from other algae. They weave microscopic shells which they use for the protection and locomotion. These shells are covered with a pattern of tiny holes so regular that even the slightest change in their design usually signifies a different species. As the diatoms died, their shells survived, slowly piling up in deposits at the bottom of geological lakes and lagoons. When these lakes dried up, what remained were huge deposits of "*diatomaceous earth*". Today there are over 1500 uses for Diatomaceous Earth, from abrasives for toothpaste, filtering agents for water and milk, heat insulators for kilns, to polishing agents in nail polishes, and many many more.

The latest designs of Doulton filter elements incorporate Oligodynamic silver impregnated into a porous ceramic outer shell [80,000,000 pores] that can trap bacteria down to as low as .22 of a micron in particle size [1/100,000 of an inch]. Laboratories consider a filtering medium with an effective pore size of .01 micron to .45 micron to be *bacteriologically sterile* and .45 micron to 1.0 micron to be *bacteriologically safe*. Regrowth of bacteria that becomes trapped either on the outside of the element or in the ceramic's pores is controlled by the **silver** which, on contact with water, releases small quantities of positively charged metals ions. These ions are taken into the enzyme system of the bacteria's cell and thereby neutralize it. The flow rate of the ceramic filter can be easily renewed by simply brushing its outer surface under running water. As the top layer of ceramic and the contaminants are brushed off and flushed away, a new layer becomes available. This process can be repeated several hundred times before the ceramic material is exhausted.

Doulton water filters have been manufactured since 1827 and available in the United States since 1983.

Doulton holds Certification, Accreditation, or Membership with the following Agencies:

ISO 9002 Quality Standard

National Sanitation Foundation standards 42 and 53

Environmental Protection Agency (EPA)

Water Quality Association

Department of Health (Toronto, Canada)

Spectrum Labs (Minneapolis, USA)

Water Research Council (UK)

British 5750 Quality Standard

England's Water Research council (WRc) Performance Standards

California Department of Health

Over 50 Independent Laboratories Worldwide

They are currently sold and used in over 150 countries throughout the world.