

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

To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL 4898 (Dr. M Kashif)

Reference of the request letter # MDSYS-259

Dated: 02-04-2024

Dated: 30-03-2024

Tension Test Report (Page – 1/40)

Date of Test 03-05-2024 Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight		trength e (6.3)	Breaking strength clause (6.2)		Young's Modulus of Elasticity	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa	0%	Rema
1	15.24 (0.6")	1102.0	1128.0	24900	244.27	27400	268.79	199	>3.50	210010
2	15.24 (0.6")	1102.0	1127.0	24900	244.27	27500	269.78	199	>3.50	210018
3	15.24 (0.6")	1102.0	1119.0	25400	249.17	27700	271.74	199	>3.50	210019
4	15.24 (0.6")	1102.0	1125.0	24400	239.36	27600	270.76	198	>3.50	210019
5	15.24 (0.6")	1102.0	1121.0	24700	242.31	27600	270.76	199	>3.50	210020
6	15.24 (0.6")	1102.0	1123.0	24900	244.27	27600	270.76	199	>3.50	210020
7	15.24 (0.6")	1102.0	1123.0	24900	244.27	27400	268.79	199	>3.50	210022
8	15.24 (0.6")	1102.0	1122.0	24400	239.36	27500	269.78	199	>3.50	210023
9	15.24 (0.6")	1102.0	1119.0	25400	249.17	27800	272.72	199	>3.50	210024
10	15.24 (0.6")	1102.0	1123.0	24100	236.42	27600	270.76	198	>3.50	210034

Only Ten Samples for Test

Note:

- 1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM A416a
- 2. Load versus percentage strain graphs are attached

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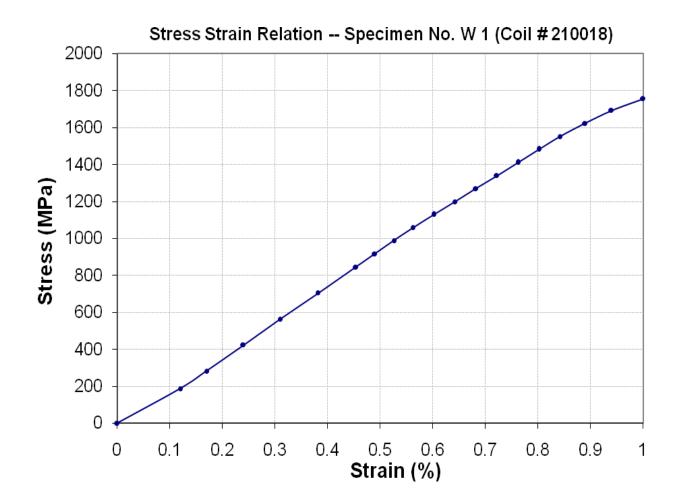
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

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Graph (Page -2/40)



