

## Repetitive Water Heater Failure Claims – New Theories of Recovery

It can be frustrating when pursuit of a products liability case is not economically feasible due to the small dollar value of the claim. This is especially true with repetitive failure claims – when the same type of product fails over and over again. However, if repetitive failure claims can be identified, and a scientifically viable theory of the failure can be deduced, costs can be shared and claims can potentially be bundled.

### A Trend Is Identified

Water heater leaks are an example of a repetitive failure claim. In recent years, claims professionals have noticed a trend involving a national manufacturer of water heaters suffering repetitive leak claims. Expert mechanical engineers analyzed dozens of failed water heaters, and observed two distinct manufacturing defects: non-conductive anode rods and interior coating defects.

### Non-Conductive Anode Rods

Water heater tanks are typically made of steel that corrodes in water. To prevent or greatly slow the corrosion certain safety devices are used including sacrificial anode rods. The anode rod attracts the corrosion through a process of electrolysis. While the anode rod is in place, the steel tank should not corrode. On certain water heaters the national manufacturer also installs a resistor that is connected to the anode rod. The intended purpose of the resistor is to slow the consumption of the anode rod material, thereby extending the life of the anode. However, there has been a history of failure with resistor anode rods, primarily with the resistor itself, which failure renders the anode rod non-conductive and completely ineffective as a corrosion protection device.

### Interior Coating Defects

When an anode rod inside the water heater fails or is depleted, the next line of defense is the interior coating of the steel tank. Plumbing codes require interior tank walls to be completely coated with non-corrosive glass or a ceramic material. Our experts observed that the coatings used often have anomalies and defects, especially over welded joints. Many of these anomalies impact the effectiveness of the coating. Coating defects are attributable to the manufacturing process.

Another interior coating defect is known as “fish eyes.” Fish eyes are voids in the glass coating that leave the surface of the steel tank exposed. Fish eyes are very similar in appearance to imperfections one would observe when painting steel where a contaminant was not entirely cleaned from the steel surface, thereby resulting in a lack of coating adhesion. Due to the lack of full adhesion, there are steel surfaces that remain exposed and vulnerable to corrosion.

Beyond coating defects our experts have observed impact fractures, where the glass coating has broken free or chipped away, exposing the steel tank. Importantly, these fractures have been noted on brand new water heaters from that national manufacturer, and where there were no signs of physical impact to the shipping box or the jacket of the water heater to suggest the physical impact occurred after the manufacturing process.

These manufacturing defects also make the non-corrosive coating ineffective because the steel tank itself becomes exposed to water and corrodes — the very problem the coating was meant to prevent. In fact, when a coating defect is present, these water heaters are in violation of applicable code requirements.



Suzanne C. Radcliff

Member

scradcliff@cozen.com  
Phone: (214) 462-3023  
Fax: (214) 462-3299

### Related Practice Areas

- Subrogation & Recovery

## Arbitration Forums Finds Manufacturing Defect

In a recent Arbitration Forums case, a three member panel was asked to consider these newly developed theories of defect against the national water heater manufacturer. After reviewing the evidence, the panel adopted our contentions regarding the problems resulting from the non-conductive anode, and simultaneously rejected the manufacturer's contention of comparative fault based upon the homeowner's failure to have installed a drip pan. The panel found that comparative negligence is not a defense to a products liability or breach of warranty claim. This was the first test case for these newly developed theories of product defect involving these water heaters. However, state laws vary on the requirements for a product liability recovery. For example, under the Virginia law that applied to this particular loss, recovery is completely barred upon a finding of 1 percent contributory negligence.

---

**For additional information, please feel free to contact Suzanne C. Radcliff in the firm's Dallas office at (214) 462-3023 or [scradcifil@cozen.com](mailto:scradcifil@cozen.com).**