



## APPENDIX 2: ANOVA INPUT DATA AND DETAILED RESULTS



The following appendix contains information relating to the ANOVA tests described in Section 5 Statistical analysis of the influence of different parameters on the adiabatic temperatures generated in I-girder bridge fires .

The first part of the appendix details the input data used for the ANOVA tests, taking into account the statistical sample to be analysed (all models or divided into groups depending on fire position), and the discretisation of the results obtained from the FDS analyses for a specific set of points: maximum or relative position adiabatic temperatures ( $X/L=0$ ,  $X/L=1$ , ...,  $X/L=0.9$ ,  $X/L=1$ ).

The second part of the appendix includes the tabular results of the relative position adiabatic temperature ANOVAs, in order to complement the summary tables provided in the main report.



## INPUT DATA

### MAXIMUM TEMPERATURES - ALL

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Max. Temp. Bot. Flange	Max. Temp. Web
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	1158.0 °C	1228.0 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	1088.4 °C	1118.8 °C
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	926.8 °C	860.5 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	778.3 °C	650.6 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	1147.7 °C	1228.2 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	1082.9 °C	1118.4 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	902.5 °C	833.1 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	765.6 °C	634.2 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	1168.4 °C	1232.1 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	1096.2 °C	1118.0 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	904.9 °C	821.8 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	791.6 °C	641.1 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	1313.9 °C	1296.3 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	1218.9 °C	1164.9 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	990.2 °C	866.2 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	854.7 °C	687.1 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	1035.9 °C	1123.1 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	1001.0 °C	1074.9 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	1019.6 °C	1103.3 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	911.0 °C	984.1 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	1061.5 °C	1143.9 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	990.5 °C	1073.9 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	1007.8 °C	1101.9 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	917.8 °C	998.3 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	1100.9 °C	1162.2 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	1028.0 °C	1106.6 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	788.7 °C	860.8 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	725.7 °C	777.0 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	1092.5 °C	1165.8 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	1013.8 °C	1105.8 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	767.0 °C	817.1 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	764.5 °C	826.4 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Max. Temp. Bot. Flange	Max. Temp. Web
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m <sup>2</sup>	1137.6 °C	1216.9 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m <sup>2</sup>	1083.3 °C	1096.4 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m <sup>2</sup>	836.0 °C	779.1 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m <sup>2</sup>	664.8 °C	574.0 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m <sup>2</sup>	1145.3 °C	1224.8 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m <sup>2</sup>	1074.5 °C	1097.2 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m <sup>2</sup>	841.6 °C	788.4 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m <sup>2</sup>	680.5 °C	592.4 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m <sup>2</sup>	1153.2 °C	1240.3 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m <sup>2</sup>	1097.1 °C	1119.8 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m <sup>2</sup>	844.6 °C	795.3 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m <sup>2</sup>	672.3 °C	579.5 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m <sup>2</sup>	1156.6 °C	1236.8 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m <sup>2</sup>	1092.0 °C	1109.6 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m <sup>2</sup>	872.0 °C	814.7 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m <sup>2</sup>	678.6 °C	592.8 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m <sup>2</sup>	1148.6 °C	1243.3 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m <sup>2</sup>	1059.3 °C	1096.8 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m <sup>2</sup>	828.1 °C	779.5 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m <sup>2</sup>	636.8 °C	550.4 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m <sup>2</sup>	1052.4 °C	1164.3 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m <sup>2</sup>	924.6 °C	1002.2 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m <sup>2</sup>	806.4 °C	775.2 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m <sup>2</sup>	605.5 °C	544.7 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m <sup>2</sup>	1165.5 °C	1251.5 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m <sup>2</sup>	1080.8 °C	1106.5 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m <sup>2</sup>	821.0 °C	773.3 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m <sup>2</sup>	638.5 °C	562.2 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m <sup>2</sup>	1138.2 °C	1253.6 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m <sup>2</sup>	1054.8 °C	1108.6 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m <sup>2</sup>	832.7 °C	807.3 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m <sup>2</sup>	633.9 °C	574.8 °C

## MAXIMUM TEMPERATURES – FIRE ADJACENT TO ABUTMENT/PIERS

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Max. Temp. Bot. Flange	Max. Temp. Web
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m <sup>2</sup>	1158.0 °C	1228.0 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m <sup>2</sup>	1088.4 °C	1118.8 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m <sup>2</sup>	1147.7 °C	1228.2 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m <sup>2</sup>	1082.9 °C	1118.4 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m <sup>2</sup>	1168.4 °C	1232.1 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m <sup>2</sup>	1096.2 °C	1118.0 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m <sup>2</sup>	1313.9 °C	1296.3 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m <sup>2</sup>	1218.9 °C	1164.9 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m <sup>2</sup>	1035.9 °C	1123.1 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m <sup>2</sup>	1001.0 °C	1074.9 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m <sup>2</sup>	1061.5 °C	1143.9 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m <sup>2</sup>	990.5 °C	1073.9 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m <sup>2</sup>	1100.9 °C	1162.2 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m <sup>2</sup>	1028.0 °C	1106.6 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m <sup>2</sup>	1092.5 °C	1165.8 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m <sup>2</sup>	1013.8 °C	1105.8 °C
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m <sup>2</sup>	1137.6 °C	1216.9 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m <sup>2</sup>	1083.3 °C	1096.4 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m <sup>2</sup>	1145.3 °C	1224.8 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m <sup>2</sup>	1074.5 °C	1097.2 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m <sup>2</sup>	1153.2 °C	1240.3 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m <sup>2</sup>	1097.1 °C	1119.8 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m <sup>2</sup>	1156.6 °C	1236.8 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m <sup>2</sup>	1092.0 °C	1109.6 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m <sup>2</sup>	1148.6 °C	1243.3 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m <sup>2</sup>	1059.3 °C	1096.8 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m <sup>2</sup>	1052.4 °C	1164.3 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m <sup>2</sup>	924.6 °C	1002.2 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m <sup>2</sup>	1165.5 °C	1251.5 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m <sup>2</sup>	1080.8 °C	1106.5 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m <sup>2</sup>	1138.2 °C	1253.6 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m <sup>2</sup>	1054.8 °C	1108.6 °C

