HISTORICAL MONUMENTS

King's Fountain, Jeddah

King Fountain, also known as Jeddah's Fountain, is the tallest water fountain in the world. It dominates the skyline of the city of Jeddah, the commercial capital of Saudi Arabia and the wealthiest city in the Middle East and western Asia, located on the coast of the Red Sea. The fountain was built in the 1980's and is listed in Guinness World Records as the highest water fountain in the world, with a reach of over one thousand feet. The salt-water fountain was donated to the City of Jeddah by the late King Fahd bin Abdul Aziz.

Visible throughout the entire city of Jeddah, the water fountain consists of a single massive plume of water shooting vertically into the air at a speed of 233 miles per hour. On a calm day the water reaches a height of one thousand and twenty-four feet, higher than Parisâ€™ Eiffel Tower (excluding the antenna). At any given moment, the water hanging in the air weighs in excess of eighteen tons (thirty-six thousand pounds)!

The first construction of the fountain was developed between 1980 and 1983, after the style of Lake Genevaâ€™s freshwater fountain, which reaches four hundred and sixty feet into the air at speeds of approximately one hundred and twenty-four miles per hour. This scale was found to be insufficiently impressive for planners.

The fountain as it stands today began operating in 1985, and has been running without any significant difficulties for over twenty years. A comprehensive maintenance system includes daily, weekly, bi-weekly, monthly, half-yearly and annual inspections and maintenance operations.

Because Jeddahâ€™s Fountain operates using sea water running at unusually high speeds;

corrosion and abrasion were key challenges to the builders, SETE Technical Services Latsis Group. The intakes for the pumps are in a special pit that is continually pumped dry and treated annually with anti-fouling paint that prevents growth of marine life. The water is passed through a series of screens before it reaches the pumps, filtering out soil, sand, and organic matter. The pipes and pump systems are isometrically designed and made of special stainless steel. Water exits the pumps via a 350 meter high-pressure output line constructed with steadily decreasing diameters towards the nozzles. The nozzles are constructed of a specially designed alloy which can withstand a constant pressure of forty-two bar (over 609 pounds per square inch). The five hundred high-intensity spotlights that illuminate the fountain also had to be specially designed to withstand the constant barrage of thousands of tons of water an hour falling from several hundred feet. The spots are mounted on special islands. A cathodic system was installed in 1987 to protect the pipelines from the corrosive effects of the falling seawater, consisting of fifty-seven anodes and twenty-nine reference electrodes at seventeen points along the system.

It took over two years of constant development to arrive at the current successful design, which has resulted in not only a record-setting water fountain, but has brought about the first real development of specialized knowledge on high pressure seawater.