



UPDATE ON THE ANODE ROD ISSUE

Since issuing the [Anode Rod Technical Service Bulletin](#) on October 23, 2015 we have continued to investigate the root cause of the issue.

SUMMARY:

Up to this point, anode rods were supplied with GARN units because they were a simple solution to deal with the possibility of undirected current or stray current. Anodes were installed in 100% of units to prevent an issue that might occur in less than 1% of units. But now that customers have experienced *sloughing* and accelerated rod degradation, the use of anode rods no longer meets our standards of broad protection (i.e., as a low-cost, low-maintenance solution for protection against stray current).

BACKGROUND:

What has been discovered is that during the past 15 years 100% of magnesium anode alloy production has been moved from the US to China. Consequently, the suppliers cannot guarantee that the rods will meet specification for use in GARN equipment without a significant increase in cost (to a retail price of \$300 per rod).

Based on past history, the early degradation of the anode rods was unforeseen by all involved: the designers, technicians, test labs and suppliers.

GARN customers are not the only ones affected by this issue: water heater manufacturers, the petroleum industry, and the buried pipeline industry are all coping with the issue. If we learn of industry-wide remedies of possible recovery for our customers we will provide that information to you.

WHAT THIS MEANS FOR GARN CUSTOMERS:

What this means is that new GARN WHS units will no longer be supplied with anode rods, and anode rods will no longer be available as replacement parts from our online store. In addition, we DO NOT recommend purchasing anode rods from another source as the rods will likely produce the same issue.

WHAT SHOULD BE DONE:

Customers have been asking what should be done as a replacement for the anode rods. At this point we are still working on a permanent solution.

What is currently underway is investigation into revised grounding procedures and electric isolation as substitutes for anode rods.

Although taking action to move from anode rods to a new solution is important, it is not cause for alarm. Undirected current has affected fewer than 15 GARN customers over the past 35 years. Damage from undirected current is extremely rare and is not a common occurrence. Debris removal, proper inspection, cleaning, and water treatment is the recommended and best approach to ensure a long life of a GARN unit.

COMMITMENT TO PERFORMANCE AND SIMPLICITY:

GARN WHS equipment is a quality product that is simple, easy to use, efficient and meets EPA emission limits beyond 2020. While there is no corrosion guarantee, we endeavor to give our customers the best recommendations for protecting their GARN unit. In addition, GARN WHS equipment is designed to be fully cleanable and repairable, so any problem can be fixed.

Thank you for your patience as we work toward a reasonable and safe solution.

FURTHER READING AND REFERENCES USED AS BACKGROUND RESEARCH:

- Frashet, E. (2015, 10 29). MESA Products - Quality Assurance Discussion. (D. Lunde, Interviewer)
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- May, T. (2004, January). Magnesium Anodes - A Quality Crisis? *Materials Performance Magazine*, 43(1), p. 28.
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- Parthiban, G., Palaniswamy, N., & Sivian, V. (2009). Effect of manganese addition on anode characteristics of electrolytic. *Anti-Corrosion Methods and Materials*, 56(2), 79-83.