

AIT

Asian Institute of Technology

Km. 42 Paholyothin Highway, Klong Luang, Pathumthani, Thailand 12120

P.O. Box 4 Klong Luang, Pathumthani 12120, Thailand. Tel. (66-2) 524-5527, 524-6427 Fax. (66-2) 524-5544.

STRUCTURAL ENGINEERING LABORATORY

STRUCTURAL ENGINEERING FIELD OF STUDY

SCHOOL OF ENGINEERING AND TECHNOLOGY

TYPE OF TEST: COMPRESSIVE STRENGTH TEST (ASTM C109)**TEST SPECIMEN:** Three (3) cubes having a nominal size of 50x50x50 mm made of EPOXY FERROREZ 721 were prepared in SE laboratory. The mixing ratio between A:B:C material was 1.34:0.66:10 by weight.**CLIENT:** FERRO CONSTRUCTION PRODUCT CO., LTD.**DATE OF TEST:** June 14, 2017**TEST METHOD:** After mixed thoroughly, the mixed specimen was cast in the 2" standard test cubes. The cubes are cured for 23.5 hours in the molds, then stripped and cured in room temperature until they reached the required test age.**TEST RESULTS:**

Specimen No.	Date of Cast	Date of Test	Age of Specimen (day)	Weight of Specimen (g)	Cross Sectional Area (cm ²)	Maximum Load (kgf)	Compressive Strength (kgf/cm ²)	Remarks
1	13/06/17	14/06/17	1	290	25.40	12,100	476.35	*1 kgf/cm ² = 0.0981 MPa. Average compressive strength is 47.31 MPa at 1 day aged.
2	13/06/17	14/06/17	1	290	25.20	12,510	496.42	
3	13/06/17	14/06/17	1	286	25.33	12,020	474.61	
						Average	482.46	

Note : This report certifies the adequacy and representative character of the test sample(s) only.

TESTED BY:

CHECKED & APPROVED BY:

**MR. RUNGROJ JANGJIT**
TECHNICIAN**DR. ANAWAT CHOTESUWAN**
SENIOR LABORATORY SUPERVISOR
June 23, 2017

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Specimen No.	Date of Cast	Date of Test	Age of Specimen (days)	Weight of Specimen (g)	Cross Sectional Area (cm ²)	Maximum Load (kgf)	Compressive Strength (kgf/cm ²)	Remarks
1	13/06/17	16/06/17	3	295	25.63	15,960	622.75	*1 kgf/cm ² = 0.0981 MPa. Average compressive strength is 61.40 MPa at 3 day(s) aged.
2	13/06/17	16/06/17	3	288	25.48	15,800	620.17	
3	13/06/17	16/06/17	3	286	25.13	15,960	635.22	
						Average	626.05	

Note : This report certifies the adequacy and representative character of the test sample(s) only.

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Specimen No.	Date of Cast	Date of Test	Age of Specimen (days)	Weight of Specimen (g)	Cross Sectional Area (cm ²)	Maximum Load (kgf)	Compressive Strength (kgf/cm ²)	Remarks
1	13/06/17	20/06/17	7	294	25.63	17,180	670.36	*1 kgf/cm ² = 0.0981 MPa. Average compressive strength is 66.46 MPa at 7 day(s) aged.
2	13/06/17	20/06/17	7	290	25.58	17,260	674.79	
3	13/06/17	20/06/17	7	287	25.33	17,420	687.83	
						Average	677.66	

Note : This report certifies the adequacy and representative character of the test sample(s) only.

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Specimen No.	Date of Cast	Date of Test	Age of Specimen (days)	Weight of Specimen (g)	Cross Sectional Area (cm ²)	Maximum Load (kgf)	Compressive Strength (kgf/cm ²)	Remarks
1	13/06/17	11/07/17	28	290	25.45	19,090	750.04	*1 kgf/cm ² = 0.0981 MPa.
2	13/06/17	11/07/17	28	295	25.65	18,890	736.33	Average compressive strength is 73.09 MPa at 28 day(s) aged.
3	13/06/17	11/07/17	28	296	25.60	19,190	749.50	
						Average	745.29	

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**MR. RUNGROJ JANGJIT**
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**DR. ANAWAT CHOTESUWAN**
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July 13, 2017

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TYPE OF TEST: BOND STRENGTH BY SLANT SHEAR TEST (ASTM C882)

TEST SPECIMEN: Three (3) specimens of cylindrical shape concrete bonded with EPOXY FERROREZ 721 were prepared in SE laboratory. The mixing ratio between A:B:C material 1.34:0.66:10 by weight.

CLIENT: FERRO CONSTRUCTION PRODUCT CO., LTD.

DATE OF TEST: June 20, 2017 **DATE OF PREPARATION :** June 13, 2017

TEST METHOD: After thoroughly mixed, the specimen was applied to the slant surfaces of two pieces of concrete cylinder which were cut by slant angle of 30 degrees from concrete cylinder of nominal size 100 mm. in diameter by 200 mm. in height. After jointed them together, the specimens were cured in room temperature until they reached the required test age.

TEST RESULTS: The bond strength of specimens at the age of 7 days are shown as follows.

Specimen No.	Size of Elliptical Surface Ds x Ls (cm.)	Bond Area of tested Specimen (cm ²)	Maximum Load (kgf)	Bond Strength (kgf/cm ²)	Remarks
1	10.02 x 18.98	149.33	28,760	192.60	Failure in Concrete Base Material
2	10.13 x 19.03	151.33	30,270	200.03	Failure in Concrete Base Material
3	10.05 x 18.94	149.42	29,360	196.49	Failure in Concrete Base Material
Average				196.37	Average bond strength of specimens is 19.26 MPa. at 7 days' age. * 1 kgf/cm ² = 0.0981 MPa.

Note: This report certifies the adequacy and representative character of the test sample(s) only.

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Specimen No.	Size of Elliptical Surface Ds x Ls (cm.)	Bond Area of tested Specimen (cm ²)	Maximum Load (kgf)	Bond Strength (kgf/cm ²)	Remarks
1	10.07 x 19.04	150.51	29,970	199.12	Failure in Concrete Base Material
2	10.07 x 18.97	149.96	30,770	205.19	Failure in Concrete Base Material
3	10.14 x 19.02	151.47	29,260	193.17	Failure in Concrete Base Material
			Average	199.16	Average bond strength of specimens is 19.54 MPa. at 28 days age. * 1 kgf/cm ² = 0.0981 MPa.

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July 13, 2017