

Lt Col Khalid Mahmood Zia,RE

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

ACE Arts GC Uni,Lhr.(Works Of Residence Apartments / Building at New Campus of GC Uni KSK)

Client Reference: RE/GCU(KSK)/T-1020/23

SOM Lab

Ref: 2002 (Page-1/1)

Dated: 27-03-2023

Dated: 29-03-2023

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 | 1.429 | 6 | 0.731 | 0.44 | 0.420 | 13.43 | 18.32 | 67290 | 70500 | 91820 | 96190 | 1.20 | 8.0 | 15.0 | |
| 2 | 1.488 | 6 | 0.746 | 0.44 | 0.437 | 14.85 | 19.57 | 74450 | 74960 | 98100 | 98780 | 1.10 | 8.0 | 13.8 | |
| 3 | 0.674 | 4 | 0.502 | 0.20 | 0.198 | 5.98 | 8.26 | 65990 | 66650 | 91050 | 91970 | 1.20 | 8.0 | 15.0 | |
| 4 | 0.678 | 4 | 0.503 | 0.20 | 0.199 | 6.01 | 8.28 | 66320 | 66660 | 91280 | 91740 | 1.10 | 8.0 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|---|
| # 6 | 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

Zafar Iqbal

Test Performed By:

Dr. /Engr.

Asad Ali Gillani

PM United LifeStyle Pvt. Ltd.(Sky Scraper By United at Johar Town Lahore)

Client Reference: ULS/2021-22-23/031

SOM Lab

Ref:

2003 (Page-1/1)

Dated: 29-03-2023

Dated:

29-03-2023

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 | 2.629 | 8 | 0.992 | 0.79 | 0.773 | 25.96 | 33.81 | 72480 | 74080 | 94400 | 96470 | 1.40 | 8.0 | 17.5 | |
| 2 | 2.619 | 8 | 0.990 | 0.79 | 0.770 | 25.59 | 33.54 | 71430 | 73290 | 93630 | 96060 | 1.40 | 8.0 | 17.5 | |
| 3 | 1.485 | 6 | 0.745 | 0.44 | 0.436 | 14.24 | 19.98 | 71380 | 72040 | 100150 | 101070 | 1.40 | 8.0 | 17.5 | |
| 4 | 1.487 | 6 | 0.746 | 0.44 | 0.437 | 14.12 | 19.62 | 70770 | 71250 | 98360 | 99030 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

8 Sample bend through 180 degrees Satisfactorily without any crack

6 Sample bend through 180 degrees Satisfactorily without any crack

Note:-Only Six Samples
Received and TestedNote: Please always confirm the results of above report on web www.uet-civil.edu.pk

Al-Hadeed Corporation

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

Lahore.(Const Of Loading Unloading W/Rest Room/Security Bldg at DESCON Oxychem Ltd.)

Client Reference: AHC/650/25

SOM Lab

Ref: 2004 (Page-1/1)

Dated: 29-03-2023

Dated: 29-03-2023

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 | 1.476 | 6 | 0.743 | 0.44 | 0.434 | 15.11 | 19.78 | 75720 | 76770 | 99130 | 100500 | 1.10 | 8.0 | 13.8 | |
| 2 | 1.480 | 6 | 0.744 | 0.44 | 0.435 | 15.60 | 20.05 | 78180 | 79080 | 100500 | 101660 | 1.10 | 8.0 | 13.8 | |
| 3 | 0.652 | 4 | 0.494 | 0.20 | 0.192 | 7.46 | 8.92 | 82290 | 85710 | 98360 | 102460 | 1.20 | 8.0 | 15.0 | |
| 4 | 0.652 | 4 | 0.494 | 0.20 | 0.192 | 7.21 | 8.56 | 79470 | 82790 | 94420 | 98360 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|---|
| # 6 | 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

Muhammad Haider,RE

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

VELOSI Engg.(Supervision Of Regional Campust Of AIOU Regional Located at Sargodha)

Client Reference: VISP-RC-SRG-03

SOM Lab

Ref: 2006 (Page-1/1)

