

LAMPIRAN I

DATA PEMODELAN BALOK BETON PRACETAK

Tabel 1 Data defleksi (mm) akibat variasi dimensi dan posisi tulangan lentur bentang 10 meter

BU1	BU2	BU3	BU4	BU5	BU6
-107.619	-104.938	-95.248	-103.072	-114.157	-114.471
-107.619	-104.938	-95.248	-103.072	-114.157	-114.471
-107.619	-104.938	-95.248	-103.072	-114.157	-114.471
-107.619	-104.938	-95.248	-103.072	-114.157	-114.471
-107.619	-104.938	-95.248	-103.072	-114.157	-114.471
-106.629	-103.760	-94.179	-101.872	-112.962	-113.282
-103.645	-100.407	-91.146	-98.481	-109.556	-109.885
-98.897	-95.424	-86.683	-93.549	-104.420	-104.745
-92.986	-89.671	-81.540	-87.923	-98.181	-98.490
-86.564	-83.606	-76.054	-81.990	-91.469	-91.758
-79.955	-77.269	-70.348	-75.874	-84.575	-84.846
-73.169	-70.755	-64.460	-69.584	-77.509	-77.763
-66.219	-64.070	-58.405	-63.142	-70.293	-70.532
-59.114	-57.225	-52.190	-56.557	-62.935	-63.161
-51.866	-50.231	-45.831	-49.838	-55.445	-55.658
-44.487	-43.103	-39.338	-42.994	-47.832	-48.033
-36.991	-35.852	-32.724	-36.039	-40.107	-40.298
-29.392	-28.494	-26.005	-28.984	-32.284	-32.464
-21.708	-21.046	-19.198	-21.842	-24.374	-24.545
-18.029	-17.479	-15.938	-18.131	-20.241	-20.383
-14.374	-13.936	-12.702	-14.447	-16.135	-16.249
-10.750	-10.423	-9.497	-10.794	-12.061	-12.145
-7.153	-6.936	-6.317	-7.175	-8.020	-8.076
-3.574	-3.466	-3.157	-3.585	-4.008	-4.036
0.000	0.000	0.000	0.000	0.000	0.000

Tabel 2 Data hubungan panjang bentang (mm) dan defleksi (mm) akibat variasi dimensi dan posisi tulangan lentur bentang 10 meter.

BU1		BU2		BU3	
Bentang	Defleksi	Bentang	Defleksi	Bentang	Defleksi
5000.00	-107.619	5000.00	-104.938	5000.00	-95.248
5000.00	-107.619	5000.00	-104.938	5000.00	-95.248
5000.00	-107.619	5000.00	-104.938	5000.00	-95.248
5000.00	-107.619	5000.00	-104.938	5000.00	-95.248
5000.00	-107.619	5000.00	-104.938	5000.00	-95.248
4703.57	-106.629	4703.57	-103.760	4703.57	-94.179
4407.14	-103.645	4407.14	-100.407	4407.14	-91.146
4110.71	-98.897	4110.71	-95.424	4110.71	-86.683
3814.29	-92.986	3814.29	-89.671	3814.29	-81.540
3517.86	-86.564	3517.86	-83.606	3517.86	-76.054
3221.43	-79.955	3221.43	-77.269	3221.43	-70.348
2925.00	-73.169	2925.00	-70.755	2925.00	-64.460
2628.57	-66.219	2628.57	-64.070	2628.57	-58.405
2332.14	-59.114	2332.14	-57.225	2332.14	-52.190
2035.71	-51.866	2035.71	-50.231	2035.71	-45.831
1739.29	-44.487	1739.29	-43.103	1739.29	-39.338
1442.86	-36.991	1442.86	-35.852	1442.86	-32.724
1146.43	-29.392	1146.43	-28.494	1146.43	-26.005
850.00	-21.708	850.00	-21.046	850.00	-19.198
708.33	-18.029	708.33	-17.479	708.33	-15.938
566.67	-14.374	566.67	-13.936	566.67	-12.702
425.00	-10.750	425.00	-10.423	425.00	-9.497
283.33	-7.153	283.33	-6.936	283.33	-6.317
141.67	-3.574	141.67	-3.466	141.67	-3.157
0.00	0.000	0.00	0.000	0.00	0.000

Tabel 3 Data hubungan panjang bentang (mm) dan defleksi (mm) akibat variasi dimensi dan posisi tulangan lentur bentang 10 meter.

