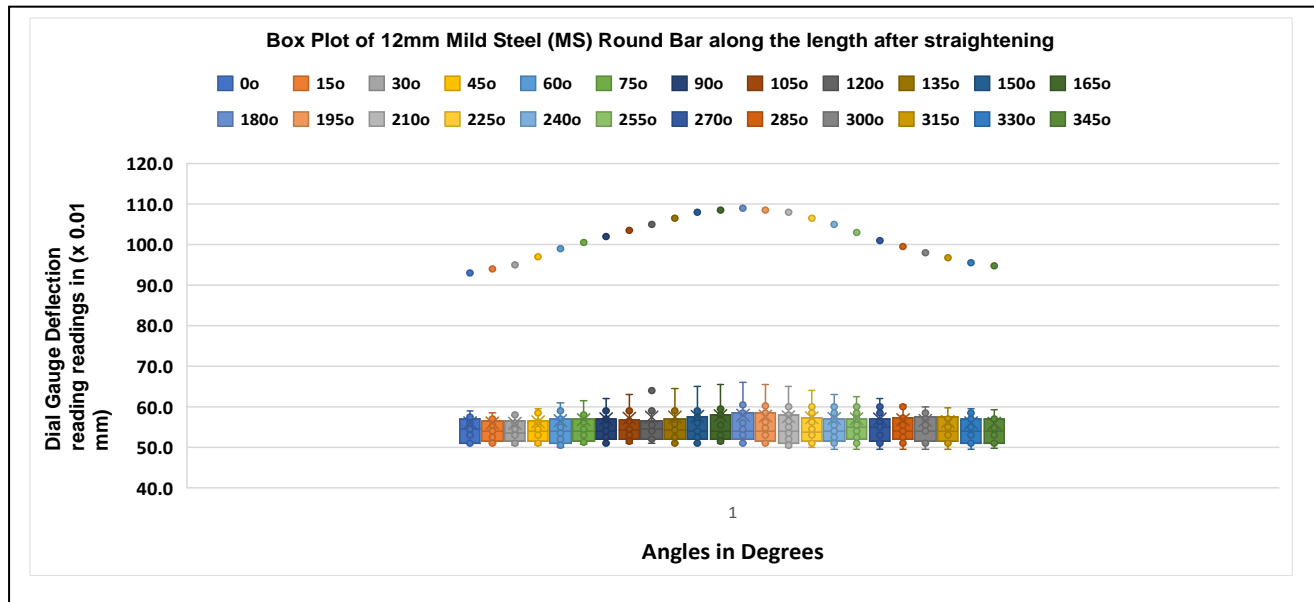
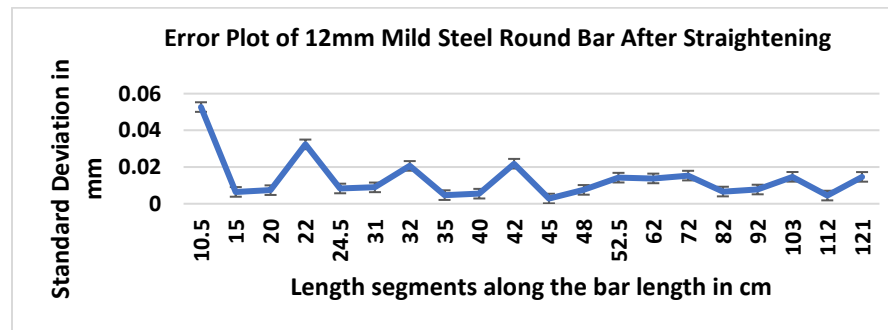


**Table 6.13****Measurement of roundness by Dial gauge deflections of 12-mm Diameter Mild Steel (MS) Round Bar After Straightening****Mean values of Dial Gauge Deflection Readings after straightening of 12 mm Mild Steel (MS) round bar x 0.01 mm**

