



Corrosion Loop Identification Services

What is Circuit?

Circuit Subsection(s) of a part of equipment or piping system where the metallurgy is the same and the corrosion rate is expected to be the same(e.g., shell, channel, running line, dead-legs, drain system, injection/ mixing point)

Corrosion loop(s) are systematized analysis “loops” used during Risk-based inspection analysis. Both terms “RBI Corrosion loops” or “RBI corrosion circuits” are generic terms used to indicate the systematization of piping systems into usable and understandable parts associated with corrosion. Systematized piping loops or circuits are systems used in Risk Based Inspection analysis to assess the likelihood and consequence of failure. Other systematization may also prove useful, such as, i.e. inspection, consequence, materials of construction and chemistry.

The complex and extensive amount of piping in refineries, petrochemicals, fertilizers, power and processing plants poses considerable difficulty in inspection planning. Under-inspection or over-inspection might occur due to either the lack of jurisdictional requirements on the inspection interval and on the method for piping, or the inspection interval being only based on piping service classifications in the existing regulations, such as API 570. This could result not only in much loss of resources, but also unacceptable risks.



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What is Corrosion Loop?

Corrosion Loop Grouping of equipment and piping based on the same process condition (service medium, operating condition) and material selection criteria resulting in the same degradation mechanism.

To alleviate the piping risk level, more and more companies, since the last decade, have adopted risk based inspection (RBI) methodology to reduce risk and to improve cost benefits. This study applied RBI methodology to optimize the inspection strategy of the piping in a refinery and petrochemical plants. For detailed RBI studies one need to check the critical areas which corrossions expected. To monitor these area, we need to have corrosion loop system.