BU4		BU5		BU6	
Bentang	Sefleksi	Bentang	Defleksi	Bentang	Defleksi
5000.00	-103.072	5000.00	-114.157	5000.00	-114.471
5000.00	-103.072	5000.00	-114.157	5000.00	-114.471
5000.00	-103.072	5000.00	-114.157	5000.00	-114.471
5000.00	-103.072	5000.00	-114.157	5000.00	-114.471
5000.00	-103.072	5000.00	-114.157	5000.00	-114.471
4707.81	-101.872	4708.11	-112.962	4708.42	-113.282
4415.62	-98.481	4416.23	-109.556	4416.83	-109.885
4123.43	-93.549	4124.34	-104.420	4125.25	-104.745
3831.24	-87.923	3832.45	-98.181	3833.67	-98.490
3539.05	-81.990	3540.56	-91.469	3542.08	-91.758
3246.86	-75.874	3248.68	-84.575	3250.50	-84.846
2954.66	-69.584	2956.79	-77.509	2958.92	-77.763
2662.47	-63.142	2664.90	-70.293	2667.33	-70.532
2370.28	-56.557	2373.02	-62.935	2375.75	-63.161
2078.09	-49.838	2081.13	-55.445	2084.16	-55.658
1785.90	-42.994	1789.24	-47.832	1792.58	-48.033
1493.71	-36.039	1497.35	-40.107	1501.00	-40.298
1201.52	-28.984	1205.47	-32.284	1209.41	-32.464
909.33	-21.842	913.58	-24.374	917.83	-24.545
757.77	-18.131	761.32	-20.241	764.86	-20.383
606.22	-14.447	609.05	-16.135	611.89	-16.249
454.66	-10.794	456.79	-12.061	458.91	-12.145
303.11	-7.175	304.53	-8.020	305.94	-8.076
151.55	-3.585	152.26	-4.008	152.97	-4.036
0.00	0.000	0.00	0.000	0.00	0.000

Tabel 4 Data beban maksimal (kN/m) akibat varisai dimensi dan posisi tulangan lentur bentang 10 meter.

BU1	BU2	BU3	BU4	BU5	BU6
0.000	0.000	0.000	0.000	0.000	0.000
4.157	4.063	4.124	4.613	4.637	4.661
8.314	8.127	8.247	9.227	9.275	9.322
12.471	12.190	12.371	13.840	13.912	13.984
16.629	16.253	16.495	18.453	18.549	18.645
20.786	20.316	20.618	23.066	23.186	23.306
24.943	24.380	24.742	27.680	27.824	27.967
29.100	28.443	28.866	32.293	32.461	32.628
33.257	32.506	32.989	36.906	37.098	37.289
37.414	36.569	37.113	41.519	41.736	41.951
41.571	40.633	41.237	46.133	46.373	46.612
45.729	44.696	45.360	50.746	51.010	51.273
49.886	48.759	49.484	55.359	55.647	55.934
54.043	52.822	53.608	59.973	60.285	60.595
58.200	56.886	57.731	64.586	64.922	65.257
62.357	60.949	61.855	69.199	69.559	69.918
66.514	65.012	65.979	73.812	74.197	74.579
70.671	69.076	70.102	78.426	78.834	79.240
74.829	73.139	74.226	83.039	83.471	83.901
78.986	77.202	78.350	87.652	88.108	88.562
83.143	81.265	82.473	92.265	92.746	93.224
78.986	77.202	78.350	87.652	88.108	88.562

Tabel 5 Data hubungan Defleksi (mm) dan beban maksimal (kN/m) akibat variasi dimensi dan posisi tulangan lentur benyang 10 meter.

