

From: Ron Baak [belzona2000@msn.com]
Sent: Monday, September 12, 2005 4:32 PM
To: Chandler, Mark
Subject: Ron Baak pages 2 and 3

Attachments (file names): COT 2nd Page.bmp; new page 3.BMP

See two following pages for data sheets.



The bitumen sample has been cut through as three different samples
 One sample has been placed for 72 hours at 50 degree celcius immersed
 in demineralized water, for 72 hours. During the 72 hours exposed to
 23 degrees celcius and 50% relative humidity.(RV)

5. Results

Directive COT quality description 55.02 (2002) epoxy rollcoating
 minus. 2. on/mm3

Table2: Results COT #18-06-05/602 (N/mm2) (N/mm2)

specifications	Panel	Adhesion strenght	Average	Breaking point
72 Hours @ 23 celcius/ 50% RV	Flat lines	1.9 1.9	1.9 \pm 0.9	100% Attached 100% Attached
	Angular Lines	6.9 6.5	7 \pm 3	100% Substrate 100% Substrate
72 Hours immersion in H2o	Flat lines	3.0 3.4 5.7	4 \pm 1	100% Attached 100% substrate 100% Substrate
	Angular line	6.5 5.7	6.0 \pm 0.3	100% Substrate 100%Substrat
72 Hours @ 50 Celcius	Flat line	2.3 7.4 3.2	4 \pm 2	100%attached 100% Substrate 100%Substrate
	Angular	3.8 7.2 3.4	5 \pm 2	100% Attached 100%Substrate 100% Attached
	Test Area	8.4 6.5 5.7	7 \pm 1	100% Substrate 100% Substrate 100%Substrate



1. Introduction

Requested by Ms T.V Grahmbeek of TG lining bv in Heiloo, further known as constituent, by the Center for Research and Tecnical Recommendation LTD, COT. in Haarlem.
The attachement of epoxy lining on bitumen substrate.

To conduct this investigation it has been commisioned on behalf of the constituent, verbally and confirmed in writing by the COT by means of a E-mail dated June 16 2005 16:07.

2. Objective

The objective of this conducted investigation is declared that the epoxy lining has sufficient attachement on a bitumen substrate.

3. General Data

Sample

Table 1: Sample description

COT Sample number	Description
16-06-05/602	testing of epoxy lining on bitumen substrate
Received	June 16, 2005
COT test	310.893
Tests run by	Mr. M. Walrave

4. Procedure

7 epoxy lines were applied by the constituent, 4 of the 7 lines the substrate was scarified prior to application to the bitumen substrate.

The procedure used to test the epoxy lines on the bitumen substrate is in accordance with the zg. dolly test solidification test in accordance with ISO 4624 of aluminum hole pin groin with a diameter of 14mm.die. after application of the epoxy lines, using a Precision Adhesion tester (Stalemate cot number A0061) The break point and strenght are tested.



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The objective of this conducted investigation is declared that the epoxy lining has sufficient attachment on a bitumen substrate.



Het proefstuk is doorgezaagd in drie vlakken, waarvan één vlak gedurende 72 uur is geconditioneerd bij 50°C, één gedurende 72 uur volledige immersie in gedemineraliseerd water en één gedurende 72 uur bij 23°C en 50 % relatieve luchtvochtigheid (RV).

5. RESULTATEN

Richtlijn COT kwaliteitsomschrijving 55.02 (2002) "Epoxy isolcoating" : min 7,0 N/mm²

Tabel 7 hechtingsresultaten COT monsternummer 16-06-05/602

Omstandigheden	Paneel	Hechtsterkte (N/mm ²)	Gemiddeld (N/mm ²)	Breukvlak
72 uur 23°C / 50% RV	Platte lning	1,9	1,9 ± 0,9	100% lijm
		1,9		100% lijm
	Hoekige lning	6,9	7 ± 3	100% ondergrond
		6,5		100% ondergrond
72 uur immersie water	Platte lning	3,0	4 ± 1	100% lijm
		3,4		100% ondergrond
		5,7		100% ondergrond
	Hoekige lning	6,5	6,0 ± 0,3	100% ondergrond
		5,7		100% ondergrond
		5,9		100% ondergrond
72 uur 50°C	Platte lning	2,3	4 ± 2	100% lijm
		7,4		100% ondergrond
		3,2		100% ondergrond
	Hoekige lning	3,8	5 ± 2	100% lijm
		7,2		100% ondergrond
		3,4		100% lijm
	Proefvlak	8,4	7 ± 1	100% ondergrond
		5,5		100% ondergrond
		5,7		100% ondergrond

6. BESPREKING VAN DE RESULTATEN

Na vergelijking van de gemeten hechtsterkte van de epoxy lining op de bitumen ondergrond met de hechtsterkte zoals omschreven in de richtlijn COT kwaliteitsomschrijving (KO) 55.02 (2002) "Epoxy rolcoating" blijkt dat de hechtsterkte van de epoxy lining ruimschoots voldoet.

Het enigszins inslijpen van de ondergrond verhoogt de hechting van het product op het substraat.

7. CONCLUSIE

De hechting van de epoxy lining op een bitumen ondergrond voldoet aan redelijk te stellen eisen.

CENTRUM VOOR ONDERZOEK
EN TECHNISCH ADVIES (COT)

Ba


