Sintesis material tembaga berpori terimpregnasi sulfur porous cus sebagai adsorben uap merkuri hg = Synthesis of porous copper material impregnated with sulphur porous cus as mercury vapour hg adsorbent / Akhmad Irhas Robby

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Abstrak

ABSTRAK
Korosi sebagai penyebab utama kegagalan di industri migas dapat dicegah dengan menggunakan green inhibitor yang bersifat aman, mudah diperoleh, biodegradeable, murah, dan ramah lingkungan. Penelitian ini bertujuan untuk mengetahui kadar optimal campuran kedua ekstrak ubi ungu dan melinjo untuk melindungi baja API 5L di lingkungan NaCl 3,5% dengan metode kehilangan berat dan polarisasi. Kedua green inhibitor dipilih karena mengandung senyawa antioksidan yang dapat menghambat laju korosi.

Hasil penelitian menunjukkan bahwa kedua inhibitor yang digunakan anti-sinergis dimana kebanyakan variasi kadar pencampuran melindungi sampel kurang baik dibandingkan dengan salah satu inhibitor tersebut. Pencampuran 6 ml kedua ekstrak menghasilkan perlindungan maksimal terhadap korosi.
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ABSTRACT
Corrosion as the main cause of material failure in oil industries can be prevented with green inhibitors, which are easily accessible, biodegradable, cheap and environmental friendly. This research is intended to determined the optimal mixing concentration of both purple sweet potato and melinjo extract in protecting API 5L steel in NaCl 3,5% environment by weight loss and polarization tests. These inhibitors are selected as they contain antioxidants to decrease corrosion rate.

The results of the research conclude that these inhibitors not anti-synergic as most of the mixing concentration provide worse protection against corrosion than either one of the inhibitors. The optimal mixing concentration is both extracts at 6 ml.