BU1		BU2		BU3	
Defleksi	Beban	Defleksi	Beban	Dfleksi	Beban
0.000	0.000	0.000	0.000	0.000	0.000
0.567	4.157	0.594	4.063	0.582	4.124
1.134	8.314	1.188	8.127	1.165	8.247
1.785	12.471	1.900	12.190	1.851	12.371
2.671	16.629	2.814	16.253	2.755	16.495
3.694	20.786	3.887	20.316	3.810	20.618
4.848	24.943	5.084	24.380	4.991	24.742
6.041	29.100	6.319	28.443	6.212	28.866
7.270	33.257	7.581	32.506	7.461	32.989
8.563	37.414	8.901	36.569	8.776	37.113
9.949	41.571	10.328	40.633	10.188	41.237
11.355	45.729	11.768	44.696	11.617	45.360
12.750	49.886	13.212	48.759	13.041	49.484
14.131	54.043	14.637	52.822	14.447	53.608
15.503	58.200	16.051	56.886	15.847	57.731
16.861	62.357	17.450	60.949	17.228	61.855
18.216	66.514	18.846	65.012	18.608	65.979
19.568	70.671	20.236	69.076	19.982	70.102
20.923	74.829	21.729	73.139	21.429	74.226
22.623	78.986	24.957	77.202	23.904	78.350
107.619	83.143	104.938	81.265	95.248	82.473
113.000	78.986	110.185	77.202	100.010	78.350

Tbel 4 Data beban maksimal (kN/m) akibat varisai dimensi dan posisi tulangan lentur bentang 10 meter.

BU4		BU5		BU6	
Defleksi	Beban	Defleksi	Beban	Defleksi	Beban
0.000	0.000	0.000	0.000	0.000	0.000
0.533	4.613	0.527	4.637	0.521	4.661
1.066	9.227	1.054	9.275	1.042	9.322
1.688	13.840	1.665	13.912	1.643	13.984
2.550	18.453	2.517	18.549	2.488	18.645
3.582	23.066	3.536	23.186	3.500	23.306
4.689	27.680	4.632	27.824	4.590	27.967
5.858	32.293	5.790	32.461	5.740	32.628
7.078	36.906	6.993	37.098	6.939	37.289
8.409	41.519	8.314	41.736	8.253	41.951
9.740	46.133	9.636	46.373	9.566	46.612
11.061	50.746	10.950	51.010	10.872	51.273
12.363	55.359	12.243	55.647	12.157	55.934
13.651	59.973	13.522	60.285	13.429	60.595
14.930	64.586	14.791	64.922	14.689	65.257
16.201	69.199	16.053	69.559	15.942	69.918
17.471	73.812	17.314	74.197	17.194	74.579
18.763	78.426	18.598	78.834	18.472	79.240
20.085	83.039	19.912	83.471	19.782	83.901
21.746	87.652	21.596	88.108	21.483	88.562
103.072	92.265	114.157	92.746	114.471	93.224
108.225	87.652	119.865	88.108	120.194	88.562

Tabel 7 Data kurvatur (rad/km) akibat variasi dimensi dan posisi tulangan lentur bentang 10 meter.

BU1	BU2	BU3	BU4	BU5	BU6
-0.026	-0.022	-0.024	-0.030	-0.028	-0.026
0.074	0.078	0.076	0.064	0.065	0.067
0.174	0.178	0.176	0.157	0.158	0.159
0.274	0.278	0.276	0.251	0.251	0.252
0.374	0.378	0.376	0.344	0.344	0.344
0.474	0.478	0.476	0.438	0.437	0.437
0.574	0.578	0.576	0.531	0.530	0.530
0.674	0.678	0.676	0.625	0.623	0.622
0.774	0.778	0.776	0.718	0.716	0.715
0.874	0.878	0.876	0.811	0.809	0.807
0.974	0.978	0.976	0.905	0.903	0.900
1.074	1.078	1.076	0.998	0.996	0.993
1.181	1.186	1.184	1.092	1.089	1.085
1.300	1.305	1.302	1.201	1.197	1.194
1.430	1.435	1.432	1.321	1.317	1.313
1.573	1.579	1.575	1.453	1.449	1.444
1.730	1.736	1.733	1.599	1.594	1.589
1.903	1.910	1.906	1.758	1.753	1.748
2.093	2.101	2.097	1.934	1.929	1.923
2.302	2.311	2.306	2.128	2.121	2.115
2.533	2.542	2.537	2.341	2.333	2.326
2.786	2.797	2.791	2.575	2.567	2.559
3.064	3.076	3.070	2.832	2.824	2.815
3.371	3.384	3.377	3.115	3.106	3.096
4.079	4.094	4.086	3.769	3.758	3.747
4.487	4.504	4.495	4.146	4.134	4.121
4.935	4.954	4.944	4.561	4.547	4.533
5.429	5.450	5.438	5.017	5.002	4.987
5.972	5.995	5.982	5.519	5.502	5.485
6.569	6.594	6.580	6.071	6.052	6.034
7.226	7.253	7.238	6.678	6.658	6.637