## MAXIMUM TEMPERATURES – FIRE LOCATED MID-SPAN

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Max. Temp. Bot. Flange	Max. Temp. Web
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m <sup>2</sup>	926.8 °C	860.5 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m <sup>2</sup>	778.3 °C	650.6 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m <sup>2</sup>	902.5 °C	833.1 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m <sup>2</sup>	765.6 °C	634.2 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m <sup>2</sup>	904.9 °C	821.8 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m <sup>2</sup>	791.6 °C	641.1 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m <sup>2</sup>	990.2 °C	866.2 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m <sup>2</sup>	854.7 °C	687.1 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m <sup>2</sup>	1019.6 °C	1103.3 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m <sup>2</sup>	911.0 °C	984.1 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m <sup>2</sup>	1007.8 °C	1101.9 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m <sup>2</sup>	917.8 °C	998.3 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m <sup>2</sup>	788.7 °C	860.8 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m <sup>2</sup>	725.7 °C	777.0 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m <sup>2</sup>	767.0 °C	817.1 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m <sup>2</sup>	764.5 °C	826.4 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m <sup>2</sup>	836.0 °C	779.1 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m <sup>2</sup>	664.8 °C	574.0 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m <sup>2</sup>	841.6 °C	788.4 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m <sup>2</sup>	680.5 °C	592.4 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m <sup>2</sup>	844.6 °C	795.3 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m <sup>2</sup>	672.3 °C	579.5 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m <sup>2</sup>	872.0 °C	814.7 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m <sup>2</sup>	678.6 °C	592.8 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m <sup>2</sup>	828.1 °C	779.5 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m <sup>2</sup>	636.8 °C	550.4 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m <sup>2</sup>	806.4 °C	775.2 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m <sup>2</sup>	605.5 °C	544.7 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m <sup>2</sup>	821.0 °C	773.3 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m <sup>2</sup>	638.5 °C	562.2 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m <sup>2</sup>	832.7 °C	807.3 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m <sup>2</sup>	633.9 °C	574.8 °C