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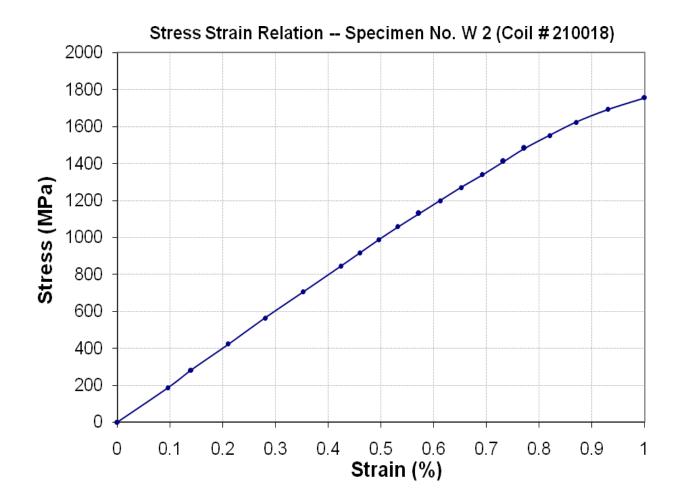
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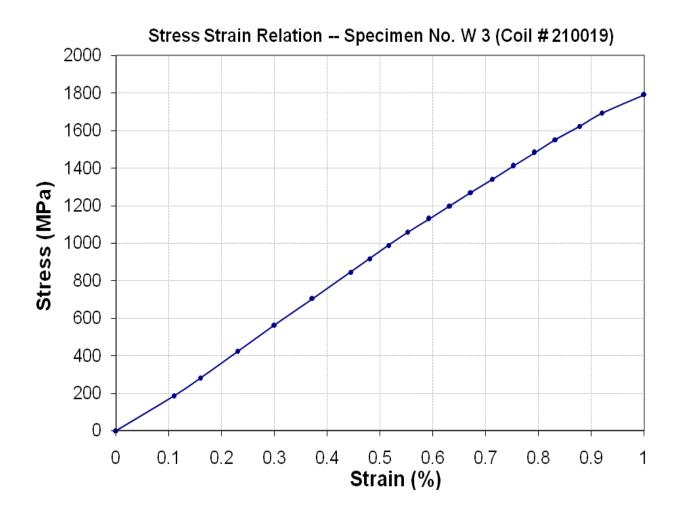
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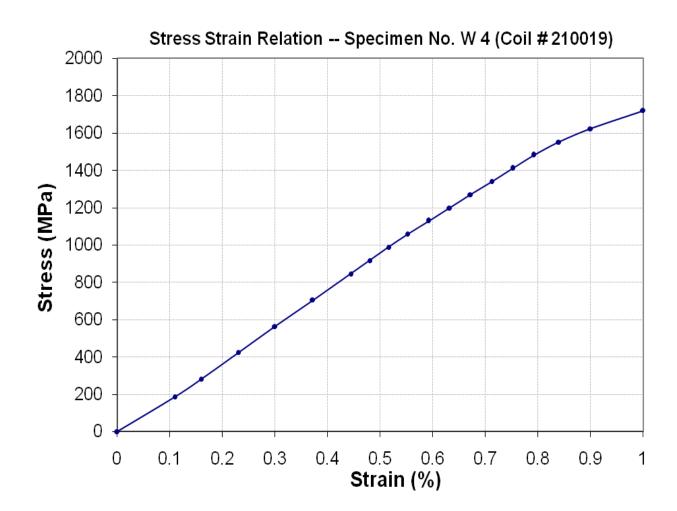
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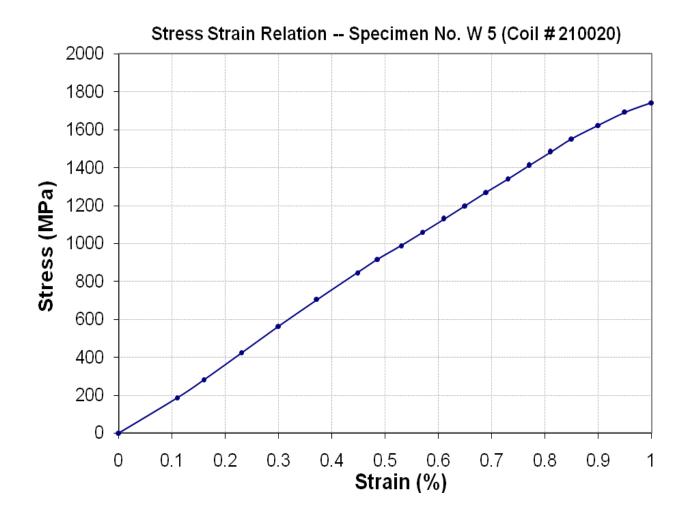
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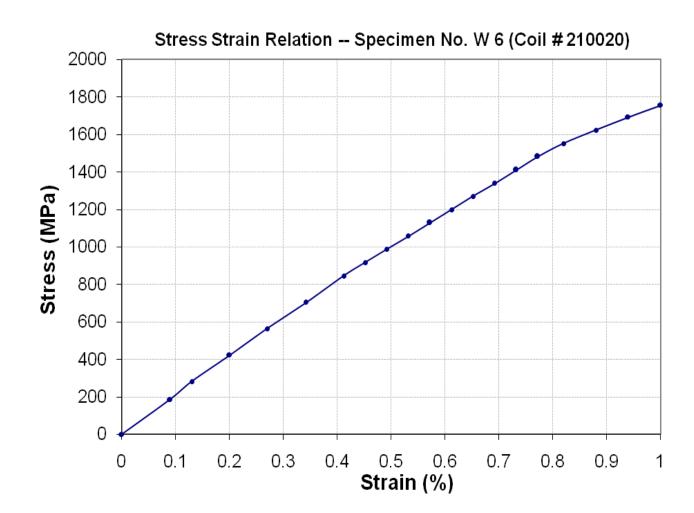
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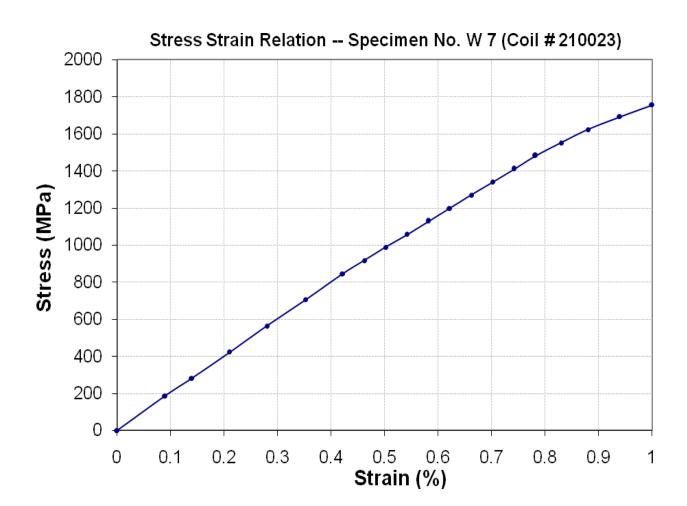
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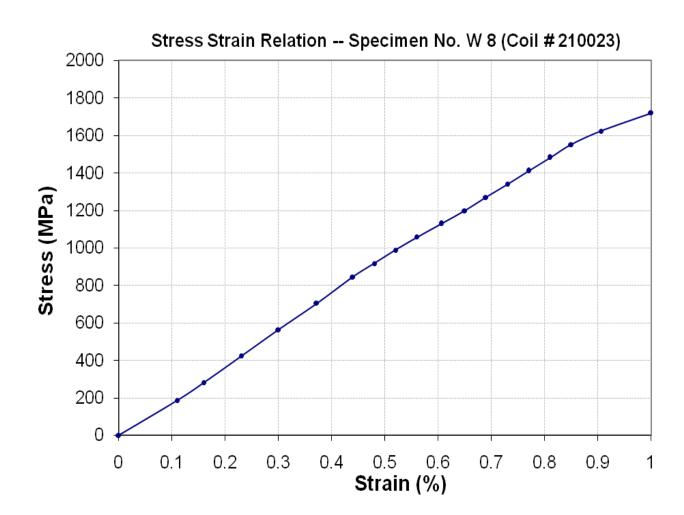
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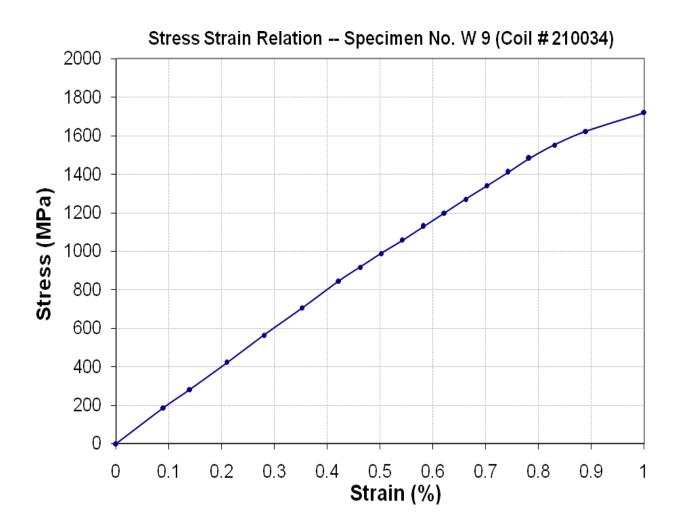
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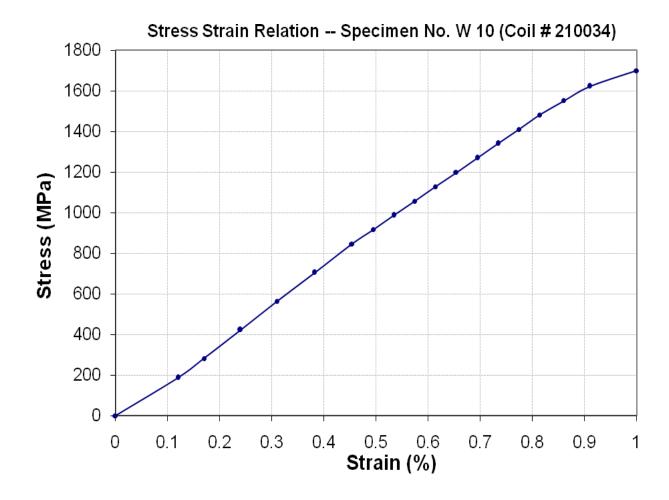
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Reference # CED/TFL 4898 (Dr. M Kashif)

Reference of the request letter # MDSYS-259

Dated: 02-04-2024

Dated: 30-03-2024

Tension Test Report (Page – 12/40)

Date of Test 03-05-2024 Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight		trength e (6.3)	Breaking strength clause (6.2)		Young's Modulus of Elasticity	Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa	0%	Rema
1	15.24 (0.6")	1102.0	1131.0	24700	242.31	27400	268.79	199	>3.50	210021
2	15.24 (0.6")	1102.0	1128.0	24800	243.29	27500	269.78	198	>3.50	210021
3	15.24 (0.6")	1102.0	1128.0	25000	245.25	27500	269.78	199	>3.50	210030
4	15.24 (0.6")	1102.0	1129.0	24900	244.27	27400	268.79	199	>3.50	210030
5	15.24 (0.6")	1102.0	1138.0	24800	243.29	27400	268.79	199	>3.50	210021
6	15.24 (0.6")	1102.0	1135.0	24800	243.29	27400	268.79	199	>3.50	210031
7	15.24 (0.6")	1102.0	1129.0	25500	250.16	27600	270.76	199	>3.50	210026
8	15.24 (0.6")	1102.0	1130.0	25500	250.16	27500	269.78	198	>3.50	210026
9	15.24 (0.6")	1102.0	1119.0	25000	245.25	27400	268.79	199	>3.50	210042
10	15.24 (0.6")	1102.0	1119.0	25100	246.23	27400	268.79	199	>3.50	210043

