

عنوان مقاله:

Fuzzy corrosion modeling, new horizons, new oportunities

محل انتشار:

ششمین همایش ملی دانشجویی مهندسی شیمی و پنجمین همایش ملی دانشجویی مهندسی نفت (سال: 1385)

تعداد صفحات اصل مقاله: 10

نویسنده:

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خلاصه مقاله:

Corrosion in the petroleum industry is one the major concerns of the managers and engineers. The total annual cost of corrosion in the oil and gas production industry is estimated to be \$1.372 billion. To remain competitive with the world market, this cost must be kept to a minimum and here the large demands for a reliable corrosion prediction model do exist. On the other hand in many engineering problems the available information is vague and sometimes measured data or expert knowledge is too imprecise to justify the use numbers. Fuzzy logic is a good solution here and helps us to compute with words. Using fuzzy logic as a powerful and marvelous tool, 3-D corrosion models have been generated as the purpose of this research. Pressure, temperature, oil and gas production rate, CO₂ and H₂S content of the flow are the model inputs and the corrosion rate is the output. Corrosion rate can be obtained only having 2 parameters of the model input. These graphs can be used as a powerful tool in corrosion prediction by managers and engineers.

کلمات کلیدی:

Corrosion, fuzzy logic

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<https://civilica.com/doc/22254>