## RELATIVE POSITION TEMPERATURES – ALL

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Flange X/L=0	Flange X/L=0.1	Flange X/L=0.2	Flange X/L=0.3	Flange X/L=0.4	Flange X/L=0.5
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	289.6 °C	320.6 °C	305.2 °C	291.7 °C	283.6 °C	297.1 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	236.3 °C	260.0 °C	249.1 °C	240.0 °C	236.3 °C	241.8 °C
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	491.8 °C	547.2 °C	515.7 °C	540.6 °C	727.9 °C	1123.9 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	378.3 °C	424.1 °C	418.3 °C	470.6 °C	648.6 °C	1053.4 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	189.0 °C	206.6 °C	201.8 °C	204.0 °C	224.5 °C	264.7 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	147.4 °C	158.9 °C	156.4 °C	163.0 °C	184.2 °C	218.5 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	297.5 °C	367.7 °C	398.6 °C	479.8 °C	629.4 °C	826.4 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	228.5 °C	284.2 °C	318.3 °C	401.4 °C	497.0 °C	654.8 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	371.6 °C	424.4 °C	416.7 °C	404.8 °C	395.1 °C	403.3 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	292.9 °C	331.8 °C	324.6 °C	316.7 °C	317.1 °C	335.0 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	576.2 °C	638.8 °C	624.3 °C	643.9 °C	844.6 °C	1145.3 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	454.9 °C	518.9 °C	525.4 °C	570.5 °C	740.5 °C	1074.5 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	232.1 °C	274.0 °C	284.7 °C	300.3 °C	320.2 °C	350.4 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	179.4 °C	210.8 °C	223.8 °C	240.2 °C	260.8 °C	291.9 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	354.1 °C	425.8 °C	474.3 °C	542.7 °C	703.8 °C	841.4 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	280.6 °C	349.2 °C	402.6 °C	450.9 °C	568.0 °C	678.2 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	225.1 °C	232.2 °C	219.2 °C	225.3 °C	240.6 °C	277.3 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	186.9 °C	193.6 °C	181.8 °C	179.1 °C	192.6 °C	215.3 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	446.3 °C	467.4 °C	448.5 °C	528.4 °C	734.6 °C	1133.6 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	334.9 °C	353.9 °C	357.1 °C	448.1 °C	645.7 °C	1074.4 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	165.4 °C	170.2 °C	167.8 °C	179.9 °C	212.4 °C	255.1 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	131.2 °C	136.0 °C	135.8 °C	146.5 °C	175.3 °C	212.7 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	284.4 °C	345.6 °C	380.6 °C	474.5 °C	622.9 °C	836.8 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	224.5 °C	277.6 °C	314.8 °C	402.7 °C	508.8 °C	667.6 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	469.5 °C	368.3 °C	350.7 °C	336.2 °C	344.0 °C	374.4 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	379.4 °C	288.6 °C	272.2 °C	262.3 °C	270.4 °C	306.8 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	782.1 °C	598.1 °C	575.3 °C	631.4 °C	857.4 °C	1156.4 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	621.9 °C	473.1 °C	486.0 °C	555.2 °C	755.8 °C	1092.0 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	304.8 °C	248.2 °C	259.1 °C	278.1 °C	303.6 °C	340.7 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	243.9 °C	202.6 °C	214.4 °C	232.3 °C	254.2 °C	287.5 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	495.0 °C	432.6 °C	472.9 °C	541.2 °C	712.1 °C	872.0 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	384.3 °C	350.9 °C	401.0 °C	451.4 °C	567.3 °C	678.0 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Flange X/L=0	Flange X/L=0.1	Flange X/L=0.2	Flange X/L=0.3	Flange X/L=0.4	Flange X/L=0.5
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m2	624.6 °C	692.3 °C	717.5 °C	728.2 °C	705.3 °C	663.3 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m2	564.9 °C	608.7 °C	585.9 °C	581.8 °C	559.8 °C	531.9 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m2	726.8 °C	744.5 °C	746.4 °C	732.8 °C	751.9 °C	1148.6 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m2	579.9 °C	581.8 °C	581.5 °C	586.9 °C	655.9 °C	1055.5 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m2	628.4 °C	606.1 °C	583.7 °C	573.2 °C	561.7 °C	567.8 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m2	440.4 °C	422.7 °C	402.8 °C	397.3 °C	399.1 °C	405.4 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m2	429.9 °C	428.7 °C	432.5 °C	485.7 °C	611.8 °C	826.1 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m2	310.9 °C	321.5 °C	335.5 °C	398.0 °C	477.8 °C	636.8 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m2	740.6 °C	829.8 °C	855.5 °C	880.7 °C	893.8 °C	894.1 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m2	716.3 °C	763.4 °C	755.6 °C	751.8 °C	741.8 °C	722.6 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m2	713.8 °C	825.5 °C	787.3 °C	787.0 °C	873.7 °C	1050.6 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m2	605.9 °C	696.2 °C	669.8 °C	669.6 °C	739.1 °C	924.6 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m2	764.3 °C	766.0 °C	734.9 °C	736.2 °C	733.2 °C	724.2 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m2	590.0 °C	574.1 °C	546.8 °C	546.2 °C	553.6 °C	558.5 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m2	428.5 °C	504.1 °C	504.4 °C	552.1 °C	684.8 °C	806.2 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m2	315.6 °C	385.2 °C	406.1 °C	443.1 °C	534.5 °C	604.5 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m2	647.8 °C	724.5 °C	743.1 °C	715.9 °C	662.9 °C	631.0 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m2	591.6 °C	628.7 °C	589.5 °C	551.8 °C	500.6 °C	481.3 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m2	703.0 °C	693.0 °C	677.1 °C	632.2 °C	716.4 °C	1165.5 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m2	545.8 °C	527.1 °C	521.3 °C	516.8 °C	624.9 °C	1078.7 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m2	353.1 °C	340.1 °C	331.8 °C	318.9 °C	317.9 °C	345.1 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m2	307.5 °C	278.0 °C	263.3 °C	260.7 °C	268.9 °C	293.2 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m2	389.3 °C	381.8 °C	401.3 °C	471.2 °C	605.5 °C	819.6 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m2	303.8 °C	308.2 °C	328.8 °C	399.8 °C	483.8 °C	636.4 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m2	779.7 °C	860.8 °C	891.9 °C	898.0 °C	877.3 °C	838.6 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m2	754.4 °C	788.4 °C	786.1 °C	760.9 °C	709.3 °C	656.8 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m2	756.1 °C	845.4 °C	797.1 °C	772.1 °C	894.8 °C	1138.2 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m2	601.8 °C	670.4 °C	635.2 °C	638.9 °C	770.2 °C	1053.1 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m2	425.4 °C	421.4 °C	401.2 °C	400.3 °C	406.6 °C	424.9 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m2	419.0 °C	403.1 °C	383.9 °C	385.3 °C	388.8 °C	402.6 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m2	381.0 °C	431.4 °C	458.0 °C	553.0 °C	706.9 °C	832.7 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m2	294.4 °C	340.1 °C	369.6 °C	425.3 °C	534.9 °C	633.0 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Flange X/L=0.6	Flange X/L=0.7	Flange X/L=0.8	Flange X/L=0.9	Flange X/L=1
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	334.6 °C	414.0 °C	530.8 °C	830.4 °C	1158.0 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	272.3 °C	347.6 °C	462.7 °C	717.3 °C	1088.4 °C
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	647.7 °C	516.8 °C	507.6 °C	536.7 °C	470.7 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	580.4 °C	437.6 °C	398.6 °C	413.0 °C	362.9 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	307.7 °C	379.9 °C	469.7 °C	673.6 °C	926.8 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	255.6 °C	324.2 °C	401.2 °C	534.2 °C	778.3 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	558.4 °C	450.6 °C	376.8 °C	344.6 °C	283.1 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	460.8 °C	379.2 °C	308.9 °C	278.9 °C	226.2 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	453.3 °C	532.7 °C	685.3 °C	960.3 °C	1147.7 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	382.1 °C	463.6 °C	606.0 °C	851.0 °C	1082.9 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	803.9 °C	640.3 °C	623.5 °C	633.1 °C	574.8 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	706.1 °C	550.8 °C	516.8 °C	506.5 °C	445.9 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	409.0 °C	470.9 °C	582.2 °C	752.4 °C	902.5 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	349.0 °C	401.9 °C	474.4 °C	597.9 °C	765.6 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	666.5 °C	527.6 °C	467.3 °C	426.6 °C	352.9 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	536.7 °C	443.2 °C	393.8 °C	347.5 °C	279.6 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	327.6 °C	408.5 °C	528.1 °C	826.7 °C	1168.4 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	258.6 °C	345.9 °C	462.5 °C	724.3 °C	1096.2 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	660.8 °C	505.8 °C	427.4 °C	452.9 °C	426.9 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	579.0 °C	423.3 °C	351.1 °C	357.4 °C	330.4 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	296.3 °C	370.8 °C	456.5 °C	650.6 °C	904.9 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	250.0 °C	320.8 °C	397.1 °C	526.2 °C	791.6 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	567.9 °C	450.3 °C	373.3 °C	337.9 °C	272.7 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	464.7 °C	378.3 °C	303.8 °C	268.6 °C	211.0 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	435.8 °C	530.8 °C	700.1 °C	993.8 °C	1313.9 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	375.3 °C	465.3 °C	614.3 °C	860.4 °C	1218.9 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	809.8 °C	617.5 °C	573.5 °C	596.3 °C	766.0 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	711.7 °C	534.8 °C	474.5 °C	467.6 °C	608.1 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	402.3 °C	464.9 °C	577.2 °C	760.2 °C	990.2 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	346.1 °C	399.5 °C	475.1 °C	608.1 °C	854.7 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	694.1 °C	533.0 °C	468.3 °C	432.8 °C	493.3 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	547.1 °C	446.7 °C	394.9 °C	353.1 °C	387.0 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Flange X/L=0.6	Flange X/L=0.7	Flange X/L=0.8	Flange X/L=0.9	Flange X/L=1
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m2	629.5 °C	633.5 °C	686.0 °C	786.0 °C	1035.9 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m2	510.8 °C	525.7 °C	593.5 °C	722.0 °C	1001.0 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m2	725.4 °C	726.7 °C	740.2 °C	742.4 °C	638.6 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m2	635.7 °C	583.4 °C	577.4 °C	578.8 °C	513.4 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m2	595.7 °C	636.2 °C	700.9 °C	845.3 °C	1019.6 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m2	431.5 °C	490.0 °C	562.7 °C	709.0 °C	911.0 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m2	582.2 °C	470.5 °C	427.8 °C	423.1 °C	360.1 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m2	468.0 °C	393.4 °C	340.4 °C	327.6 °C	277.1 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m2	878.6 °C	846.2 °C	801.2 °C	926.9 °C	1061.5 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m2	697.2 °C	672.4 °C	684.9 °C	786.3 °C	990.5 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m2	859.7 °C	799.0 °C	803.0 °C	835.1 °C	811.6 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m2	719.9 °C	657.9 °C	655.7 °C	690.8 °C	674.7 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m2	710.9 °C	713.6 °C	775.6 °C	906.0 °C	1007.8 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m2	565.4 °C	591.2 °C	665.0 °C	797.2 °C	917.8 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m2	671.6 °C	548.3 °C	504.6 °C	504.3 °C	494.0 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m2	513.2 °C	435.9 °C	400.9 °C	383.8 °C	368.3 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m2	653.1 °C	718.6 °C	783.4 °C	900.8 °C	1100.9 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m2	491.1 °C	560.7 °C	663.3 °C	779.2 °C	1028.0 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m2	688.7 °C	637.3 °C	677.9 °C	690.2 °C	625.8 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m2	610.6 °C	521.9 °C	522.4 °C	534.9 °C	499.1 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m2	390.5 °C	460.7 °C	541.3 °C	674.7 °C	788.7 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m2	331.7 °C	394.7 °C	473.1 °C	591.9 °C	725.7 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m2	594.2 °C	465.2 °C	400.5 °C	387.2 °C	339.9 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m2	468.3 °C	390.6 °C	324.5 °C	304.4 °C	264.8 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m2	807.2 °C	812.5 °C	839.1 °C	983.9 °C	1092.5 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m2	640.6 °C	677.5 °C	724.7 °C	850.6 °C	1013.8 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m2	863.9 °C	769.1 °C	791.5 °C	845.8 °C	849.4 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m2	737.0 °C	631.3 °C	628.3 °C	667.6 °C	676.9 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m2	467.9 °C	524.0 °C	612.6 °C	703.5 °C	767.0 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m2	438.3 °C	488.5 °C	572.9 °C	675.7 °C	764.5 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m2	724.5 °C	566.8 °C	467.4 °C	452.5 °C	451.3 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m2	566.3 °C	455.0 °C	387.3 °C	357.7 °C	350.4 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Web X/L=0	Web X/L=0.1	Web X/L=0.2	Web X/L=0.3	Web X/L=0.4	Web X/L=0.5
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	447.7 °C	466.4 °C	484.2 °C	508.0 °C	539.2 °C	582.9 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	362.6 °C	376.8 °C	390.7 °C	408.9 °C	432.4 °C	464.7 °C
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	725.2 °C	768.7 °C	828.1 °C	924.1 °C	1081.7 °C	1214.6 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	584.6 °C	625.2 °C	677.5 °C	763.2 °C	925.6 °C	1088.0 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	287.8 °C	296.3 °C	306.0 °C	320.6 °C	341.3 °C	369.3 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	224.4 °C	230.4 °C	238.1 °C	249.4 °C	265.2 °C	284.9 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	433.5 °C	461.7 °C	504.5 °C	575.0 °C	688.2 °C	775.1 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	322.9 °C	341.7 °C	372.0 °C	422.1 °C	500.9 °C	570.1 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	566.8 °C	588.9 °C	609.1 °C	633.4 °C	665.5 °C	703.5 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	450.9 °C	467.2 °C	482.3 °C	500.5 °C	524.1 °C	552.9 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	835.2 °C	879.5 °C	940.7 °C	1021.5 °C	1141.6 °C	1224.8 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	688.6 °C	728.2 °C	783.4 °C	861.4 °C	992.3 °C	1096.9 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	347.8 °C	359.9 °C	372.0 °C	387.6 °C	407.6 °C	432.5 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	269.6 °C	278.4 °C	288.0 °C	299.4 °C	313.5 °C	331.2 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	499.0 °C	525.9 °C	575.0 °C	640.0 °C	735.4 °C	788.0 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	383.3 °C	402.0 °C	436.8 °C	480.6 °C	550.4 °C	591.7 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	384.9 °C	405.5 °C	428.4 °C	460.2 °C	503.5 °C	559.2 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	318.7 °C	334.7 °C	351.7 °C	374.9 °C	405.9 °C	444.7 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	703.4 °C	761.2 °C	835.4 °C	941.9 °C	1104.9 °C	1234.4 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	560.0 °C	608.5 °C	671.4 °C	768.4 °C	939.6 °C	1115.1 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	260.2 °C	269.9 °C	282.4 °C	300.2 °C	323.2 °C	350.5 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	209.6 °C	216.1 °C	225.1 °C	239.0 °C	257.3 °C	278.3 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	418.7 °C	452.1 °C	497.9 °C	573.4 °C	696.5 °C	792.4 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	321.2 °C	344.6 °C	377.3 °C	429.5 °C	509.0 °C	576.7 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	536.8 °C	553.8 °C	579.2 °C	611.8 °C	653.2 °C	699.9 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	430.4 °C	440.0 °C	457.5 °C	481.3 °C	511.3 °C	545.6 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	846.3 °C	879.4 °C	944.4 °C	1031.3 °C	1157.2 °C	1236.8 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	679.7 °C	711.2 °C	773.5 °C	864.1 °C	1002.6 °C	1109.6 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	336.6 °C	343.2 °C	356.8 °C	375.2 °C	398.6 °C	426.6 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	266.8 °C	271.6 °C	281.2 °C	293.4 °C	308.7 °C	327.8 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	504.7 °C	529.8 °C	579.8 °C	649.5 °C	751.2 °C	814.7 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	383.5 °C	399.7 °C	433.3 °C	477.5 °C	546.2 °C	592.8 °C



Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Web X/L=0	Web X/L=0.1	Web X/L=0.2	Web X/L=0.3	Web X/L=0.4	Web X/L=0.5
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m <sup>2</sup>	678.8 °C	791.3 °C	823.8 °C	849.1 °C	870.1 °C	896.9 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m <sup>2</sup>	607.0 °C	696.3 °C	711.4 °C	728.6 °C	750.3 °C	781.5 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m <sup>2</sup>	785.6 °C	877.5 °C	926.7 °C	993.4 °C	1104.2 °C	1243.3 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m <sup>2</sup>	636.4 °C	704.2 °C	743.6 °C	804.1 °C	926.2 °C	1096.1 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m <sup>2</sup>	660.8 °C	701.8 °C	714.5 °C	735.3 °C	761.8 °C	800.3 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m <sup>2</sup>	472.6 °C	510.5 °C	522.8 °C	543.0 °C	569.8 °C	607.9 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m <sup>2</sup>	450.5 °C	500.4 °C	528.2 °C	585.7 °C	690.4 °C	777.5 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m <sup>2</sup>	329.9 °C	364.1 °C	380.9 °C	416.5 °C	476.2 °C	550.4 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m <sup>2</sup>	804.0 °C	932.1 °C	974.4 °C	1007.6 °C	1037.0 °C	1059.6 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m <sup>2</sup>	769.0 °C	849.1 °C	866.4 °C	882.5 °C	899.7 °C	918.6 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m <sup>2</sup>	833.9 °C	947.7 °C	986.2 °C	1034.1 °C	1109.5 °C	1164.3 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m <sup>2</sup>	715.1 °C	806.8 °C	837.2 °C	875.3 °C	941.3 °C	1002.1 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m <sup>2</sup>	791.8 °C	831.1 °C	839.0 °C	854.0 °C	875.3 °C	904.5 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m <sup>2</sup>	623.2 °C	660.2 °C	670.1 °C	688.6 °C	713.7 °C	746.2 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m <sup>2</sup>	494.9 °C	566.3 °C	597.4 °C	646.4 °C	725.8 °C	775.1 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m <sup>2</sup>	360.1 °C	412.4 °C	434.3 °C	464.6 °C	514.2 °C	544.2 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m <sup>2</sup>	713.3 °C	835.3 °C	872.3 °C	897.4 °C	922.9 °C	962.3 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m <sup>2</sup>	637.8 °C	723.7 °C	737.2 °C	755.3 °C	785.0 °C	831.7 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m <sup>2</sup>	766.0 °C	840.9 °C	883.7 °C	957.6 °C	1093.2 °C	1251.5 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m <sup>2</sup>	610.7 °C	666.6 °C	706.6 °C	776.6 °C	922.3 °C	1106.5 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m <sup>2</sup>	384.5 °C	422.5 °C	439.5 °C	463.2 °C	496.8 °C	540.9 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m <sup>2</sup>	337.8 °C	364.6 °C	376.3 °C	398.2 °C	426.1 °C	461.9 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m <sup>2</sup>	422.9 °C	468.0 °C	505.1 °C	573.7 °C	681.2 °C	773.0 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m <sup>2</sup>	320.6 °C	356.7 °C	380.7 °C	427.3 °C	493.7 °C	561.2 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m <sup>2</sup>	856.7 °C	971.2 °C	1009.3 °C	1037.7 °C	1062.3 °C	1083.0 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m <sup>2</sup>	813.9 °C	887.0 °C	903.7 °C	917.5 °C	933.7 °C	954.9 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m <sup>2</sup>	879.0 °C	987.4 °C	1029.6 °C	1088.5 °C	1184.3 °C	1253.6 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m <sup>2</sup>	718.5 °C	802.8 °C	843.9 °C	907.8 °C	1018.6 °C	1108.3 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m <sup>2</sup>	460.4 °C	501.5 °C	517.3 °C	537.0 °C	560.9 °C	589.7 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m <sup>2</sup>	459.6 °C	492.7 °C	504.5 °C	522.7 °C	547.1 °C	576.6 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m <sup>2</sup>	430.5 °C	508.0 °C	560.8 °C	637.7 °C	740.3 °C	807.3 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m <sup>2</sup>	324.0 °C	377.3 °C	410.7 °C	457.4 °C	522.9 °C	574.2 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Web X/L=0.6	Web X/L=0.7	Web X/L=0.8	Web X/L=0.9	Web X/L=1
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	643.6 °C	726.0 °C	827.7 °C	1037.1 °C	1224.9 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	510.3 °C	571.2 °C	651.4 °C	852.3 °C	1118.8 °C
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	1037.2 °C	893.3 °C	805.3 °C	749.8 °C	704.5 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	864.9 °C	725.1 °C	648.7 °C	601.3 °C	562.1 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	405.0 °C	456.9 °C	521.3 °C	674.7 °C	860.5 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	308.3 °C	344.8 °C	390.2 °C	494.7 °C	650.5 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	643.6 °C	540.5 °C	477.3 °C	439.7 °C	416.5 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	477.0 °C	412.8 °C	369.7 °C	343.9 °C	327.5 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	756.9 °C	830.7 °C	954.5 °C	1099.6 °C	1226.4 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	594.2 °C	655.7 °C	772.7 °C	936.5 °C	1118.4 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	1122.5 °C	1004.8 °C	925.8 °C	871.8 °C	833.0 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	966.7 °C	835.7 °C	759.4 °C	710.0 °C	676.9 