

Irfan Siddique
For Building Standards, Lahore

Test Performed By: Dr. /Engr. S. Asad Ali Gillani

Client Reference: GT/LTR/191108-64
SOM Lab Ref: CED/SOM/1709, 1710(Page-1-1)
Test: Tension Test
Sample Type: M S Deformed Bar

Dated: 08-11-2019
Dated: 08-09-2019
Test Specification: ASTM-A 615
Gauge Length: 200 mm

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | kg/m | mm | mm | mm ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 1.729 | 16 | 16.74 | 201 | 220 | 97.00 | 155.20 | 482 | 441 | 772 | 706 | 22.5 | 200 | 11.3 | |
| 2 | 1.820 | 16 | 17.18 | 201 | 232 | 88.00 | 130.00 | 438 | 380 | 647 | 561 | 27.5 | 200 | 13.8 | |
| 3 | 0.868 | 12 | 11.87 | 113 | 111 | 60.00 | 84.70 | 531 | 543 | 749 | 766 | 25.0 | 200 | 12.5 | |
| 4 | 0.971 | 12 | 12.55 | 113 | 124 | 53.50 | 82.70 | 473 | 433 | 731 | 669 | 25.0 | 200 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

BEND TEST:

| | | |
|----|------------------------|--|
| -- | No Bend test performed | Note:- Only Four Samples Received and Tested |
| | | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Syed Nabeel Hassan
Resident Engineer-II, NESPAK (Pvt) Ltd. Lahore

Test Performed By: Dr. /Engr. S. Asad Ali Gillani

Client Reference: 4047-R/13/SNH/07/AFE/109

Dated: 01-11-2019

SOM Lab Ref: CED/SOM/1714 (Page-1/2)

Dated: 08-11-2019

Test: Tension Test

Test Specification: ASTM-F-1554

Sample Type: J- Bolt

Gauge Length: 200 mm

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | kg/m | mm | mm | mm ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 1.663 | 25 | 16.43 | 491 | 212 | 260.00 | 329.20 | 530 | 1227 | 671 | 1553 | 12.5 | 50 | 25.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|----|------------------------|--|
| -- | No Bend test performed | Note:- Only One Sample Received and Tested |
| | | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Test Performed by: Dr S. Asad Ali Gillani

Syed Nabeel Hassan
Resident Engineer, NESPAK (Pvt) Ltd. Lahore

Client Reference No.: 4047-R/13/SNH/07/AFE/109

Dated: 01-11-2019

SOM Lab Ref: CED/SOM/1714 (Page-1/1)

Dated: 08-11-2019

Test Type: Proof Load Test & Slippage Test

Sample Type: J Bolt (25mm Diameter)

- Proof Load Results

| Sample No. | Sample Type | Tested Dia (mm) | Specified Proof Load (given by client) | | Operational condition of net Bolt Assembly |
|------------|-------------|-----------------|---|--------|---|
| | | | (kN) | (Kips) | |
| 1 | J- Bolt | 25 | 191.27 | 43.0 | Sample remains satisfied at this Proof load |

- Slippage Test Results

| Sample No. | Sample Type | Diameter of Bolt (mm) | Maximum Load Applied (kN) | Remarks |
|------------|-------------|-----------------------|---------------------------|----------------------------|
| 1 | J- Bolt | 25 | 248.7 | Sample breaks at this load |

Note: Please always confirm the results on web www.uet-civil.edu.pk

