

FFS-1 EVALUATION OF A HOT LIME SOFTENER VESSEL WITH LOCALIZED METAL LOSS FROM CUI

A hot lime softener vessel located in an EOR facility was found with substantial localized metal loss (LML) occasioned by corrosion under insulation. The vessel had been in service for about one-half its expected life. Initial review indicated that multiple areas were below ASME VIII Division 1 required thickness.

Detailed review including use of a screening level finite element analysis, ordinarily part of a ASME Level 3 fitness for service (FFS) effort showed remaining shell thickness was adequate for continued operation without need for repair and would be suitable for permanent service if ongoing corrosion were to be halted. Nozzles were identified for local repair and deemed adequate for continued operation to the next scheduled turnaround.

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