Only Ten Samples for Test

Note:

- 1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM A416a
- 2. Load versus percentage strain graphs are attached

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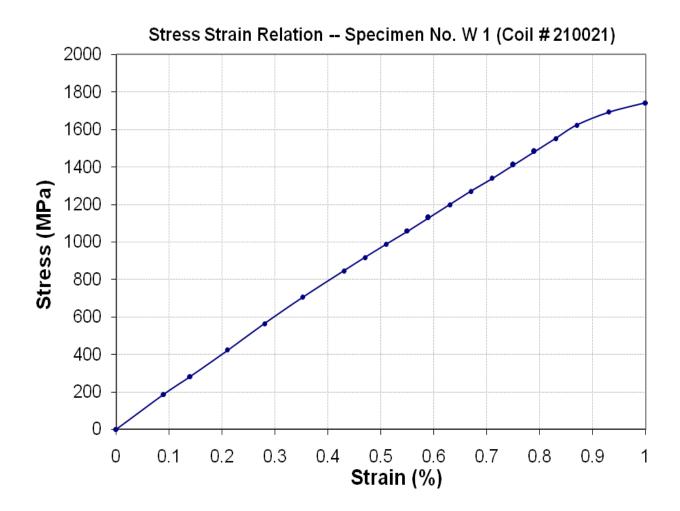
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Graph (Page –13/40)



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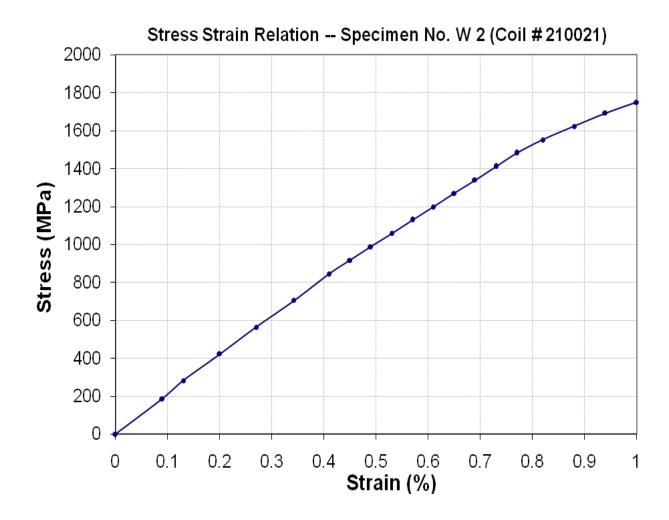
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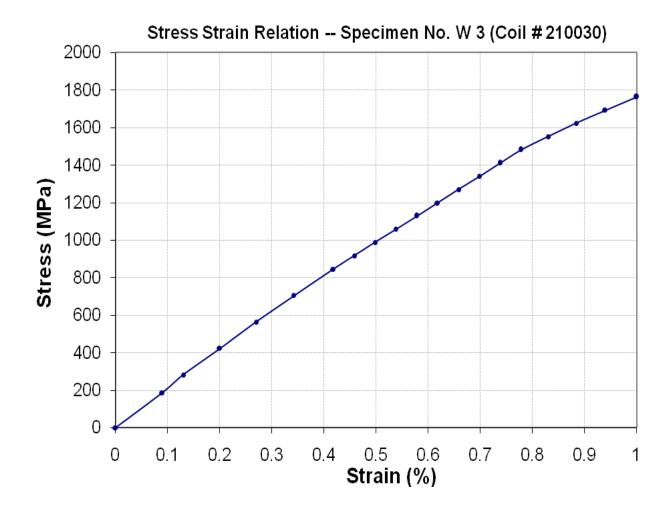
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Graph (Page –15/40)



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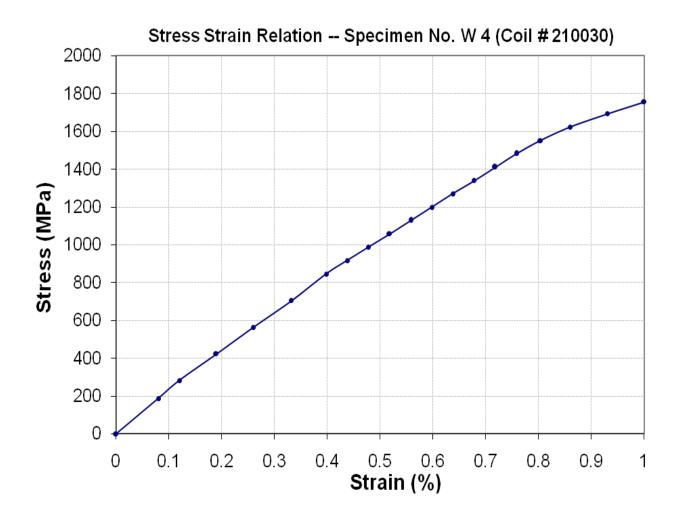
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Graph (Page –16/40)



