

P R E S S R E L E A S E

Gemini Receives Patent for “Zero Discharge” Water Reclamation Technology

FOR IMMEDIATE RELEASE

Cannon Falls, MN — Gemini Incorporated, one of the world’s leading manufacturers of dimensional letters, logos and plaques for the sign industry, has received a patent for its “Zero Discharge” water reclamation process. Gemini is currently using this process in its waterjet cutting operations.

The groundbreaking technology effectively serves the needs of companies committed to “Green” manufacturing processes by ensuring that no particles are ever released into local water tables. The process also saves Gemini and its customers thousands of dollars a year in water by reusing 100 percent of the water from its waterjet cutting operations.

Gemini’s patented process is a “Closed Loop” water reclamation system that captures water used by waterjets for cutting metal pieces. It recycles the water, filters out the suspended solids and returns the water back to the machine. It accomplishes this through a combination of filters and settling chambers called weir tanks. The water is gravity-fed through the settling chambers and then pumped back into the machine through a bank of filters.

As opposed to standard storage tanks that are composed of just one large chamber, Gemini’s Zero Discharge System incorporates a weir tank with five separate chambers separated by a series of weir tanks to enhance the sediment settling efficiency. Sediment-laden water is pumped into one end of the tank from a collection point. The water travels over and under the weirs before reaching the outlet at the other end of the tank. The weirs serve to maximize the distance the water must travel inside the tank and to minimize water turbulence.

Both of these factors greatly increase the settling efficiency of the weir tank over standard tanks. The minimized turbulence also allows Gemini’s Zero Discharge System to be used for continuous flow operations much more effectively than standard tanks.

Waterjet cutting uses a high-pressure stream of water, mixed with garnet, an abrasive mineral. The high water pressure of the water and abrasive garnet is capable of producing extremely intricate cuts in metal. As the metal is cut, however, both the garnet and powdered metal sliced away become floating sediments in the discharged water.

The holder of many manufacturing patents, Gemini Incorporated uses a variety of earth-friendly materials and manufacturing processes to make its products. The company currently has manufacturing plants in Minnesota, Iowa, Texas, Nevada, Virginia, Canada and Mexico. For more information about Gemini, visit www.signletters.com or call toll-free at 1-800-538-8377.

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