



Table - 3a

PULLOUT TEST RESULTS

1. Identification	STPL/JO/133/2020
2. Date of Cast	24.07.2020
3. No. of samples	3 nos.
4. Test conducted	Pullout test as per IS 2770: Part I: 1967 (RA: Year: 2017)
5. Date of test	26.08.2020
6. UTM Detail	Capacity - 600 kN Model/SL No. - EIE/1
7. Dial gauge detail	Mitutoyo / 12.5 mm travel/ 0.001 mm least count

Test Result:

Bond area of rod = $\pi d l = 3.142 * 5.24 \text{ mm} * 25 \text{ mm} = 411.602 \text{ mm}^2$

Sample Identification: 1

Sl.No.	Applied Load (kN)	Slip (mm)	Stress (N/mm ²)
1	0	0	0
2	0.160	0.010	0.388
3	0.280	0.020	0.680
4	0.330	0.025	0.802
5	0.600	0.050	1.457
6	0.840	0.100	2.040
7	1.140	0.150	2.769
8	1.380	0.200	3.353
9	1.620	0.250	3.935
10	2.220	0.300	5.394

Stress at 0.025 mm slip = **0.802 N/mm²**

Stress at 0.250 mm slip = **3.935 N/mm²**



Table3 b

PULLOUT TEST RESULTS

1. Identification	STPL/JO/133/2020
2. Date of Cast	24.07.2020
3. No. of samples	3 nos.
4. Test conducted	Pullout test as per IS 2770: Part 1: 1967 (RA Year: 2017)
5. Date of test	26.08.2020
6. UTM Detail	Capacity- 600 kN Model/SI. No. - EIE/1
7. Dial gauge detail	Mitutoyo / 12.5 mm travel/ 0.001 mm least count

Test Result:

Bond area of rod = $1\text{tdl} = 3.142 * 5.24\text{mm} * 25\text{ mm} = 411.602\text{ mm}^2$

Sample Identification: 2

SI. No.	Applied Load (kN)	Slip (mm)	Stress (N/mm ²)
1	0	0	0
2	0.170	0.010	0.413
3	0.285	0.020	0.692
4	0.350	0.025	0.850
5	0.640	0.050	1.554
6	0.890	0.100	2.162
7	1.180	0.150	2.866
8	1.390	0.200	3.377
9	1.660	0.250	4.033
10	2.260	0.300	5.490

Stress at 0.025 mm slip = **0.850 N/mm²**

Stress at 0.250 mm slip = **4.033 N/mm²**



Table 3c

PULLOUT TEST RESULTS

1. Identification	STPL/JO/133/2020
2. Date of Cast	24.07.2020
3. No. of samples	3 nos.
4. Test conducted	Pullout test as per IS 2770: Part 1: 1967 (RA Year: 2017)
5. Date of test	26.08.2020
6. UTM Detail	Capacity- 600 kN Model/SL No. - EIE/1
7. Dial gauge detail	Mitutoyo I 12.5 mm travel/ 0.001 mm least count

Test Result:

Bond area of rod = $\pi d l = 3.142 * 5.24 \text{ mm} * 25 \text{ mm} = 411.602 \text{ mm}^2$

Sample Identification: 3

Sl. No.	Applied Load (kN)	Slip (mm)	Stress (N/mm ²)
1	0	0	0
2	0.180	0.010	0.437
3	0.300	0.020	0.728
4	0.370	0.025	0.898
5	0.650	0.050	1.790
6	0.890	0.100	2.162
7	1.170	0.150	2.842
8	1.410	0.200	3.425
9	1.670	0.250	4.057
10	2.270	0.300	5.510

Stress at 0.025 mm slip = **0.898 N/mm²**

Stress at 0.250 mm slip = **5.047 N/mm²**



Table 3 d

RESULTS OF PULL OUT TEST

1. Diameter of bar 6mm
2. Identification Plain Round
3. Dial Gauge Details
 Type Baker
 Range 0-5mm
 Least Count 0.001 ,,
4. Area of Slip 565.565 Sq.mm
5. Method of Test IS: 2770 -1967 (RA 1990)

Sl. No.	Load (N)	Slip (mm)	Remarks
1	148	0.01	Concrete failure
2	226	0.02	
3	328	0.025	
4	394	0.05	
5	648	0.1	
6	826	0.15	
7	1285	0.2	
8	1335	0.25	
9	2462	0.5	

Bond Stress at : 1) 0.025 mm Slip = 0.58 N/Sq. mm
 2) 0.25 mm Slip = 2.36 N/Sq. mm



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Table3 e

SUMMARY OF RESULTS OF PULL OUT TEST

Sl. No.	Identification	Bond Stress in N/Sa.mm at		Type of Failure
		0.025 mm Slip	0.25mm Slip	
1	STARK STEELRODS	0.802	3.935	Continuous slipping ofbar
2		0.850	4.033	Continuous slipping of bar
3		0.898	5.047	Continuous slipping of bar
Average		0.850	4.338	
1	6mmdia. Plain round	0.58	2.36	Continuous slipping of bar
% increase over Plain round bar		46.5	83.8	
Requirement as per IS 1786: 2008		Minimum 40%	Minimum80%	



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PHOTOGRAPHS



Mass / m run of individual bar



Pull out Test Sample



Pullout Test under Progress