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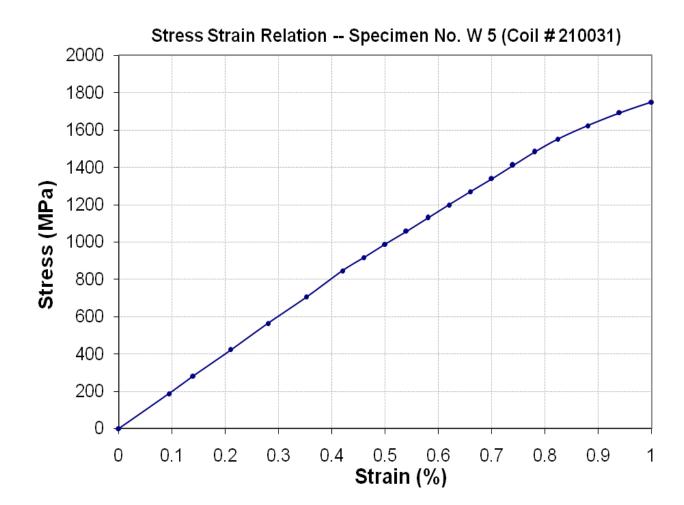
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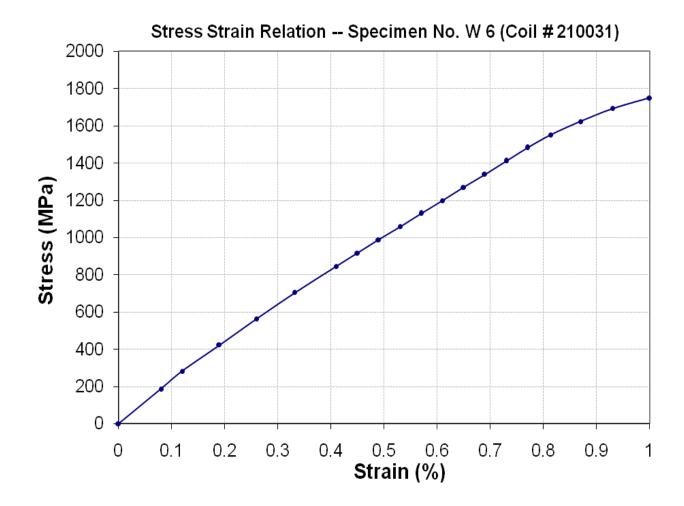
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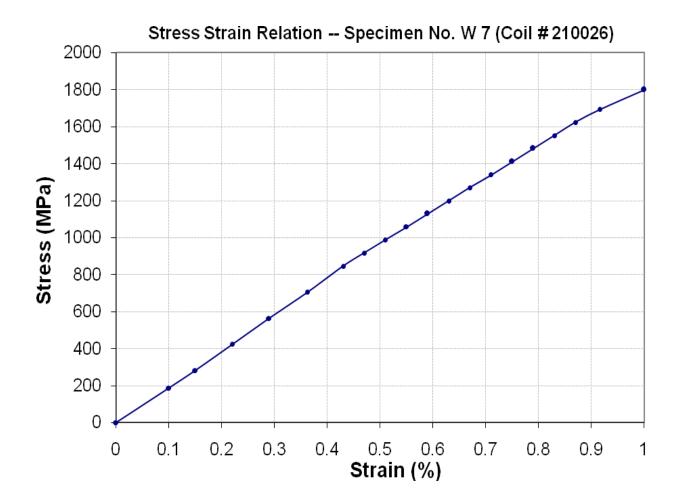
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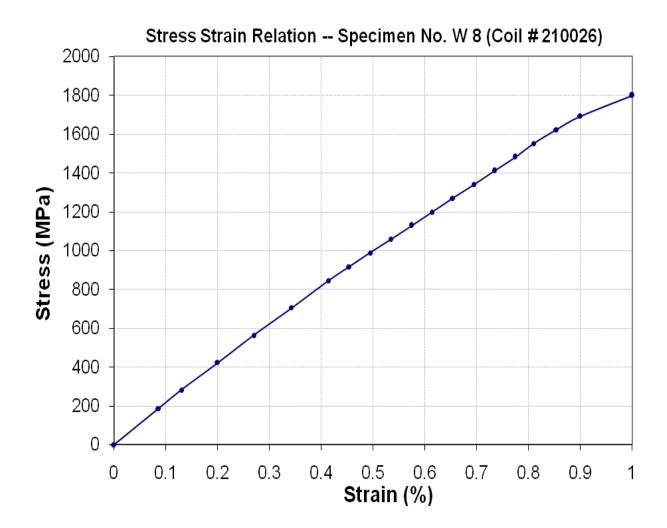
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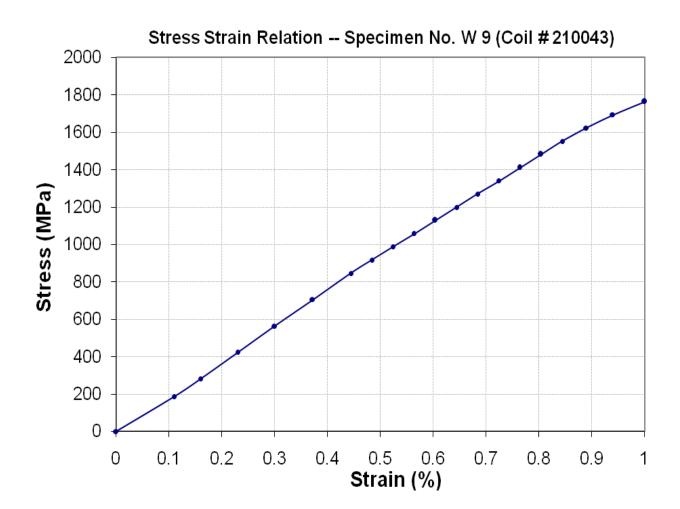
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Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –21/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

- 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
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- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

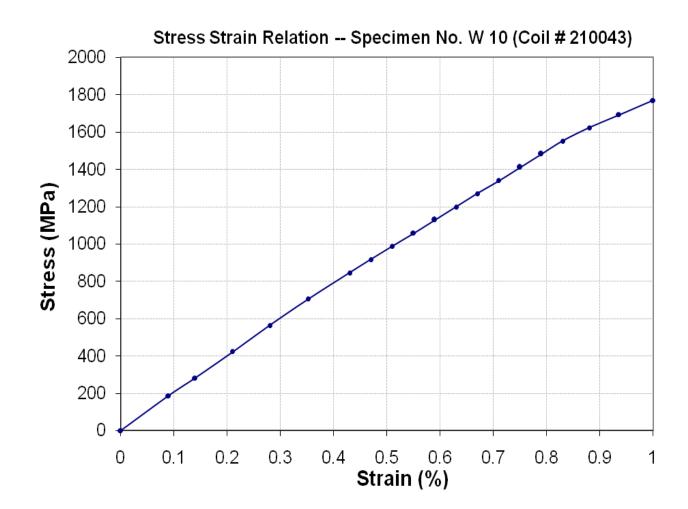
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –22/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

- 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
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To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL 4898 (Dr. M Kashif)

Reference of the request letter # MDSYS-259

Dated: 02-04-2024

Dated: 30-03-2024

Tension Test Report (Page – 23/40)

Date of Test 03-05-2024 Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight		trength e (6.3)	Breaking strength clause (6.2)		Young's Modulus of Elasticity	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa	%	Rema
1	15.24 (0.6")	1102.0	1126.0	24100	236.42	27500	269.78	198	>3.50	210046
2	15.24 (0.6")	1102.0	1123.0	25000	245.25	27500	269.78	199	>3.50	210046
3	15.24 (0.6")	1102.0	1129.0	24300	238.38	27500	269.78	199	>3.50	210049
4	15.24 (0.6")	1102.0	1131.0	24100	236.42	27500	269.78	199	>3.50	210048
5	15.24 (0.6")	1102.0	1124.0	25200	247.21	27500	269.78	199	>3.50	210025
6	15.24 (0.6")	1102.0	1122.0	25200	247.21	27500	269.78	199	>3.50	210025
7	15.24 (0.6")	1102.0	1121.0	24500	240.35	27500	269.78	198	>3.50	210036
8	15.24 (0.6")	1102.0	1125.0	24500	240.35	27300	267.81	199	>3.50	210030

Only Eight Samples for Test

Note:

- 1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM A416a
- 2. Load versus percentage strain graphs are attached

I/C Testing Laboratoires UET Lahore, Pakistan.

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

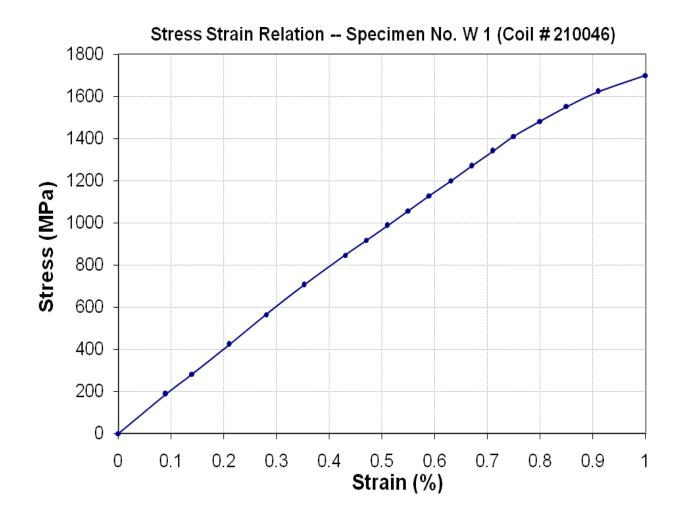
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL **4898** (Dr. M Kashif)
Reference of the request letter # MDSYS-259

