Corrosion property of carbon steel in the CO_2 absorption process using potassium glycinate solution

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The corrosion is important factor when new absorbent of CO2 is selected. The life of plant is decided by corrosion rate where it is CO2 absorption process.
The purpose of this research is to investigate the behavior of corrosion in reaction of carbon dioxide with potassium glycinate solution. The fluent factors are concentration of absorbent, CO2 loading and temperature in this study. Corrosion property of carbon steel in the CO2 capture process was assessed by weight loss method. The results indicated that the average corrosion rates in the carbon dioxide absorption process were found to be going down with the increasing concentration of Potassium glycinate solution. The rate of corrosion is considerably accelerated by increasing the temperature of potassium glycinate solutions.