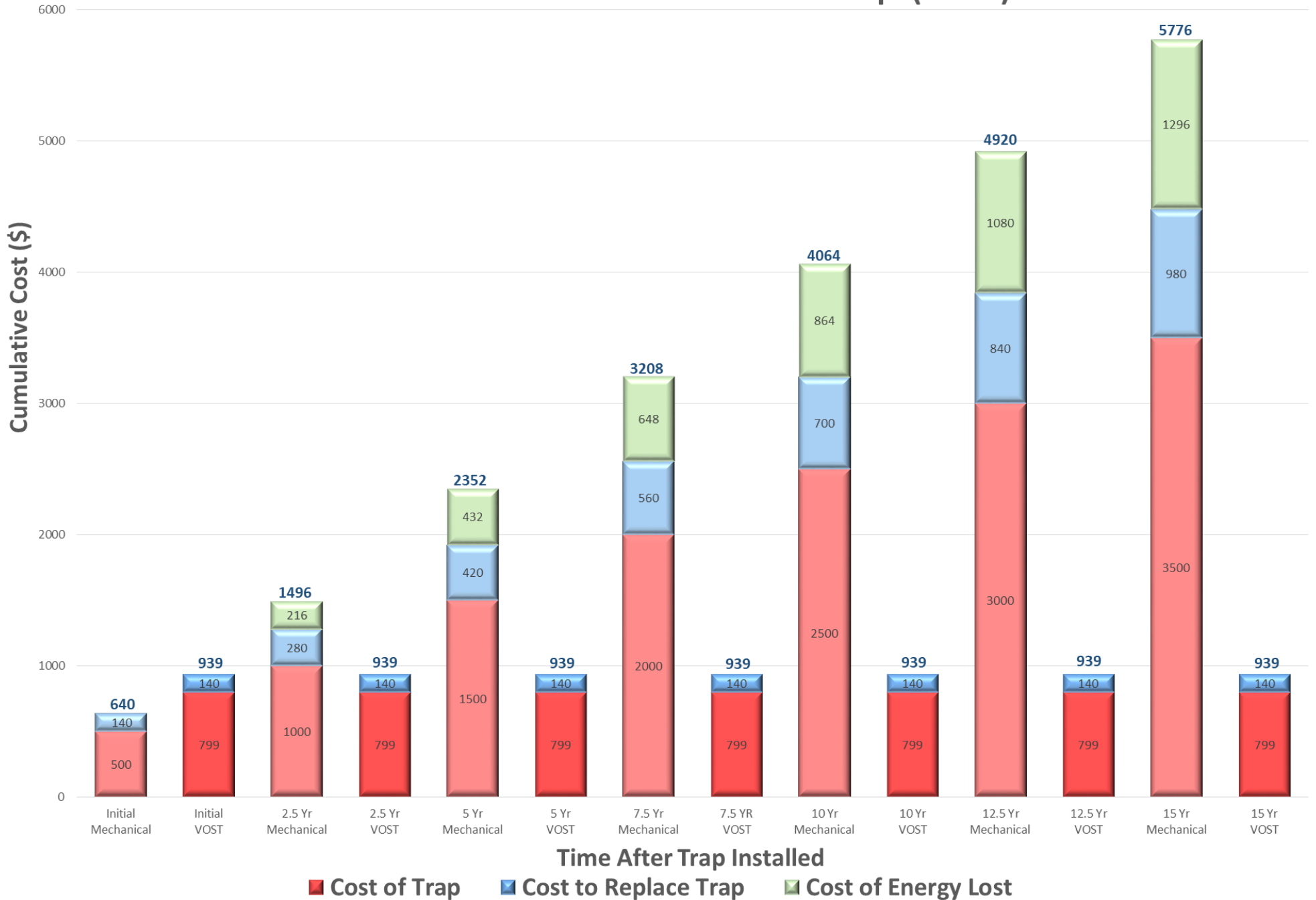


Cost of DN15 Mechanical vs Venturi Orifice Steam Trap (VOST) over Time



ENERGY SAVINGS WITH VENTURI ORIFICE STEAM TRAPS

When compared to a conventional mechanical steam trap, the venturi orifice steam trap can save you money. The venturi orifice steam trap has a life expectancy that is 10 times that of a conventional mechanical steam trap due to its unique venturi design that has no moving parts. Our experience performing plant retrofits has produced decreases in steam consumption.

The savings on the venturi orifice steam trap is to be found in the long life of the trap. If it is assumed that the life of a float trap or a thermodynamic trap is on average 2.5 years, the venturi orifice steam trap has an expected lifetime of 20 years. Over a period of 15 years, 6 mechanical traps will have to be replaced. If it is assumed that the cost of a DN15 venturi orifice steam trap is \$799.00 and the cost of a DN15 mechanical trap is \$500.00, then over this period the cost difference between the two is \$2201.00.

There are further savings to be made as the venturi orifice trap does not progressively deteriorate over the lifetime of the trap. It is conservative to assume that a conventional mechanical steam trap will leak steam before it is replaced. If a 15mm trap on a 10 bar system leaks for 2 months before the leak is detected and the trap replaced, it will lose 6 kg of steam per hour which is 8640 kg of steam. Assuming the cost of the energy of the steam is \$25 per tonne, this will cost \$216.00 in lost steam over a period of 2 months till replacement. The other cost is the labor cost of trap surveying and replacement. The time to replace a float trap will be two hours including ordering the trap and filling out permits. Assuming labor costs are \$70 per hour, this is a cost of \$140.00 per trap replaced.

The graph below shows the cumulative savings of a venturi orifice steam trap compared to a conventional mechanical steam trap over 15 years.

Factoring in the energy savings and long life expectancy of the venturi orifice steam trap, the venturi orifice steam trap has the lowest total life cycle cost of any steam trap on the market. The venturi orifice steam trap has proven itself to be highly efficient, long lasting, and a better choice for improving and maintaining plant efficiently. Moving away from the use of conventional mechanical steam traps such as thermodynamic and float traps, and toward more efficient technologies such as the venturi orifice steam trap will improve overall plant efficiency and lower maintenance costs substantially.

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