Graph (Page –24/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

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

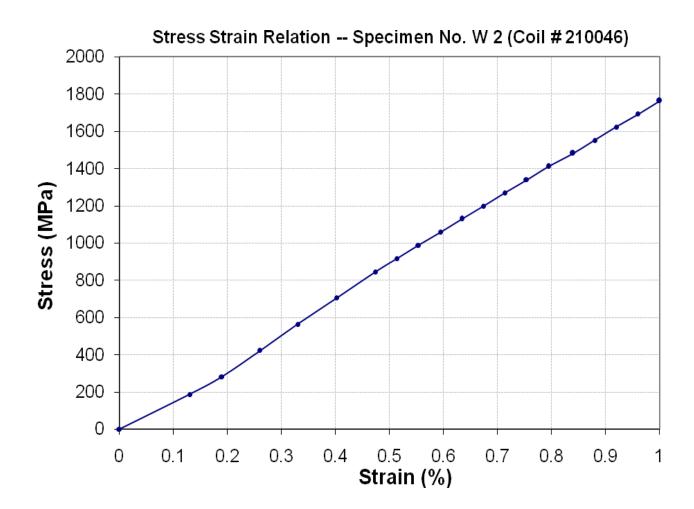
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –25/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

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

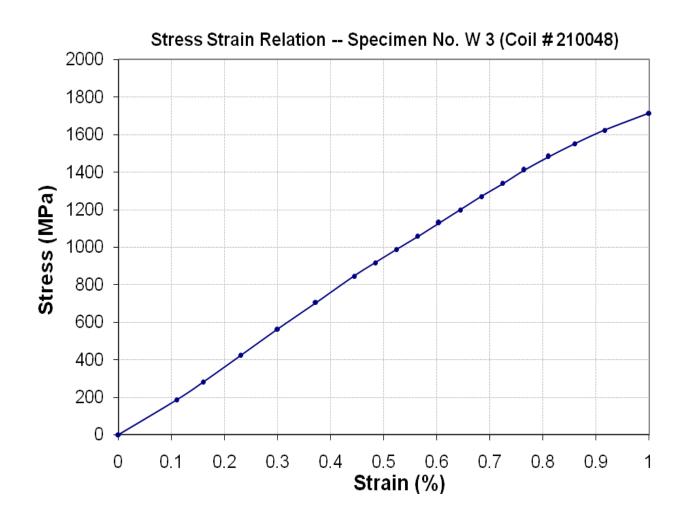
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –26/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

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

To,

M/S China Gezhouba Group Company Limited CGGC DESCON

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Reference # CED/TFL <u>4898 (Dr. M Kashif)</u> Reference of the request letter # MDSYS-259

Graph (Page –27/40)

Stress Strain Relation -- Specimen No. W 4 (Coil #210048) 1800 1600 1400 1200 Stress (MPa) 1000 800 600 400 200 0 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 8.0 0.9 1 Strain (%)

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

- 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
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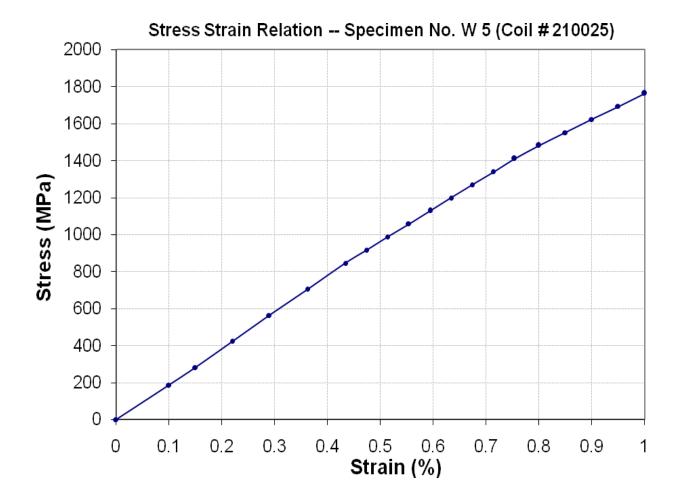
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –28/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

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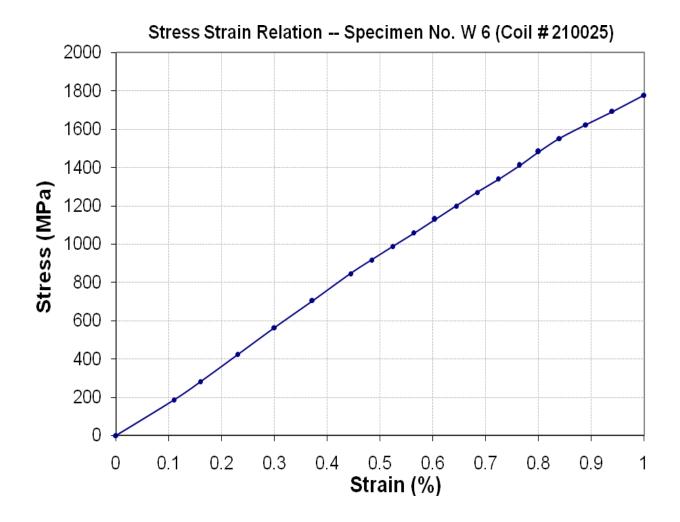
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL 4898 (Dr. M Kashif)
Reference of the request letter # MDSYS-259

Graph (Page –29/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

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

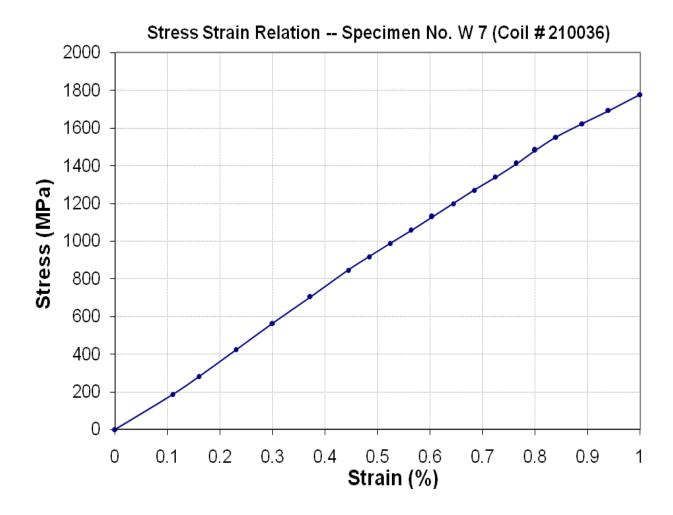
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –30/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

- 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
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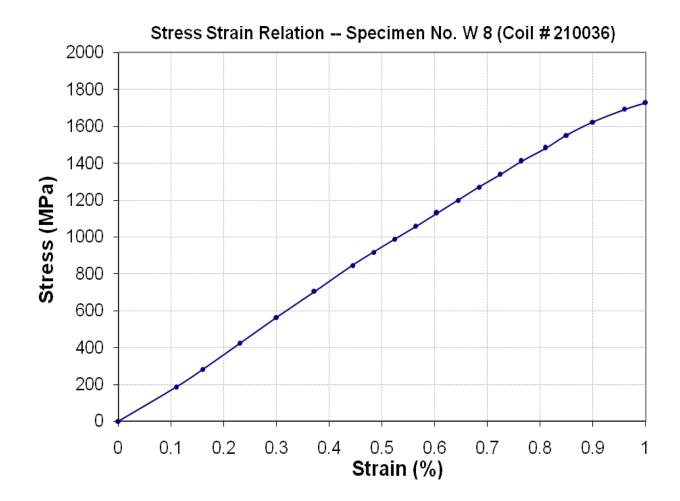
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Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL **4898** (Dr. M Kashif)
Reference of the request letter # MDSYS-259

