

SODIUM HYPOCHLORITE LEVEL INDICATORS

OLD SYSTEM



Chlorine solution corroding cast metal on indicator



Chlorine solution corrodes PVC fitting causing leak.



Corrosion of internal pulleys and nylon cord.

PROBLEM

At Mt Kynoch we have three 1800L storage tanks for sodium-hypochlorite. In order to determine the level of these tanks and prevent overflowing, level indicators had to be installed. The original level indicators were the floating pea type, which over a short period of time failed due to leakage. The next attempt trialled was the counter weight type which consisted of floats and nylon ropes. Again this type was unsuccessful due to the corrosive nature of sodium hypochlorite on all moving parts. There was a suggestion to use a magnetic type of level indicator, but at \$400 each and unknown reliability these systems proved unsustainable. Another issue encountered was at all of our bore sites around the network. The sodium hypochlorite tanks used are a grey colour, fully enclosed and have a cam lock fitting for filling. This means a reliable level indicator is imperative for the safety of our staff as it is the only means of determining the level in the tank.

SOLUTION

After consultation and several brainstorming sessions with the WTP Operators, a new hypo level indicator was born. The concept of a simple float constructed of 10mm UPVC pipe with EPDM rubber ring joint for straight connection with a clear 20mm PVC sleeve was trialled. The design is simple but effective and does not have intricate workings as it is positioned at the top of the hypo tank instead of on the side. Graduated markings on the clear tube indicate different levels, giving the operators an easy visual indication at all times. Chlorine suppliers have all given positive feedback on the level indicators saying they are easily read and a good design. With this in mind we are now starting to roll out these systems to other sodium-hypochlorite storage sites across the region. The low cost of these indicators, with its durability and ease of use is very attractive compared to other types on the market, as the savings from purchasing and replacing broken units, can add up to thousands of dollars for council rate payers.

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NEW SYSTEM



Accurate indicator



Float heavy to stop bouncing



Clear PVC sleeve with graduated markings