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	469.5 °C	518.6 °C	609.6 °C	722.5 °C	832.8 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	358.3 °C	391.8 °C	452.1 °C	537.2 °C	633.1 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	716.1 °C	624.7 °C	563.3 °C	521.0 °C	494.6 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	530.6 °C	465.8 °C	425.1 °C	394.8 °C	375.6 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	627.8 °C	714.0 °C	819.7 °C	1040.7 °C	1229.0 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	493.3 °C	556.6 °C	639.5 °C	846.8 °C	1118.0 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	1044.9 °C	895.9 °C	795.7 °C	727.7 °C	674.8 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	892.7 °C	745.7 °C	658.3 °C	600.2 °C	551.0 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	384.0 °C	433.4 °C	496.3 °C	644.6 °C	821.8 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	301.8 °C	336.5 °C	379.4 °C	484.6 °C	641.1 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	665.8 °C	563.6 °C	495.9 °C	447.9 °C	414.0 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	480.5 °C	412.8 °C	366.7 °C	335.5 °C	314.1 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	762.0 °C	844.1 °C	982.8 °C	1146.3 °C	1296.3 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	592.3 °C	657.0 °C	777.4 °C	949.6 °C	1164.9 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	1137.1 °C	1018.5 °C	933.8 °C	876.7 °C	849.4 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	982.3 °C	848.0 °C	765.2 °C	713.8 °C	689.2 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	466.1 °C	516.5 °C	609.1 °C	731.0 °C	866.2 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	356.1 °C	391.2 °C	456.7 °C	553.6 °C	687.1 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	752.4 °C	652.4 °C	583.1 °C	538.5 °C	518.4 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	539.9 °C	474.1 °C	431.4 °C	402.4 °C	389.2 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Web X/L=0.6	Web X/L=0.7	Web X/L=0.8	Web X/L=0.9	Web X/L=1
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m2	937.0 °C	991.7 °C	1048.0 °C	1109.3 °C	1123.1 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m2	825.7 °C	887.7 °C	953.3 °C	1042.2 °C	1074.9 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m2	1087.9 °C	982.0 °C	922.3 °C	871.1 °C	753.9 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m2	908.9 °C	799.9 °C	745.5 °C	705.3 °C	617.3 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m2	853.7 °C	926.8 °C	1000.6 °C	1086.4 °C	1103.3 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m2	659.4 °C	731.9 °C	811.9 °C	933.6 °C	984.1 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m2	659.2 °C	567.2 °C	516.6 °C	487.7 °C	423.6 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m2	475.9 °C	418.0 °C	384.7 °C	366.9 °C	320.4 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m2	1081.7 °C	1101.4 °C	1124.3 °C	1143.9 °C	1143.9 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m2	943.6 °C	975.4 °C	1022.5 °C	1062.7 °C	1073.9 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m2	1102.7 °C	1034.7 °C	989.2 °C	954.7 °C	874.7 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m2	927.4 °C	862.7 °C	824.5 °C	797.4 °C	731.3 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m2	944.4 °C	994.6 °C	1057.2 °C	1098.2 °C	1101.9 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m2	789.0 °C	844.9 °C	922.9 °C	983.7 °C	998.3 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m2	716.7 °C	642.9 °C	596.8 °C	570.5 °C	523.8 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m2	503.6 °C	457.3 °C	430.5 °C	412.8 °C	378.2 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m2	1015.3 °C	1076.8 °C	1129.5 °C	1162.0 °C	1162.2 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m2	893.9 °C	963.3 °C	1026.4 °C	1094.6 °C	1106.6 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m2	1088.9 °C	958.4 °C	889.5 °C	839.1 °C	739.2 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m2	908.7 °C	776.9 °C	713.0 °C	671.5 °C	598.0 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m2	589.3 °C	649.8 °C	715.7 °C	818.7 °C	860.8 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m2	504.2 °C	558.3 °C	620.4 °C	724.6 °C	777.0 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m2	670.0 °C	569.2 °C	503.0 °C	463.8 °C	399.4 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m2	478.3 °C	417.7 °C	376.6 °C	352.4 °C	306.2 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m2	1109.8 °C	1137.3 °C	1160.1 °C	1162.7 °C	1165.8 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m2	987.5 °C	1026.6 °C	1073.9 °C	1104.7 °C	1105.8 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m2	1172.7 °C	1079.2 °C	1023.3 °C	986.9 °C	914.0 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m2	999.2 °C	892.7 °C	833.5 °C	798.9 °C	742.7 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m2	627.2 °C	675.3 °C	744.1 °C	799.0 °C	817.1 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m2	614.1 °C	662.5 °C	737.4 °C	802.7 °C	826.4 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m2	752.6 °C	658.6 °C	579.5 °C	531.5 °C	473.9 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m2	545.3 °C	482.5 °C	432.9 °C	399.0 °C	356.8 °C