Graph (Page –31/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

- 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
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Reference # CED/TFL 4898 (Dr. M Kashif)

Reference of the request letter # MDSYS-259

Dated: 02-04-2024

Dated: 30-03-2024

Tension Test Report (Page – 32/40)

Date of Test 03-05-2024 Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity	Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa	%	Rema
1	15.24 (0.6")	1102.0	1118.0	24800	243.29	27400	268.79	199	>3.50	210047
2	15.24 (0.6")	1102.0	1116.0	25400	249.17	27500	269.78	199	>3.50	210047
3	15.24 (0.6")	1102.0	1129.0	25400	249.17	27600	270.76	198	>3.50	210060
4	15.24 (0.6")	1102.0	1132.0	24800	243.29	27600	270.76	199	>3.50	210069
5	15.24 (0.6")	1102.0	1125.0	25200	247.21	27500	269.78	198	>3.50	210063
6	15.24 (0.6")	1102.0	1122.0	25100	246.23	27400	268.79	199	>3.50	210003
7	15.24 (0.6")	1102.0	1121.0	25000	245.25	27400	268.79	199	>3.50	210064
8	15.24 (0.6")	1102.0	1126.0	24800	243.29	27400	268.79	199	>3.50	210004

Only Eight Samples for Test

Note:

- 1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM A416a
- 2. Load versus percentage strain graphs are attached

I/C Testing Laboratoires UET Lahore, Pakistan.

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

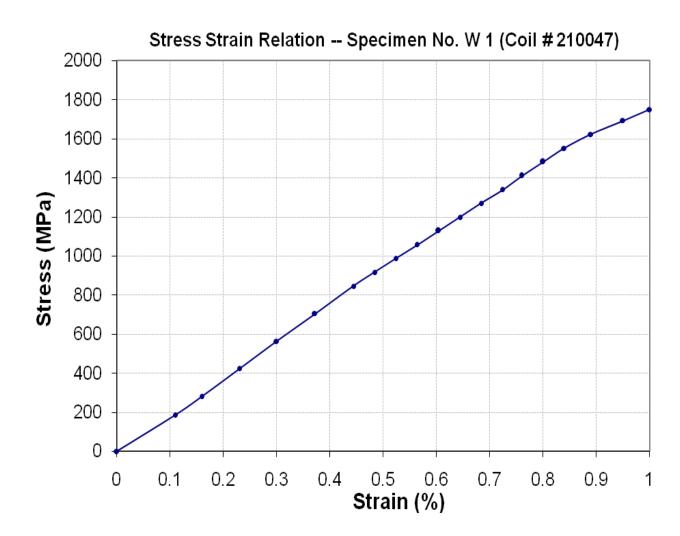
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u> Reference of the request letter # MDSYS-259

Graph (Page –33/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

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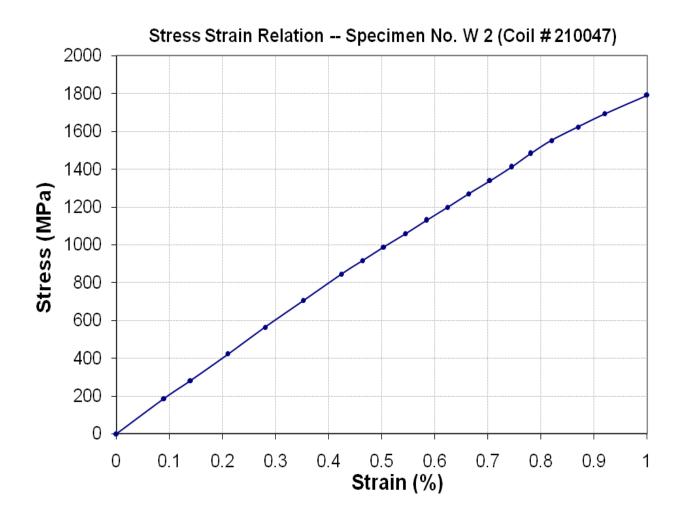
To,

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Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –34/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

- 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
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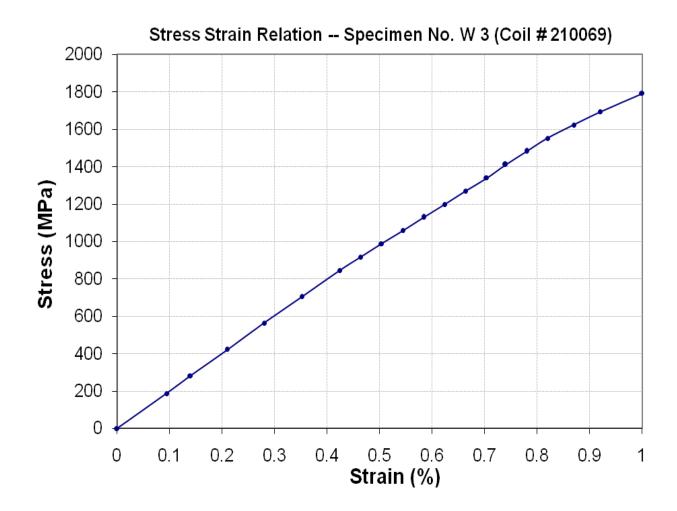
To,

M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –35/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

- 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
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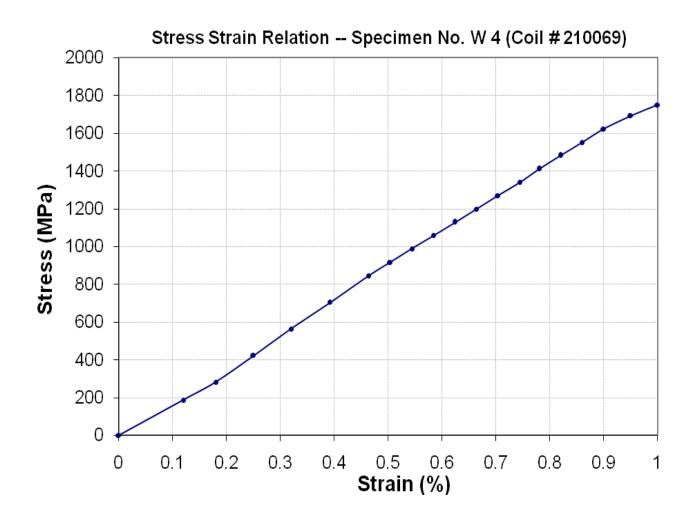
To,

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Reference # CED/TFL **4898** (Dr. M Kashif)
Reference of the request letter # MDSYS-259

