TEKHNOTEST
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Approved by:
Head of Tekhnotest engineering LLC
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02/08/2013
SEAL: Lmited liability company/
Kyiv/Ukraine/TEKHNOTEST ENGINEERING/
ID code 37797475

Technical report No.1

Test of Metrolith D10 (D10f) filler coat adhesion on fracture

Customer: Graf Group LLC

Contract No. 13-**25 dated 12/07/2013**
Service provider: Tekhnotest engineering LLC





Date of test: August 1, 2013
Test site: Laboratoty of Tekhnotest engineering LLC, 21b, Yakira street, Kyiv city
The test was carried out by: lab technician Rudenko R.B.

Kyiv-2013

1. General information

To carry out the test of adhesion properties of reinforce undercoat in accordance with the contract No.13-25 dated 12/07/2013 between the Customer – Graf Group Limited Liability Company (Graf Group LLC), represented by the head Antonovskii Vadim Ihorovich and Service provider - Tekhnotest engineering LLC, represented by the head Ivakh Demian Bogdanovich.

Test site: Laboratoty of Tekhnotest engineering LLC, 21b, Yakira street, Kyiv city

Material: Merolith D10 (D10f)

Lower coating: asbestos cement

2. Carrying out of the tests

2.1 Test method:
- determination of coating adhesion to the protection surface – DSTU B.V.2.6-36-2008

2.2 Used equipment:
- adhesion meter ПСО-10МГ4, man. No. 405, calibration certificate No. 1329-2/30

2.3 Results of the tests are provided in Table 1:
Determination of adhesion strength of reinforce undercoat with the lower coating.

Appendix No. 1: Quality certificate and specifications of material

Results of the tests

Determination of adhesion strength of reinforce undercoat with the lower coating in accordance with DSTU B.V.2.6.-36.2008

Customer: Graf Group LLC
Test site: Laboratoty of Tekhnotest engineering LLC, 21b, Yakira street, Kyiv city
Waterproofing material: Metrolith D10 (D10f)
Test date: 1.08.2013
Used equipment: adhesion meter ПСО-10МГ4, man. No. 405, calibration certificate No. 1329-2/30

The test results are presented in Table 1

Table 1

Test date: 1/08/13

Test No.	Curing conditions	Break off force P, kN	Punch area F, cm^2	Adhesion strength R, MPa	Note
1	20 ± 5 °C	2.65	25	1.08	adhesional
2		2.33		0.95	adhesional
3		2.11		0.86	adhesional
4		2.35		0.96	adhesional
5		2.23		0.91	adhesional
6	Heating to + 80°C	1.86		0.76	adhesional
7		2.26		0.92	adhesional
8		2.18		0.89	adhesional
9		2.06		0.84	adhesional
10		1.98		0.81	adhesional
11	Freezing to – 20 °C	2.01		0.82	adhesional
12		1.99		0.81	adhesional
13		1.98		0.81	adhesional
14		2.01		0.82	adhesional
15		2.02		0.82	adhesional

Executed /signature/ Rudenko R.B.

STAMP: TEST LABORATORY “TEKHNOTEST ENGINEERING”/tel. 489-37-28

Conclusion

As a result of test it was determined that:

1) the average adhesion strength of reinforce undercoat with lower coating is 0.87 MPa.

THE MINISTRY OF ECONOMIC DEVELOPMENT AND TRADE OF UKRAINE

STATE ENTERPRISE "ALL-UKRAINIAN STATE SCIENTIFIC-MANUFACTURING CENTER FOR STANDARDIZATION, METROLOGY, CERTIFICATION AND PROTECTION OF CONSUMER RIGHTS"

ATTESTATION CERTIFICATE

No.ІІТ-138/12

Issued 17/04/2012
Valid till 16/04/2015

This certificate testifies that test laboratory Tekhnotest engineering LLC (50-V, Vyshhorodska street, Kyiv city, 04114) is attested according to the Law of Ukraine “On metrology and metrology activity”, and it meets the attestation criteria of measurement laboratories in accordance with the Rules of authorization and certification in the state metrology system.
Test laboratory is certified on the right to carry out the measurements of objects indicators for the field indicated in Appendix to the attestation certificate that is its integral part.

Appendix: field of attestation

Head of the institution of laboratory attestation

General director
of SE Ukrmetteststandart

/signature/ O.Yu. Pichuhin
April 17, 2012
SEAL