Length in cm	Angles in Degrees																								STD DEV (mm)
	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°	330°	345°	
10.5	93.0	94	95.0	97	99.0	101	102.0	104	105.0	107	108.0	109	109.0	109	108.0	107	105.0	103	101.0	99.5	98.0	96.8	95.5	94.8	0.0527
15	59.0	58.5	58.0	58.5	59.0	59	59.0	59	59.0	59	59.0	59.8	60.5	60.3	60.0	60	60.0	60	60.0	60	60.0	59.8	59.5	59.3	0.0065
20	57.0	57	57.0	57	57.0	57	57.0	56.8	56.5	57	57.5	58	58.5	58.5	58.5	58.5	58.5	58.5	58.5	58.5	58.5	58.3	58.0	58	0.0074
22	57.0	57.5	58.0	59.5	61.0	61.5	62.0	63	64.0	64.5	65.0	65.5	66.0	65.5	65.0	64	63.0	62.5	62.0	60.5	59.0	57.5	56.0	56	0.0324
24.5	56.5	56.5	56.5	56.3	56.0	55.8	55.5	55.5	55.5	55.8	56.0	56.3	56.5	57	57.5	57.3	57.0	57	57.0	57.3	57.5	58	58.5	57.8	0.0083
31	56.0	55.5	55.0	55	55.0	54.8	54.5	54.5	54.5	54.8	55.0	55.5	56.0	56.3	56.5	56.3	56.0	56.3	56.5	56.8	57.0	57	57.0	57	0.0089
32	55.0	55.5	56.0	56.5	57.0	58	59.0	59	59.0	59.5	60.0	59.5	59.0	58.5	58.0	57	56.0	55.5	55.0	54.5	54.0	54	54.0	54	0.0206
35	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.3	54.0	54.3	54.5	54.8	55.0	55.3	55.5	55.5	55.5	55.5	55.5	55.3	55.0	54.8	0.0047
40	53.0	53.5	54	54	54.0	54	54.0	54.3	54.5	54.3	54.0	54	54.0	54	54.0	54.5	55.0	55	55.0	55	55.0	55	55.0	54.8	0.0055
42	53.0	53.3	53.5	54.8	56.0	56.3	56.5	56.5	56.5	56.5	56.5	56.5	56.5	55.8	55.0	53.8	52.5	52	51.5	51.5	51.5	51.3	51.0	51	0.0218
45	54.5	54	53.5	53.5	53.5	53.8	54.0	54	54.0	53.8	53.5	53.5	53.5	53.5	53.5	53.8	54.0	54	54.0	54	54.0	54	54.0	54.3	0.0028
48	52.0	51.5	51.0	51	51.0	51.5	52.0	52	52.0	52.5	53.0	53	53.0	53	53.0	53	53.0	52.5	52.0	52	52.0	51.5	51.0	51	0.0076
52.5	51.0	51.3	51.5	52.3	53.0	53	53.0	53	53.0	52.8	52.5	52	51.5	51	50.5	50	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.8	0.0142
62	51.0	51	51.0	51.5	52.0	52.3	52.5	52.3	52.0	52	52.0	52	52.0	51.5	51.0	51	51.0	51	51.0	54	57.0	54	51.0	51	0.0138
72	51.0	51.5	52.0	51	50.0	51.5	53.0	52	54.0	52	51.0	53	54.0	51	50.0	51.5	53.0	55	56.0	54	52.0	53	54.0	53	0.0153
82	52.0	52.5	53.0	52	51.0	51.5	52.0	52	53.0	51	52.0	51.5	51.0	52	53.0	52	51.0	52	53.0	52.5	52.0	51.5	51.0	52	0.0066
92	51.0	51.5	52.0	53	54.0	52.5	51.0	51.5	52.0	52.5	53.0	52.5	52.0	51.5	51.0	51.5	52.0	52.5	53.0	52	51.0	52	53.0	52	0.0078
103	57.5	54	50.5	50.5	50.5	50.8	51.0	51	51.0	51	51.0	51	51.0	51	51.0	51	51.0	51	51.0	51	51.0	51	51.0	51	0.0147
112	51.0	51	51.0	51	51.0	51.3	51.5	51.8	52.0	52	52.0	52	52.0	52	52.0	51.8	51.5	51.3	51.0	51	51.0	51	51.0	51	0.0045
121	53.0	53	53.0	54.3	55.5	55.8	56.0	56.3	56.5	56.5	56.5	56.8	57.0	57	57.0	56.5	56.0	55	54.0	54	54.0	53.8	53.5	53.5	0.0146



**Figure 6.18(a): Box Plot of dial gauge readings dataset of mean values of 12-mm diameter Mild Steel (MS) round bar before straightening**



**Figure 6.18(b): Error Plot of dial gauge readings on 12 mm Mild Steel Round Bar after straightening**