Graph (Page –36/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

- 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
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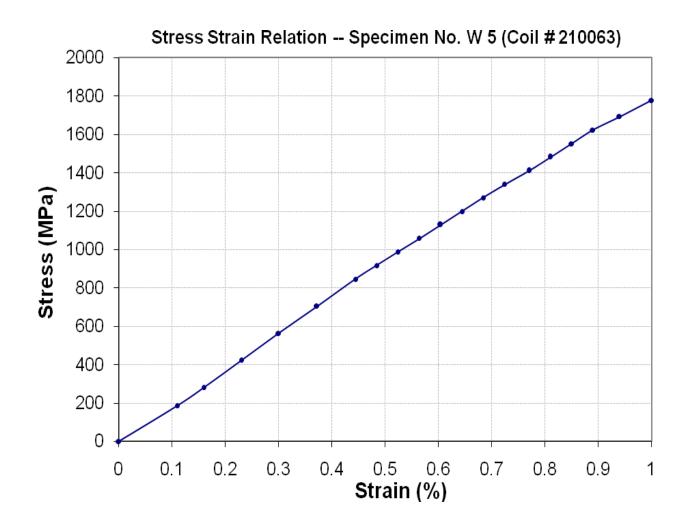
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Reference # CED/TFL **4898** (Dr. M Kashif)
Reference of the request letter # MDSYS-259

Graph (Page –37/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

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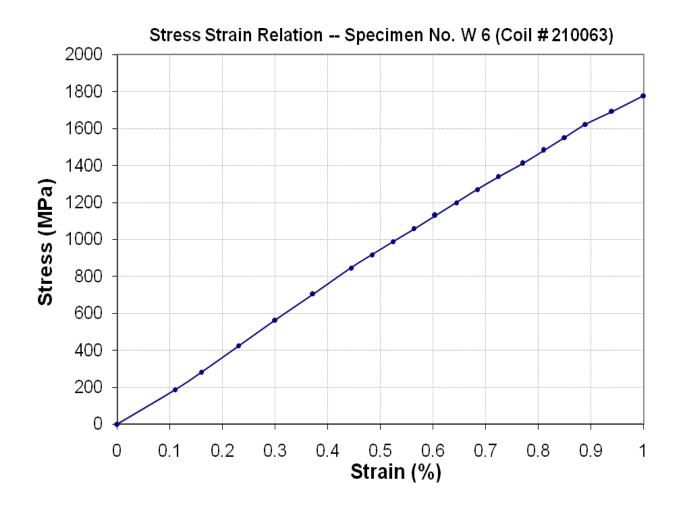
To,

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Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Graph (Page –38/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

Dated: 30-03-2024

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

To,

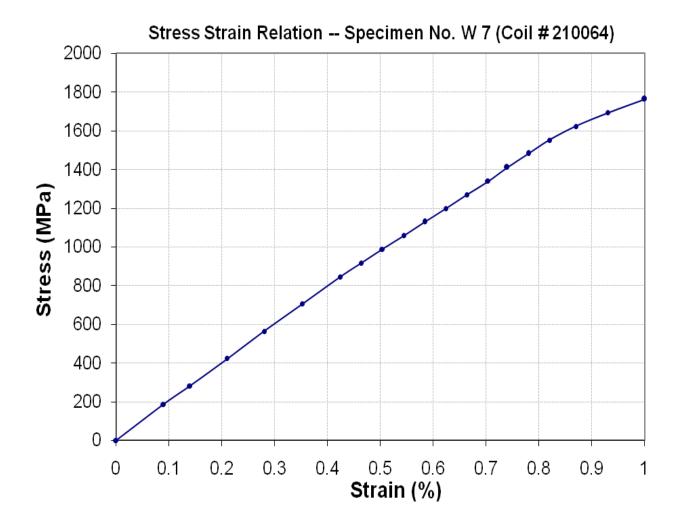
M/S China Gezhouba Group Company Limited CGGC DESCON

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL 4898 (Dr. M Kashif)
Reference of the request letter # MDSYS-259

Reference of the request letter # MDSYS-259 Dated: 30-03-2024

Graph (Page –39/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

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

To,

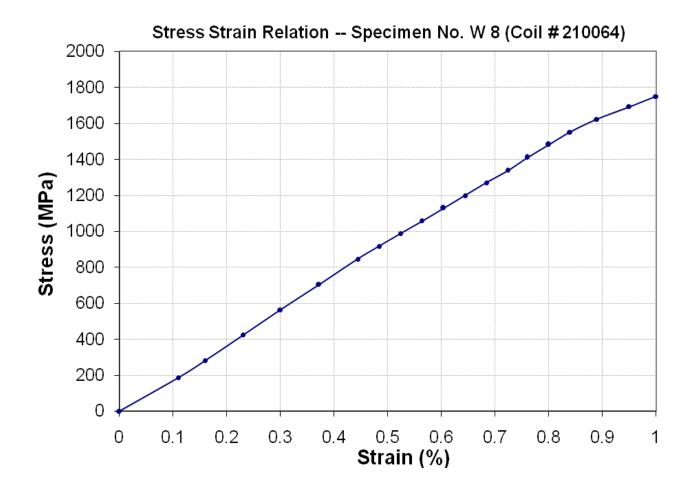
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Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL <u>4898 (Dr. M Kashif)</u>
Reference of the request letter # MDSYS-259

Reference of the request letter # MDSYS-259 Dated: 30-03-2024

Graph (Page –40/40)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-04-2024

- 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
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STRUCTURAL ENGINEERING DIVISION

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

To,

Manager Material (Engr.) Central Lab DHAI-R

Reference # CED/TFL 4983 (Dr. M Kashif)

Reference of the request letter # DHA/Central Lab/Phase-I/58

Dated: 25-04-2024

Dated: 25-04-2024

Tension Test Report (Page -1/1) Date of Test 03-05-2024

Description Deformed Steel Bar Tensile Test as per ASTM-A496

Sr. No.	Weight	Diameter/ Size (mm)		Size			rea m²)	Yield load	Breaking Load	Yield (M	Stress pa)		e Stress pa)	Remarks
S	(kg/m)	Nominal	Actual	Nominal	Actual	(kg) (kg)		Nominal	Actual	Nominal	Actual	Re		
1	0.146	5	4.87	19.40	18.62	1120	1320	566	590	667	696			
2	0.210	6	5.84	32.30	26.77	1400	1800	425	513	547	660			
3	0.533	9	9.30	71.00	67.87	2700	3700	373	390	511	535			
-	ı	ı	-	-	-	-	-	-	ı	-	ı			
_	1	1	-	-	-	-	-	-	ı	-	-			
_	ı	ı	ı	-	-	-	-	-	ı	-	ı			
				Not	te: only	three sa	mples for	tensile t	est	T				
						Done	d Test							
						Della	1 1 681							

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples

SOUNE ROLL OF THE STATE OF THE

STRUCTURAL ENGINEERING DIVISION

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

To,

M/S Premium Engineering (Private) Limited. Lahore

Reference # CED/TFL 4984 (Dr. M Kashif)

Reference of the request letter # Nil

Tension Test Report (Page - 1/1)

Date of Test 03-05-2024

Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	Rema
1	12	0.56	9200	
2	12	0.28	2400	
-	-	-	-	
-	-	-	-	
-	-	-	-	
		Only two samples for Tes	t	

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 25-04-2024

Dated: 25-04-2024

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,

Sub Divisional Officer Maintenance Sub Division No. II GOR-III, Lahore

(Construction of One Multistory Building for Residences Grade 11-14(24-Nos) for Staff Colony at Chauburgi, Garden State, Multan Road, Lahore)

Reference # CED/TFL <u>5012 (Dr. M Kashif)</u> Reference of the request letter # 339-40/GOR-III, Lhr.

