**ABSTRACT**

Industries are continuously searching for solutions to reduce the losses caused by the massive issue of corrosion, which consumes company earnings. Prevention is the best defense against corrosion. Customized solutions using various corrosion inhibitors are one of the best methods of corrosion prevention. Organic compounds rich in heteroatoms and electron-rich cores, serve as barriers that prevent corrosion by forming an adsorbed layer. Triazoles stand out as a significant five-member nitrogen heterocycle among nitrogen-containing heterocyclic compounds with outstanding uses. Five-membered triazole come in two different structural varieties: 1,2,3-triazole and 1,2,4-triazole. Both 1,2,3- and 1,2,4-triazoles may support a wide range of substituents (electrophiles and nucleophiles) around the core structures due to their structural features, which allows for the development of numerous unique compounds. The excellent corrosion protection action of triazole derivatives can be attributed to the presence of electron-withdrawing and electron-donating substituents that allow an improved protection performance compared to that of the parent triazole molecule. Computational studies have provided evidence that the triazole- based molecules undergo donor-acceptor type interactions with metallic substrates. Triazoles are used in a variety of commercial applications, including physiologically active compounds, agrochemicals, corrosion inhibitors, dyes, and optical brighteners. This paper deals with the review on recent developments on triazole as corrosion inhibitors and their application as corrosion inhibitors and their recent trends in the field of corrosion of different metals in a variety of corrosive environments.