



**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,

Resident Engineer  
 HA Consulting  
 Construction of Central Building and Rehabilitation of 110 for Rental Space in NASTP  
 Delta.

Reference # CED/TFL **4071, 4098 (Dr. M Yousaf)**

Dated: 16-10-2023

Reference of the request letter # HAC/UET/Cap/2309/20/101

Dated: 22-09-2023

**Tension Test Report** (Page -1/1)

Date of Test 24-10-2023

Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size |                  | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks     |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|-------------|
|  |                    | Nominal<br>(#)    | Actual<br>(inch) | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |             |
| 1  | 0.368              | 3                 | 0.371            | 0.11                       | 0.108  | 3820               | 5100                     | 76600                 | 77850  | 102200                   | 104000 | 1.20                 | 15.0         | FF<br>Steel |
| 2  | 0.369              | 3                 | 0.372            | 0.11                       | 0.109  | 3870               | 5100                     | 77600                 | 78560  | 102200                   | 103600 | 1.20                 | 15.0         |             |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |             |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |             |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |             |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |             |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |
| Bend Test  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |
| #3 Bar Bend Test Through 180° is Satisfactory                          |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |

Witness by Usama Ata (Quality Inspector, HA Consulting)

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

Note:

- 1- You can See your reports On Internet in the following web site  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports)
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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Ref: CED/TFL/10/4088

Dated: 23-10-2023

Dated: 24-10-2023

To

M/A S.A.A. Engineering Works  
Lahore

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/10/4088) (Page -1/1)

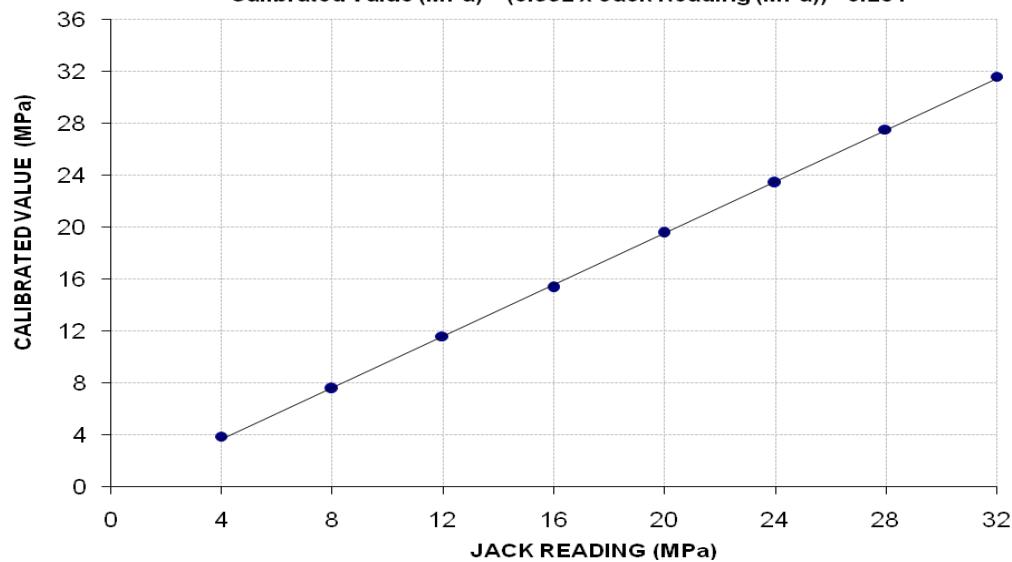
Reference to your Letter No. Nil, dated: 23/10/2023 on the subject cited above. One Hydraulic Jack (Jack No. Y.C.Q 300, Gauge No. 1.0) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 70 (MPa)**  
**Calibrated Range : Zero - 32 (MPa)**

|                              |       |       |       |       |        |        |        |        |
|------------------------------|-------|-------|-------|-------|--------|--------|--------|--------|
| Hydraulic Jack Reading (MPa) | 4     | 8     | 12    | 16    | 20     | 24     | 28     | 32     |
| Calibrated Load (kg)         | 22800 | 44400 | 68000 | 90000 | 114600 | 137200 | 161200 | 185000 |
| Calibrated Pressure (Mpa)    | 4     | 8     | 12    | 15    | 20     | 23     | 28     | 32     |

The Ram Area of Jack = 574 cm<sup>2</sup>

**Calibration Curve For Jack No. Y.C.Q 300 (Gauge # 1.0)**  
**Calibrated Value (MPa) = (0.992 x Jack Reading (MPa)) - 0.281**



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- 2- The above results pertain to sample /samples supplied to this laboratory.
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