Tabel 8 Data hubungan kurvatur (rad/km) dan momen (kNm) akibat varisi dimensi dan posisi tulangan lentur bentang 10 meter.

BU1		BU2		BU3	
Kurvatur	Momen	Kurvatur	Momen	Kurvatur	Momen
-0.026	0.121	-0.022	0.095	-0.024	0.109
0.074	96.810	0.078	89.761	0.076	93.211
0.174	193.479	0.178	179.413	0.176	186.299
0.274	289.996	0.278	268.932	0.276	279.245
0.374	386.251	0.378	358.211	0.376	371.941
0.474	482.142	0.478	447.161	0.476	464.292
0.574	577.582	0.578	535.705	0.576	556.217
0.674	672.419	0.678	623.691	0.676	647.564
0.774	766.612	0.778	711.091	0.776	738.298
0.874	860.090	0.878	797.840	0.876	828.351
0.974	952.652	0.978	883.742	0.976	917.526
1.074	1044.336	1.078	968.842	1.076	1005.865
1.181	1141.092	1.186	1059.647	1.184	1099.715
1.300	1237.125	1.305	1151.211	1.302	1193.281
1.430	1331.707	1.435	1241.426	1.432	1285.862
1.573	1420.195	1.579	1329.326	1.575	1376.053
1.730	1495.879	1.736	1407.097	1.733	1451.102
1.903	1557.264	1.910	1475.883	1.906	1516.065
2.093	1618.904	2.101	1534.982	2.097	1576.391
2.302	1680.905	2.311	1594.460	2.306	1637.256
2.533	1742.765	2.542	1654.048	2.537	1697.987
2.786	1802.991	2.797	1712.352	2.791	1757.223
3.064	1857.093	3.076	1765.794	3.070	1811.092
3.371	1898.432	3.384	1808.012	3.377	1852.968
4.079	1900.887	4.094	1821.036	4.086	1861.145
4.487	1830.525	4.504	1762.307	4.495	1796.870
4.935	1694.388	4.954	1641.841	4.944	1668.685
5.429	1501.005	5.450	1463.884	5.438	1482.849
5.972	1280.620	5.995	1251.364	5.982	1266.479
6.569	1072.929	6.594	1049.738	6.580	1061.693
7.226	884.906	7.253	865.171	7.238	875.435

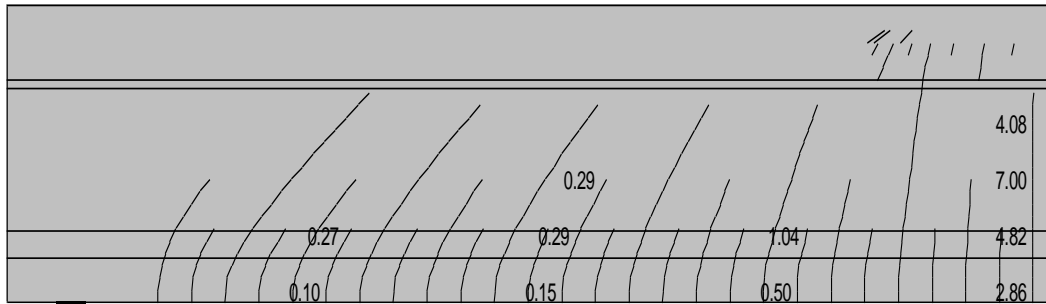
Tabel 8 Data hubungan kurvatur (rad/km) dan momen (kNm) akibat varisi dimensi dan posisi tulangan lentur bentang 10 meter.

