

ABSTRAK

Norman Subekti NPM 0806422971 Departemen Metalurgi Material	Dosen Pembimbing Prof.Dr. Ir. Johny Wahyuadi S, DEA
PENGARUH TEGANGAN PROTEKSI DAN PERSIAPAN PERMUKAAN TERHADAP SIFAT ADHESI CAT EPOXY DALAM PENGUJIAN <i>CATHODIC DISBONDMENT</i>	
Abstrak	
<p>Cat epoxy yang digunakan pada struktur logam yang terproteksi katodik sering mengalami <i>disbonding</i>. Disbonding adalah suatu keadaan dimana lapisan cat kehilangan daya adhesi pada substrat logam karena adanya tegangan proteksi katodik. Sifat adhesi cat epoxy banyak dipengaruhi oleh aspek mekanis yaitu metode persiapan permukaan.</p> <p>Evaluasi pengaruh tegangan proteksi dan persiapan permukaan terhadap sifat adhesi cat epoxy dilakukan dengan menggunakan pengujian <i>cathodic disbondment</i> untuk tegangan proteksi -0.5 Volt, -0.85 Volt dan -2 Volt dan tingkat persiapan permukaan substrat logam antara lain : SP 7, SP6 dan SP 10.</p> <p>Hasil pengujian menunjukkan bahwa semakin rendah tegangan proteksi (- 0.5 s/d - 2 Volt) maka pH larutan akan semakin meningkat (7.5 – 11) , dan begitupun <i>radius disbondment</i> akan semakin meningkat (3.5 – 32 mm). Ikatan mekanis yang tertinggi dimiliki oleh persiapan permukaan SP 10, karena memiliki distribusi <i>surface profile</i> antara 105-108 μm, sedangkan ikatan mekanis yang terendah ada pada persiapan permukaan SP 7, karena memiliki distribusi <i>surface profile</i> yang rendah antara 24-26 μm.</p>	
Kata kunci: Cathodic Disbondment, Cat Epoxy, Proteksi Katodik, Persiapan Permukaan, Grit Blasting	

ABSTRACT

Norman Subekti NPM 0806422971 Departemen Metalurgi Material	Conselor: Prof. Dr. Ir. Johnny Wahyuadi S,DEA
EFFECT OF PROTECTION VOLTAGE AND SURFACE PREPARATION TO ADHESION PROPERTIES IN CATHODIC DISBONDMENT TEST	
Abstract	
<p>Epoxy paint used on cathodically protected metal structure often experience disbonding phenomenon. Disbonding is a state when painted layer lose its adhesive properties with the substrate metal because of the cathodic protection voltage. The nature of adhesion of paint epoxy greatly affected by the mechanical aspects of surface preparation methods.</p> <p>Experiments and evaluation are conducted to review the effect of protection voltage and surface preparation to adhesive characteristics of epoxy paint by using cathodic disbondment test with testing variable -0.5 V, -0.85 volts and -2 volts and with level of the metal substrate surface preparation comprised of SP 7, SP 10 and SP6.</p> <p>The test results reveals by lowering voltage protection (- 0.5 s / d - 2 Volts) will increase pH of medium (7.5 - 11), hence increasing <i>disbondment</i> radius (3.5 - 32 mm). Highest mechanical bonding, attributed to SP 10 surface preparation, characterized by its surface profile distribution ranged between 105-108 μm, whereas SP 7 as the lowest mechanical bonding because of its low surface profile distribution, ranged between 24-26 μm.</p>	
Keywords: Cathodic Disbondment, Epoxy coating, Cathodic Protection, Surface Preparation, Grit Blasting	