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An Overview of Corroded Pipe Repair Techniques Using Composite Materials

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Abstract : Polymeric composites are being increasingly used as repair material for repairing critical infrastructures such as building, bridge, pressure vessel, piping and pipeline. Technique in repairing damaged pipes is one of the major concerns of pipeline owners. Considerable researches have been carried out on the repair of corroded pipes using composite materials. This article attempts a short review of the subject matter to provide insight into various techniques used in repairing corroded pipes, focusing on a wide range of composite repair systems. These systems including pre-cured layered, flexible wet lay-up, pre-impregnated, split composite sleeve and flexible tape systems. Both advantages and limitations of these repair systems were highlighted. Critical technical aspects have been discussed through the current standards and practices. Research gaps and future study scopes in achieving more effective design philosophy are also presented.

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