Ergonomic Solutions for Valve Turning

Valves in the water system require periodic opening and closing ("exercising") to stop them from freezing shut. Manual hand tools when used to open, close, and exercise valves (*Figure 1*) require a high degree of force (in excess of 50 lbf of torque), repetition, and awkward postures. Some valves required up to 300 turns to fully open or close.

Powered valve openers may want to be considered and implemented, some options include the Valve Boss (*Figure 2*) that counts the number of turns produced by the machine, and the Wachs ERV-7 truck mounted valve exerciser (*Figure 3*). Both serve to significantly reduce the amount of manual force and repetition required to operate a valve, make it easier to keep count of the number of turns completed, and produce a more consistent amount of torque, reducing the likelihood of valve damage.

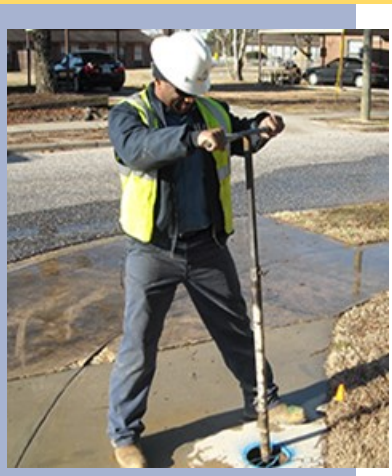

Figure 1. Manual Valve Operation

Risks include a high degree of force (in excess of 50 lbf of torque), repetition, and awkward postures. Some valves required up to 300 turns to fully open or close.

Figure 2. Valve Operation with the Valve Boss

Video Demonstration: https://vimeo.com/77099881
Manufacturer: http://www.valveboss.com/Valve_Products.html

Figure 3. A Truck-Mounted Valve Turner

No operator support ***or*** interaction required during valve exercise, all reaction torque and feedback is absorbed through machine only. This combined with automated control allows the operator to start the exercise safely away from environmental conditions that might pose ergonomic and other hazards. https://www.ehwachs.com/Utility/Brochure/

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