

Atique Ahmad
ARE-ADP Project. NESPAK (Pvt) Ltd. D. G. Khan

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: 3158/13/CAA/09/1352

Dated: 20-11-2019

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 1804(Page-1/1)

Dated: 02-12-2019

ASTM-A-615

Deformed Bar(AF-Steel)

| 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) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.576 | 8 | 0.982 | 0.79 | 0.757 | 24.26 | 34.86 | 67730 | 70680 | 97330 | 101570 | 1.20 | 8.0 | 15.0 | |
| 2 | 2.609 | 8 | 0.988 | 0.79 | 0.767 | 24.46 | 35.60 | 68300 | 70350 | 99380 | 102360 | 1.30 | 8.0 | 16.3 | |
| 3 | 1.499 | 6 | 0.749 | 0.44 | 0.441 | 14.85 | 20.00 | 74450 | 74280 | 100250 | 100020 | 1.00 | 8.0 | 12.5 | |
| 4 | 1.500 | 6 | 0.749 | 0.44 | 0.441 | 14.60 | 19.49 | 73170 | 73000 | 97690 | 97470 | 1.00 | 8.0 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|------------------------------------------------------------------|-----------------------------------------------------------|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Six Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |
| | | |

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

Engr Naveed Sadiq
Resident Engineer, Orbit Housing, Lahore

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

Client Reference: Nil

SOM Lab

Ref: 1807(Page-1/1)

Dated: 30-11-2019

Dated: 02-12-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar

| 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) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 1.693 | 6 | 0.796 | 0.44 | 0.498 | 18.55 | 22.17 | 92990 | 82160 | 111130 | 98190 | 1.40 | 8.0 | 17.5 | |
| 2 | 1.680 | 6 | 0.793 | 0.44 | 0.494 | 17.13 | 22.09 | 85840 | 76460 | 110720 | 98620 | 1.50 | 8.0 | 18.8 | |
| 3 | 0.636 | 4 | 0.488 | 0.20 | 0.187 | 6.57 | 8.58 | 72510 | 77550 | 94650 | 101230 | 1.10 | 8.0 | 13.8 | |
| 4 | 0.643 | 4 | 0.491 | 0.20 | 0.189 | 6.57 | 8.63 | 72510 | 76730 | 95210 | 100750 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|------------------------------------------------------------------|-----------------------------------------------------------|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Six Samples Received and Tested |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |
| | | |

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

Amjad Saeed
Resident Engineer, NESPAK (Pvt) Ltd. Lahore

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: 3994/103/AS/02/165

Dated: 27-11-2019

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 1811(Page-1/1)

Dated: 02-12-2019

ASTM-A-615

Deformed Bar (Kisan Steel)

| 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) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.642 | 8 | 0.994 | 0.79 | 0.776 | 23.47 | 36.54 | 65510 | 66690 | 102020 | 103860 | 1.60 | 8.0 | 20.0 | |
| 2 | 2.645 | 8 | 0.995 | 0.79 | 0.777 | 22.50 | 36.31 | 62810 | 63860 | 101370 | 103060 | 1.10 | 8.0 | 13.8 | |
| 3 | 1.525 | 6 | 0.755 | 0.44 | 0.448 | 16.18 | 21.56 | 81090 | 79640 | 108070 | 106140 | 1.00 | 8.0 | 12.5 | |
| 4 | 1.525 | 6 | 0.755 | 0.44 | 0.448 | 15.39 | 20.00 | 77160 | 75780 | 100250 | 98460 | 1.10 | 8.0 | 13.8 | |
| 5 | 0.655 | 4 | 0.494 | 0.20 | 0.192 | 6.34 | 7.58 | 69920 | 72830 | 83630 | 87120 | 1.10 | 8.0 | 13.8 | |
| 6 | 0.665 | 4 | 0.498 | 0.20 | 0.195 | 6.34 | 7.56 | 69920 | 71710 | 83410 | 85550 | 1.10 | 8.0 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-------------|------------------------------------------------------------------|--------------------------------------------------------------|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Twelve Samples Received and Tested |
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 4(S.9,10) | Sample bend through 180 degrees Satisfactorily without any crack | |

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

Test Performed By: Dr. S. Asad Ali Gillani

Maj Adnan Khalid (R)

Dy Sir MTL DHA, Extnl Elec. cSystem – Sector –A & B, DHA Ph-V - (M/S MCC Ruba)

Client Reference: 408/241/E/790/004

SOM Lab Ref: 1806 (Page-1/1)

Dated: 29-11-2019

Dated: 02-12-2019

Test: Tension Test

Test Specification:ASTM-F-1554

Guage Length: 200 mm

Sample Type: Anchor-Bolt (19mm)

| S.No. | Weight | Dia. | | Area | | Yield | Ultimate | Yield Stress | | Ultimate. Stress | | Elongation | Gauge Length | %age Elongation | Reduction of Area(%) |
|-------|--------|---------|------------|---------|------------|-------|----------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|----------------------|
| | | Nominal | Calculated | Nominal | Calculated | Load | Load | (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 | 2.195 | 19 | 18.88 | 284 | 280 | 112.50 | 178.50 | 397 | 402 | 630 | 638 | 37.5 | 200 | 18.8 | .48.9 |
| 2 | 2.208 | 19 | 18.92 | 284 | 281 | 105.00 | 154.70 | 370 | 374 | 546 | 551 | 42.5 | 200 | 21.3 | 52.7 |
| 3 | 2.004 | 19 | 18.03 | 284 | 255 | 104.20 | 159.20 | 368 | 409 | 561 | 624 | 40.0 | 200 | 20.0 | 47.2 |

:

| | |
|--|-------------------------------------------|
| | Note:- |
| | Only Three Samples Received and Tested |

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

