

# 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

### STRUCTURAL ENGINEERING LABORATORY

### STRUCTURAL ENGINEERING FIELD OF STUDY

### SCHOOL OF ENGINEERING AND TECHNOLOGY

**TYPE OF TEST:** STATIC LOAD TEST OF ANCHORAGE

**TEST SPECIMEN:** One (1) set of prestressed concrete anchorage consisting of "Anchor Block 205-MatS45C (40x40 mm.) and Guide 205-MatFC250" and 2 pcs. of 12.7 mm. 7-wire PC Strand stressed one by one installed in the concrete block having a size of 300 (T) x 600 (W) x 1,500 (L) mm. was given by the client.

**CLIENT:** J.S.V. TECHNICAL CO., LTD.**DATE OF TEST:** September 26, 2023

**TEST MACHINE:** The testing machine consists of the hydraulic jack of serial no. QC 66001 for pc strand having a nominal diameter of 12.7 mm. and the hydraulic pump of serial no. 366749 fitted with the "POWER TEAM" pressure gauge of serial no. 9062 having a maximum capacity of 690 bar or 10,000 psi.

**TEST RESULTS :**

Specimen No. and Type of Specimen	Percentage of Capacity	Sustained Time (min.)	Prestressing Load (kN.)	Total Load (kN).	Remarks
1 Mat S45C 2 pcs. - 12.7 mm.	26.70	1	49.12 x 2 pcs.	98.24	No crack or any damage were found on tested concrete block after sustained load for 10 min. at the applied load of 176.11 x 2 pcs. (352.23 kN)
	51.79	1	95.30 x 2 pcs.	190.60	
	76.89	1	141.48 x 2 pcs.	282.96	
	95.71	10	176.11 x 2 pcs.	352.23	

- Note :** 1) The testing machine was calibrated by Chulalongkorn University on the date of March 27, 2023.  
 2) The capacity of 12.7 mm. strand is 184 kN according to TIS 420-2540.  
 3) This report certifies the adequacy and representative character of the test sample(s) only.

**TESTED BY:**


**MR. PRATUANG RASAMEE**  
TECHNICIAN

**CHECKED & APPROVED BY:**


**DR. ANAWAT CHOTESUWAN**  
SENIOR LABORATORY SUPERVISOR  
October 2, 2023

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**TYPE OF TEST:** STATIC LOAD TEST OF ANCHORAGE

**TEST SPECIMEN:** One (1) set of prestressed concrete anchorage consisting of "Anchor Block 305-MatS45C (40x40 mm.) and Guide 305-MatFC250" and 3 pcs. of 12.7 mm. 7-wire PC Strand stressed one by one installed in the concrete block having a size of 300 (T) x 600 (W) x 1,500 (L) mm. was given by the client.

**CLIENT:** J.S.V. TECHNICAL CO., LTD.**DATE OF TEST:** September 26, 2023

**TEST MACHINE:** The testing machine consists of the hydraulic jack of serial no. QC 66001 for pc strand having a nominal diameter of 12.7 mm. and the hydraulic pump of serial no. 366749 fitted with the "POWER TEAM" pressure gauge of serial no. 9062 having a maximum capacity of 690 bar or 10,000 psi.

**TEST RESULTS :**

Specimen No. and Type of Specimen	Percentage of Capacity	Sustained Time (min.)	Prestressing Load (kN.)	Total Load (kN.)	Remarks
1 Mat S45C 3 pcs. - 12.7 mm.	26.70	1	49.12 x 3 pcs.	147.36	No crack or any damage were found on tested concrete block after sustained load for 10 min. at the applied load of 176.11 x 3 pcs. (528.34 kN)
	51.79	1	95.30 x 3 pcs.	285.90	
	76.89	1	141.48 x 3 pcs.	424.44	
	95.71	10	176.11 x 3 pcs.	528.34	

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**TYPE OF TEST:** STATIC LOAD TEST OF ANCHORAGE

**TEST SPECIMEN:** One (1) set of prestressed concrete anchorage consisting of "Anchor Block 405-MatS45C (40x40 mm.) and Guide 405-MatFC250" and 4 pcs. of 12.7 mm. 7-wire PC Strand stressed one by one installed in the concrete block having a size of 300 (T) x 600 (W) x 1,500 (L) mm. was given by the client.

**CLIENT:** J.S.V. TECHNICAL CO., LTD.**DATE OF TEST:** September 26, 2023

**TEST MACHINE:** The testing machine consists of the hydraulic jack of serial no. QC 66001 for pc strand having a nominal diameter of 12.7 mm. and the hydraulic pump of serial no. 366749 fitted with the "POWER TEAM" pressure gauge of serial no. 9062 having a maximum capacity of 690 bar or 10,000 psi.

**TEST RESULTS :**

Specimen No. and Type of Specimen	Percentage of Capacity	Sustained Time (min.)	Prestressing Load (kN.)	Total Load (kN.)	Remarks
1 Mat S45C 4 pcs. - 12.7 mm.	26.70	1	49.12 x 4 pcs.	196.49	No crack or any damage were found on tested concrete block after sustained load for 10 min. at the applied load of 176.11 x 4 pcs. (704.46 kN)
	51.79	1	95.30 x 4 pcs.	381.20	
	76.89	1	141.48 x 4 pcs.	565.92	
	95.71	10	176.11 x 4 pcs.	704.46	

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**TYPE OF TEST:** STATIC LOAD TEST OF ANCHORAGE

**TEST SPECIMEN:** One (1) set of prestressed concrete anchorage consisting of "Anchor Block 505-MatS45C (40x40 mm.) and Guide 505-MatFC250" and 5 pcs. of 12.7 mm. 7-wire PC Strand stressed one by one installed in the concrete block having a size of 300 (T) x 600 (W) x 1,500 (L) mm. was given by the client.

**CLIENT:** J.S.V. TECHNICAL CO., LTD.**DATE OF TEST:** September 26, 2023

**TEST MACHINE:** The testing machine consists of the hydraulic jack of serial no. QC 66001 for pc strand having a nominal diameter of 12.7 mm. and the hydraulic pump of serial no. 366749 fitted with the "POWER TEAM" pressure gauge of serial no. 9062 having a maximum capacity of 690 bar or 10,000 psi.

**TEST RESULTS :**

Specimen No. and Type of Specimen	Percentage of Capacity	Sustained Time (min.)	Prestressing Load (kN.)	Total Load (kN).	Remarks
1 Mat S45C 5 pcs. - 12.7 mm.	26.70	1	49.12 x 5 pcs.	245.61	No crack or any damage were found on tested concrete block after sustained load for 10 min. at the applied load of 176.11 x 5 pcs. (880.57 kN)
	51.79	1	95.30 x 5 pcs.	476.50	
	76.89	1	141.48 x 5 pcs.	707.40	
	95.71	10	176.11 x 5 pcs.	880.57	

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