BU4		BU5		BU6	
Kurvatur	Momen	Kurvatur	Momen	Kurvatur	Momen
-0.030	0.166	-0.028	0.158	-0.026	0.150
0.064	107.104	0.065	108.412	0.067	109.712
0.157	214.030	0.158	216.647	0.159	219.248
0.251	320.775	0.251	324.695	0.252	328.591
0.344	427.226	0.344	432.437	0.344	437.616
0.438	533.247	0.437	539.739	0.437	546.190
0.531	638.736	0.530	646.497	0.530	654.210
0.625	743.533	0.623	752.544	0.622	761.498
0.718	847.572	0.716	857.816	0.715	867.996
0.811	950.769	0.809	962.228	0.807	973.618
0.905	1052.911	0.903	1065.560	0.900	1078.132
0.998	1154.024	0.996	1167.842	0.993	1181.577
1.092	1252.875	1.089	1267.754	1.085	1282.526
1.201	1355.544	1.197	1371.564	1.194	1387.530
1.321	1452.394	1.317	1469.392	1.313	1486.351
1.453	1542.826	1.449	1560.719	1.444	1578.048
1.599	1619.423	1.594	1638.015	1.589	1656.492
1.758	1687.505	1.753	1706.635	1.748	1725.699
1.934	1752.976	1.929	1773.135	1.923	1793.193
2.128	1819.156	2.121	1840.323	2.115	1861.370
2.341	1884.929	2.333	1907.049	2.326	1929.069
2.575	1948.504	2.567	1971.508	2.559	1994.413
2.832	2005.496	2.824	2029.153	2.815	2052.709
3.115	2046.199	3.106	2070.127	3.096	2093.920
3.769	2041.992	3.758	2063.150	3.747	2084.816
4.146	1978.332	4.134	1995.608	4.121	2012.833
4.561	1862.591	4.547	1874.570	4.533	1886.357
5.017	1694.625	5.002	1700.395	4.987	1708.896
5.519	1491.233	5.502	1489.663	5.485	1489.067
6.071	1263.534	6.052	1256.877	6.034	1250.004
6.678	1049.924	6.658	1040.105	6.637	1030.264

LAMPIRAN II

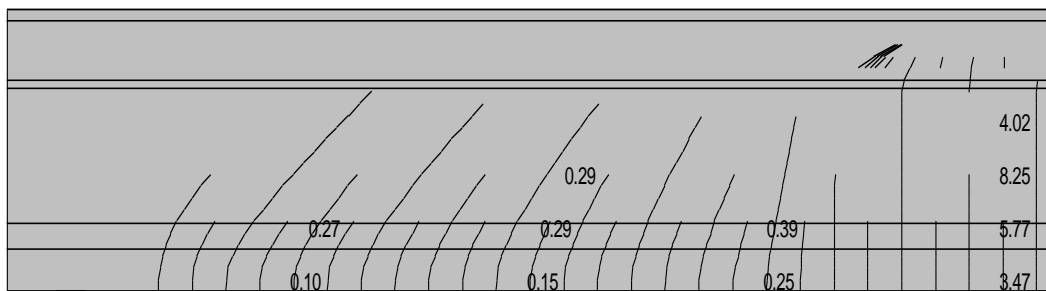
GAMBAR POLA RETAK BALOK BETON PRACETAK.

Member Crack Diagram



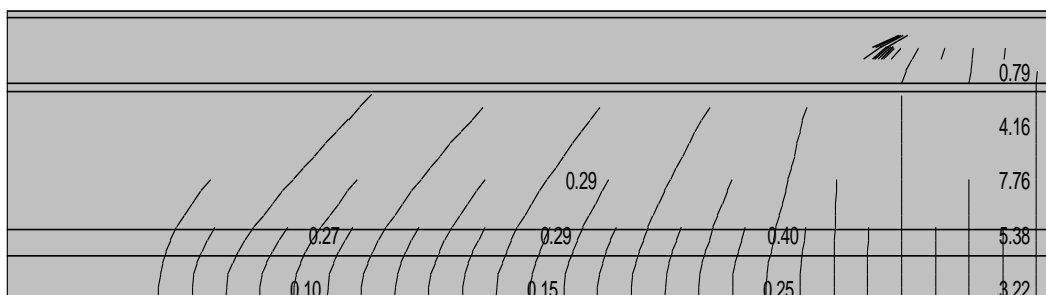
Gambar 1 Pola retak balok beton pracetak BU1