Tension Test Report (Page # 1/1)

Date of Test 03-05-2024 Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ize ch)		Area (in²)		Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal	Actual	Nominal			(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	0.378	3/8	0.376	0.11	0.111	3200	4800	64200	63540	96200	95400	1.20	15.0	
2	0.373	3/8	0.374	0.11	0.110	3200	4700	64200	64340	94200	94500	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	_	-	-	1	
			N	ote: on	ly two s	amples f	or tensile	and one	sample f	or bend t	test			
2/0	" Dia Da	D 1	T 4 T1		1000:	Satisfacto	Bend T	est						

3/8" Dia Bar Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-05-2024

Dated: 14-03-2024

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,

M/S Ibna Al Aziz Construction Company.

Lahore

(Project: Sapphire Residence 84-Arif Jan Road can't Lahore.)

Reference # CED/TFL <u>5014 (Dr. M Kashif)</u> Reference of the request letter # IAA-131254

Tension Test Report (Page -1/1)

Date of Test 03-05-2024 Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ize ch)		Nominal Actual		Breaking Load		Yield Stress (psi)		te Stress si)	Elongation	% Elongation	Remarks		
S	(lbs/ft)	Nominal	Actual	Nominal			(kg)	Nominal	Actual	Nominal	Actual	(inch)	3 %	R		
1	0.372	3/8	0.373	0.11	0.109	3400	5200	68200	68570	104200	104900	1.30	16.3	<u>.</u>		
-	1	-	-	-	-	-	-	-	-	-	-	-	-	Markhor Steel		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ma		
-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	-	-	_	-	-	-	-	-	-	-	-	-	-			
			N	ote: on	ly one s	amples f	or tensile	and one	sample f	or bend t	test					
							Bend T	est								
3/8	" Dia Ba	ır Bend	Test Th	nrough	8" Dia Bar Bend Test Through 180° is Satisfactory											

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-05-2024

Dated: 02-05-2024

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,

Project In Charge. Ittefaq Construction Associates Construction of New Office Building at EGA-2, Gajumatta, Rohi Nala, Lahore.

Reference # CED/TFL **5015** (Dr. M Kashif) Reference of the request letter # Nil

Tension Test Report (Page # 1/1)

Date of Test 03-05-2024 Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ize ch)		Area (in²)		Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal	Actual	Nominal			(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	0.375	3/8	0.374	0.11	0.110	3100	5000	62200	62050	100200	100100	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			N	ote: on	ly one s	sample fo	r tensile	and one	sample f	or bend t	est	· · · · · · · · · · · · · · · · · · ·		
3/8	" Dia Ba	ır Bend	Test Th	rough	180° is S	Satisfacto	Bend T	est						

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-05-2024

Dated: 02-05-2024

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,

Procurement Manager S.K Farmhouse

S.K Farmhouse Near Jhumra Flyover Faisalabad

Reference # CED/TFL 5016 (Dr. M Kashif)

Reference of the request letter # 001 Dated: 30-04-2024

Tension Test Report (Page # 1/1)

Date of Test 03-05-2024
Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ze ch)		Nominal Actual		Breaking Load		Yield Stress (psi)		te Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal	Actual	Nominal			(kg)	Nominal	Actual	Nominal	Actual	(inch)	3%	Re
1	0.368	3/8	0.371	0.11	0.108	3800	4800	76200	77450	96200	97900	1.10	13.8	00
-	-	-	-	-	-	-	-	-	-	-	-	-	-	Sheikhoo Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	Sh
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			N	ote: on	ly one s	sample fo	r tensile	and one	sample f	or bend t	est			
							Bend T	est						
3/8	" Dia Ba	ır Bend	Test Th	rough	180° is \$	Satisfacto	ry							

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-05-2024

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,

General Manager
Jafris and Steele (Private) Limited.
Construction of Al-Munawar Residential.

Reference # CED/TFL **5017** (Dr. M Kashif) Reference of the request letter # JS80/515

Tension Test Report (Page # 1/1)

Date of Test 03-05-2024 Gauge length 8 inches

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

Sr. No.	Weight		neter/ ze		Area (in²)		Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	· Z		(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	R
1	4.173	10	1.250	1.27	1.227	37800	52400	65600	67930	91000	94200	1.50	18.8	
2	4.175	10	1.250	1.27	1.227	39400	53200	68400	70770	92400	95600	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			No	ote: onl	ly two s	amples f	or tensile	and one	sample f	or bend 1	test			
							Bend T	est						
#10) Bar Be	Bend Test Through 180° is Satisfactory												

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-05-2024

Dated: 02-05-2024

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,

M/S China Gezhouba Group Company Limited. 300 MW Balakot Hydro Power Project.

Reference # CED/TFL <u>5018 (Dr. M Kashif)</u>
Reference of the request letter # Nil

Tension Test Report (Page -1/2)

Date of Test 03-05-2024 Gauge length 600 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield so	trength e (6.3)	stre	aking ngth e (6.2)	Young's Modulus of Elasticity "E"	Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa	%	Rema
1	15.24 (0.6")	1102.0	1117.0	24700	242.31	27500	269.78	199	>3.50	YPW169-SJ/24022
-	-	-	-	-	-	_	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	

Only one sample for Test

Note

- 1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM A416a
- 2. Load versus percentage strain graphs are attached

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-05-2024

Dated: 28-04-2024

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

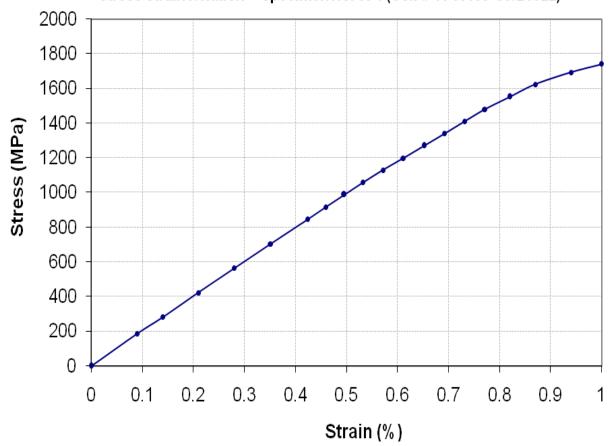
To,

M/S China Gezhouba Group Company Limited. 300 MW Balakot Hydro Power Project.

Reference # CED/TFL **5018** (Dr. M Kashif) Reference of the request letter # Nil

Graph (Page – 2/2)

Stress Strain Relation -- Specimen No. W 1 (Coil # YPW169-SJ/24022)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 02-05-2024

Dated: 28-04-2024

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,

M/S Amanah Noor Residence Wapda Town, Lahore

Reference # CED/TFL 5019 (Dr. M Kashif)

Reference of the request letter # Nil

Dated: 03-05-2024

Dated: 03-05-2024

Tension Test Report (Page -1/1)

Date of Test 03-05-2024
Gauge length 8 inches

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

Sr. No.	Weight	Diam Si	neter/ ze		Nominal Actual Actual		Breaking Load		Stress si)		te Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal			(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	0.360	3	0.367	0.11	0.106	3200	4700	64200	66720	94200	98000	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			N	ote: on	ly one s	sample fo	r tensile	and one	sample f	or bend t	est	ı		
#3	Bar Ben	d Test	Through	180° is	S Satisfa	actory	Bend T	est						

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples