



INDUSTRY Healthcare

CUSTOMER Memorial Healthcare

LOCATION Owosso, Michigan, USA

BACKGROUND Memorial Healthcare in Owosso, Michigan is committed to providing patients with a healthcare experience of the highest possible quality. For the facilities manager, this mission extends to identifying and mitigating risks that would compromise the safety of patients and staff.

PROBLEMS TO SOLVE Aware that waterborne pathogens could develop within the scale buildup of their domestic hot water system, Memorial Healthcare's facilities manager was concerned about the risks, especially for immunocompromised patients. The maintenance team had explored several chemical options for scale removal, however none of these were implemented because the potential benefits did not outweigh the new risks they presented.



“The removal of scale was our primary objective, and we’ve been pleased that it’s working,” said Josh. “Due to the visible difference it makes, we are looking at potentially putting these in on our heating hot water systems for the purpose of scale removal as well.”

— JOSH WISSINGER, FACILITY MANAGER FOR MEMORIAL HEALTHCARE

SOLUTION Armstrong Nanobubble Generators offered a natural solution for removing scale and other deposits that relies on the properties of nanobubbles—without additional chemicals. Water entering the device flows through a series of precisely designed chambers that transform the entrained gases into nanobubbles. The flow of nanobubbles through the mechanical system removes existing deposits and disrupts future growth, leaving particulate to simply flow downstream for easy removal.

Armstrong Nanobubble Generators were installed on the domestic hot water systems of the main hospital, cancer center and wellness center.

SIGNIFICANT RESULTS Within months, the facilities team noticed results. The reduction in scale on copper pipes was visually confirmed when a portion of the domestic hot water pipeline was replaced in one of the buildings.



Nanobubbles starting to remove scale on a sample of pipe from Memorial Healthcare’s domestic hot water system.