



SERVICE PROFILE

Hydro-milling

Overview

Hydro-milling, also known as retro-jetting or hydro-jetting, is an efficient method of cleaning industrial piping through the implementation of high pressure water nozzles and jets.

Newly installed process piping typically contains exuberant amounts of foreign debris. These residual deposits can potentially compromise system reliability and lead to premature system degradation and catastrophic failure during plant operation. In order to help preserve the long-term integrity of these process piping systems, hydro-milling can be used to remove all undesirable foreign contaminants and particulate matter. Hydro-milling has been proven as an effective means

of removing both large and fine debris from piping surfaces, including post-construction debris, byproducts that result during fabrication, and operation-derived deposits, which are comprised of welding slag, mill-scale, loose rust, and mineral sediment.

During the hydro-milling process, water is pumped at high pressure through a self-propelled high pressure nozzle engineered for pipe wall cleaning at service pressures between 5000 to 12000 psi (~35500 kPa to 83000 kPa). The attached hose is then sent through a bi-directional feeder and rotated at operator-controlled rates into the piping. The rotational motion of the hose allows the nozzle to easily negotiate 90° elbows, piping turns, and directional changes, in addition to providing full surface area cleaning throughout the entire pipe circumference.



Visit our website for more Case Studies and Insights at:

fourquest.com/case-studies
fourquest.com/insights

BEFORE**AFTER**

Complex vertical and horizontal lengths of pipe with diameters between 2" to 30" are easily traversed with full cleaning capacity. Simple horizontal straight-length pipelines with diameters exceeding 30" can also be cleaned sufficiently. Hydro-milling has the capability of providing a 1250 ft. horizontal and/or 350 ft. vertical cleaning spread. All loose debris is efficiently driven out of the system through the intelligent operation of the built-in rear jets. By withdrawing the high pressure nozzle during operation, all debris is pushed out of the line in a predictable and controlled manner. When equipped with auxiliary heating, hydro-milling can also be performed in subzero conditions.

As guidelines change to meet more demanding environmental regulations, FourQuest is dedicated to providing services that adhere to all client protocols. In cases where stringent environmental and waste disposal regulations call for reduced water usage, FourQuest Energy's hydro-milling setup can be outfitted with supplementary filtration skids to recycle all waste effluent. In situations where clean water cannot be obtained, external demineralized water and reverse-osmosis skids can be sourced.

When compared to more traditional water flushes, hydro-milling can match or exceed cleanliness specifications while reducing the time and costs associated with water, waste disposal, scheduling, and equipment requirements.

Benefits of Hydro-Milling:

- > Reduced commissioning (i.e. steam blows) durations on boiler feedwater and steam systems
- > High degree of cleanliness on non-critical and critical systems.
- > Can be completed in a variety of conditions, including subzero climates
- > Lower water requirements compared to conventional water flushes
- > Water recycling capability with minimal waste disposal
- > Reduced costs associated with time and scheduling



EDMONTON, AB

9304 39 Avenue Northwest
Edmonton, AB T6E 5T9
Office: +1 780-485-0690

CALGARY, AB

Suncor Energy Centre, West Tower
#5100, 150 6th Avenue, S.W.
Calgary, AB T2P 3Y7
Office: +1 403-538-2140

FORT MCMURRAY, AB

136 Macmillan Road
Fort McMurray, AB T9H 5L4
Office: +1 780-750-2829

FORT ST. JOHN, BC

Graywest Office Centre Ltd.
10704 97 Avenue
Fort St. John, BC V1J 6L7
Phone: +1 250-785-1706



Connect with us:



fourquest.com