Member Crack Diagram



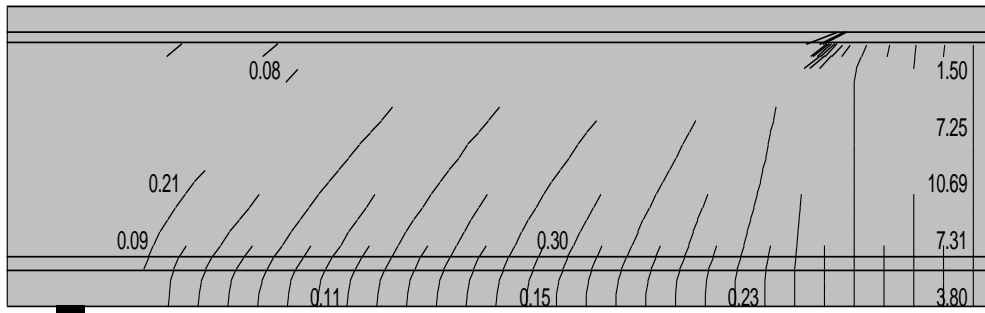
Gambar 2 Pola retak balok beton pracetak BU2

Member Crack Diagram



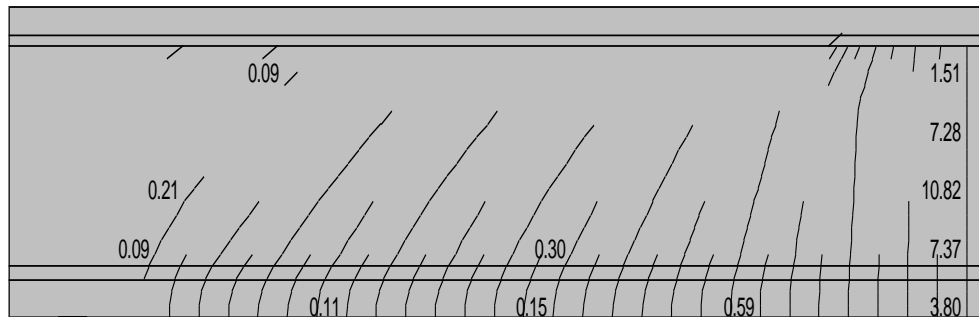
Gambar 3 Pola retak balok beton pracetak BU3

Member Crack Diagram



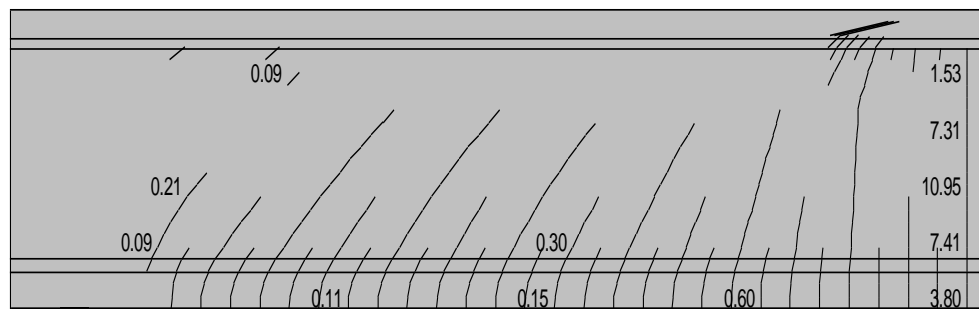
Gambar 4 Pola retak balok beton pracetak BU4

Member Crack Diagram



Gambar 5 Pola retak balok beton pracetak BU5

Member Crack Diagram



Gambar 6 Pola retak balok beton pracetak BU6