Dated: 27-03-2023

Dated: 29-03-2023

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar (Ittehad 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 | 2.578 | 8 | 0.982 | 0.79 | 0.758 | 29.36 | 35.02 | 81960 | 85420 | 97750 | 101880 | 1.20 | 8.0 | 15.0 | |
| 2 | 2.577 | 8 | 0.982 | 0.79 | 0.757 | 28.26 | 34.22 | 78890 | 82330 | 95530 | 99700 | 1.20 | 8.0 | 15.0 | |
| 3 | 1.465 | 6 | 0.741 | 0.44 | 0.431 | 15.67 | 19.08 | 78530 | 80170 | 95650 | 97650 | 1.30 | 8.0 | 16.3 | |
| 4 | 1.479 | 6 | 0.744 | 0.44 | 0.435 | 15.44 | 18.78 | 77410 | 78300 | 94120 | 95200 | 1.20 | 8.0 | 15.0 | |
| 5 | 0.651 | 4 | 0.493 | 0.20 | 0.191 | 5.52 | 8.38 | 60930 | 63800 | 92400 | 96760 | 1.30 | 8.0 | 16.3 | |
| 6 | 0.652 | 4 | 0.494 | 0.20 | 0.192 | 5.61 | 8.41 | 61830 | 64400 | 92740 | 96600 | 1.40 | 8.0 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

Ashbeel Imran Butt

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

Chief Operating Officer Gatwala Commercial Hub Faisalabad.(Const Of Gatwala Commercial Hub)

Client Reference: GCHF/2023/PM/01

SOM Lab

Ref: 2007 (Page-1/1)

Dated: 28-03-2023

Dated: 29-03-2023

Test: Tension Test 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 | 2.589 | 8 | 0.984 | 0.79 | 0.761 | 26.63 | 34.30 | 74330 | 77170 | 95760 | 99410 | 1.10 | 8.0 | 13.8 | |
| 2 | 2.559 | 8 | 0.979 | 0.79 | 0.752 | 26.57 | 34.45 | 74190 | 77940 | 96190 | 101050 | 1.30 | 8.0 | 16.3 | |
| 3 | 0.665 | 4 | 0.498 | 0.20 | 0.195 | 6.52 | 8.94 | 71940 | 73790 | 98580 | 101110 | 1.40 | 8.0 | 17.5 | |
| 4 | 0.665 | 4 | 0.498 | 0.20 | 0.195 | 6.63 | 8.99 | 73070 | 74940 | 99150 | 101690 | 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

Engineer Muhammad Irfan
Asst Dir Infra. DHA Gujranwala.(Sector L)

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

Client Reference: 111/15/AD/RS/Sec L/226

SOM Lab

Ref: 2008 (Page-1/1)

Dated: 28-03-2023

Dated: 29-03-2023

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Mughal 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 | 1.022 | 5 | 0.618 | 0.31 | 0.300 | 11.39 | 13.83 | 81010 | 83710 | 98410 | 101690 | 1.20 | 8.0 | 15.0 | |
| 2 | 1.022 | 5 | 0.618 | 0.31 | 0.300 | 11.31 | 13.83 | 80500 | 83180 | 98410 | 101690 | 1.10 | 8.0 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

BEND TEST:

| | | |
|-----|--|---|
| # 5 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Three Samples Received and Tested |
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| | | |

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

Test Performed by: S. Asad Ali Gillani

Hasan Associates

Lahore.

(EOBI Mix Use Development Project-66, Trade Centre Johar Town, Lahore)

Client Reference No.: HA/PRIMACO/0990/2Kxxiii

Dated: 20-03-2023

SOM Lab Ref: CED/SOM/2005 (Page 1/1)

Dated: 29-03-2023

Test Type: Tension Test & Wall Thickness Test

Sample Type: Aluminum (Chawla Brand)

Tension Test Results

| Sample No. | Sample Size | Area (mm ²) | Yield Load (kN) | Ultimate Load (kN) | Yield Strength (MPa) | Ultimate Strength (MPa) | Elongation (%) |
|------------|-------------|-------------------------|-----------------|--------------------|----------------------|-------------------------|----------------|
| 1 | 21.7 x 3.5 | 75.95 | 11.2 | 12.0 | 147.46 | 158.0 | 10 |
| 2 | 21.6 x 3.5 | 75.60 | 11.0 | 12.0 | 145.50 | 158.73 | 10 |

| Sample No. | Sample Type | Wall Thickness |
|------------|-------------|----------------|
| 1 | Aluminum | 3.5mm |

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

