

Sohail Afzal

**Test Performed By:**

Dr. /Engr.

M Irfan Ul Hassan

Sr. Project Manager IZHAR GROUP OF COMPANIES, Lahore

**Client Reference:** ICPL/CONST-DML/20/21**Dated:** 02-09-2020**SOM Lab Ref:** CED/SOM/2905(Page-1/2)**Dated:** 02-09-2020**Test:** Tension Test & bend Test**Test Specification:** ASTM-A 615**Sample Type:** Deformed Bar(Amreli Steel)**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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	3.876	25	25.08	491	494	248.90	317.20	507	504	646	643	35.0	200	17.5	
2	3.834	25	24.94	491	488	248.20	317.50	506	509	647	651	30.0	200	15.0	
3	3.036	22	22.19	380	387	203.20	262.00	535	526	689	678	32.5	200	16.3	
4	2.992	22	22.03	380	381	195.00	254.50	513	512	670	668	32.5	200	16.3	
5	1.603	16	16.13	201	204	119.50	145.50	594	586	724	713	30.0	200	15.0	
6	1.587	16	16.04	201	202	115.00	136.20	572	569	677	674	27.5	200	13.8	
7	0.889	12	12.01	113	113	65.00	80.20	575	575	709	709	25.0	200	12.5	
8	0.880	12	11.95	113	112	66.20	80.00	585	591	707	714	30.0	200	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**BEND TEST:**

25mm	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Twelve Samples Received and Tested
22mm	Sample bend through 180 degrees Satisfactorily without any crack	
16mm	Sample bend through 180 degrees Satisfactorily without any crack	
12mm	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](http://www.uet-civil.edu.pk)

Sohail Afzal

Test Performed By:

Dr. /Engr.

M Irfan UI Hassan

Sr. Project Manager IZHAR GROUP OF COMPANIES, Lahore

Client Reference: ICPL/CONST-DML/20/22

Dated: 02-09-2020

SOM Lab Ref: CED/SOM/2905(Page-2/2)

Dated: 02-09-2020

Test: Tension Test &amp; bend Test

Test Specification: ASTM-A 615

Sample Type: Deformed Bar(Mughal Steel)

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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	0.871	12	11.89	113	111	62.70	79.00	554	565	699	712	22.5	200	11.3	
2	0.859	12	11.80	113	109	65.70	77.50	581	601	685	709	25.0	200	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**BEND TEST:**

12mm Sample bend through 180 degrees Satisfactorily without any crack

**Note:-**Only Three Samples  
Received and TestedNote: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Engr. Ahad Johri  
 Ahad And Associates Consulting Rnginreers & Planners, Lahore

**Test Performed By:** Dr. /Engr. M. Irfan UI Hassan

**Client Reference:** nil

**Dated:** 01-09-2020

**Test:** Tension Test

**Gauge Length:** 8 inch

**Test Specification:**

**Sample Type:**

**SOM Lab**

**Ref:** 2904(Page-1/1)

**Dated:** 02-09-2020

ASTM-A-615

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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.644	8	0.995	0.79	0.777	28.75	35.73	80250	81600	99750	101410	1.10	8.0	13.8	
2	1.468	6	0.741	0.44	0.431	16.48	20.25	82620	84350	101530	103650	1.10	8.0	13.8	
3	0.687	4	0.507	0.20	0.202	6.60	9.40	72730	72010	103640	102620	1.10	8.0	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**BEND TEST:**

--	No Bend test performed	<b>Note:-</b>  Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Khurram Shahzad  
 Jr Engineer (Civil), SWP, Pakistan Atomic Energy Commission D. G. Khan

**Test Performed By:**

Dr. /Engr.

S. Asad Ali  
Gillani

**Client Reference:** SWP/W(2388)/2019/438

**SOM Lab**

**Ref:**

2907(Page-1/1)

**Dated:** 28-08-2020

**Dated:**

02-09-2020

**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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.661	8	0.998	0.79	0.782	26.35	32.21	73570	74320	89930	90850	1.20	8.0	15.0	
2	2.618	8	0.990	0.79	0.769	24.79	31.91	69210	71100	89070	91510	1.30	8.0	16.3	
3	1.525	6	0.755	0.44	0.448	17.64	21.07	88400	86820	105610	103730	1.00	8.0	12.5	
4	1.520	6	0.754	0.44	0.447	14.24	19.06	71380	70260	95550	94050	1.20	8.0	15.0	
5	0.693	4	0.510	0.20	0.204	7.24	9.09	79810	78250	100270	98300	1.10	8.0	13.8	
6	0.692	4	0.508	0.20	0.203	7.19	8.99	79250	78080	99150	97680	1.30	8.0	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  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](http://www.uet-civil.edu.pk)

Safdar Hussain  
Resident Engineer, ACE, Danish School Mankera Residency

**Test Performed By:**

Dr. /Engr.

M Irfan UI  
Hassan

**Client Reference:** ACE/RE-PDS/MNK/BHK/20/317

**Dated:** 21-07-2020

**Test:** Tension Test & Bend Test

**Gauge Length:** 8 inch

**Test Specification:**

**Sample Type:**

**SOM Lab**

**Ref:** 2906(Page-1/1)

**Dated:** 02-09-2020

ASTM-A-615

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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.064	5	0.631	0.31	0.313	10.67	15.24	75930	75200	108420	107380	1.10	8.0	13.8	
2	1.105	5	0.643	0.31	0.325	11.59	16.64	82460	78650	118360	112890	1.10	8.0	13.8	
3	0.674	4	0.502	0.20	0.198	6.60	9.76	72730	73470	107580	108660	1.20	8.0	15.0	
4	0.673	4	0.502	0.20	0.198	6.52	9.70	71940	72670	107010	108090	1.20	8.0	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**BEND TEST:**

# 5	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  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](http://www.uet-civil.edu.pk)

Khurram Shahzad  
Jr Engineer (Civil), SWP, Pakistan Atomic Energy Commission D. G. Khan

**Test Performed By:** Dr. /Engr.

S. Asad Ali  
Gillani

**Client Reference:** SWP/W(2388)/2020/437

**SOM Lab**

**Ref:** 2908(Page-1/1)

**Dated:** 28-08-2020

**Dated:** 02-09-2020

**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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.531	6	0.757	0.44	0.450	17.30	21.00	86710	84780	105260	102920	1.10	8.0	13.8	
2	1.510	6	0.752	0.44	0.444	15.24	19.57	76390	75700	98100	97220	1.10	8.0	13.8	
3	0.673	4	0.502	0.20	0.198	6.52	8.58	71940	72670	94650	95610	1.10	8.0	13.8	
4	0.674	4	0.502	0.20	0.198	6.39	8.43	70480	71190	92960	93900	1.20	8.0	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**BEND TEST:**

# 6	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  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](http://www.uet-civil.edu.pk)