## RELATIVE POSITION TEMPERATURES – FIRE ADJACENT TO ABUTMENT/PIERS

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Flange X/L=0	Flange X/L=0.1	Flange X/L=0.2	Flange X/L=0.3	Flange X/L=0.4	Flange X/L=0.5
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	289.6 °C	320.6 °C	305.2 °C	291.7 °C	283.6 °C	297.1 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	236.3 °C	260.0 °C	249.1 °C	240.0 °C	236.3 °C	241.8 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	189.0 °C	206.6 °C	201.8 °C	204.0 °C	224.5 °C	264.7 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	147.4 °C	158.9 °C	156.4 °C	163.0 °C	184.2 °C	218.5 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	371.6 °C	424.4 °C	416.7 °C	404.8 °C	395.1 °C	403.3 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	292.9 °C	331.8 °C	324.6 °C	316.7 °C	317.1 °C	335.0 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	232.1 °C	274.0 °C	284.7 °C	300.3 °C	320.2 °C	350.4 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	179.4 °C	210.8 °C	223.8 °C	240.2 °C	260.8 °C	291.9 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	225.1 °C	232.2 °C	219.2 °C	225.3 °C	240.6 °C	277.3 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	186.9 °C	193.6 °C	181.8 °C	179.1 °C	192.6 °C	215.3 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	165.4 °C	170.2 °C	167.8 °C	179.9 °C	212.4 °C	255.1 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	131.2 °C	136.0 °C	135.8 °C	146.5 °C	175.3 °C	212.7 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	469.5 °C	368.3 °C	350.7 °C	336.2 °C	344.0 °C	374.4 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	379.4 °C	288.6 °C	272.2 °C	262.3 °C	270.4 °C	306.8 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	304.8 °C	248.2 °C	259.1 °C	278.1 °C	303.6 °C	340.7 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	243.9 °C	202.6 °C	214.4 °C	232.3 °C	254.2 °C	287.5 °C
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m2	624.6 °C	692.3 °C	717.5 °C	728.2 °C	705.3 °C	663.3 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m2	564.9 °C	608.7 °C	585.9 °C	581.8 °C	559.8 °C	531.9 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m2	628.4 °C	606.1 °C	583.7 °C	573.2 °C	561.7 °C	567.8 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m2	440.4 °C	422.7 °C	402.8 °C	397.3 °C	399.1 °C	405.4 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m2	740.6 °C	829.8 °C	855.5 °C	880.7 °C	893.8 °C	894.1 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m2	716.3 °C	763.4 °C	755.6 °C	751.8 °C	741.8 °C	722.6 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m2	764.3 °C	766.0 °C	734.9 °C	736.2 °C	733.2 °C	724.2 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m2	590.0 °C	574.1 °C	546.8 °C	546.2 °C	553.6 °C	558.5 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m2	647.8 °C	724.5 °C	743.1 °C	715.9 °C	662.9 °C	631.0 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m2	591.6 °C	628.7 °C	589.5 °C	551.8 °C	500.6 °C	481.3 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m2	353.1 °C	340.1 °C	331.8 °C	318.9 °C	317.9 °C	345.1 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m2	307.5 °C	278.0 °C	263.3 °C	260.7 °C	268.9 °C	293.2 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m2	779.7 °C	860.8 °C	891.9 °C	898.0 °C	877.3 °C	838.6 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m2	754.4 °C	788.4 °C	786.1 °C	760.9 °C	709.3 °C	656.8 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m2	425.4 °C	421.4 °C	401.2 °C	400.3 °C	406.6 °C	424.9 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m2	419.0 °C	403.1 °C	383.9 °C	385.3 °C	388.8 °C	402.6 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Flange X/L=0.6	Flange X/L=0.7	Flange X/L=0.8	Flange X/L=0.9	Flange X/L=1
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	334.6 °C	414.0 °C	530.8 °C	830.4 °C	1158.0 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	272.3 °C	347.6 °C	462.7 °C	717.3 °C	1088.4 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	307.7 °C	379.9 °C	469.7 °C	673.6 °C	926.8 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	255.6 °C	324.2 °C	401.2 °C	534.2 °C	778.3 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	453.3 °C	532.7 °C	685.3 °C	960.3 °C	1147.7 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	382.1 °C	463.6 °C	606.0 °C	851.0 °C	1082.9 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	409.0 °C	470.9 °C	582.2 °C	752.4 °C	902.5 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	349.0 °C	401.9 °C	474.4 °C	597.9 °C	765.6 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	327.6 °C	408.5 °C	528.1 °C	826.7 °C	1168.4 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	258.6 °C	345.9 °C	462.5 °C	724.3 °C	1096.2 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	296.3 °C	370.8 °C	456.5 °C	650.6 °C	904.9 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	250.0 °C	320.8 °C	397.1 °C	526.2 °C	791.6 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	435.8 °C	530.8 °C	700.1 °C	993.8 °C	1313.9 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	375.3 °C	465.3 °C	614.3 °C	860.4 °C	1218.9 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	402.3 °C	464.9 °C	577.2 °C	760.2 °C	990.2 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	346.1 °C	399.5 °C	475.1 °C	608.1 °C	854.7 °C
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m2	629.5 °C	633.5 °C	686.0 °C	786.0 °C	1035.9 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m2	510.8 °C	525.7 °C	593.5 °C	722.0 °C	1001.0 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m2	595.7 °C	636.2 °C	700.9 °C	845.3 °C	1019.6 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m2	431.5 °C	490.0 °C	562.7 °C	709.0 °C	911.0 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m2	878.6 °C	846.2 °C	801.2 °C	926.9 °C	1061.5 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m2	697.2 °C	672.4 °C	684.9 °C	786.3 °C	990.5 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m2	710.9 °C	713.6 °C	775.6 °C	906.0 °C	1007.8 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m2	565.4 °C	591.2 °C	665.0 °C	797.2 °C	917.8 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m2	653.1 °C	718.6 °C	783.4 °C	900.8 °C	1100.9 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m2	491.1 °C	560.7 °C	663.3 °C	779.2 °C	1028.0 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m2	390.5 °C	460.7 °C	541.3 °C	674.7 °C	788.7 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m2	331.7 °C	394.7 °C	473.1 °C	591.9 °C	725.7 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m2	807.2 °C	812.5 °C	839.1 °C	983.9 °C	1092.5 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m2	640.6 °C	677.5 °C	724.7 °C	850.6 °C	1013.8 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m2	467.9 °C	524.0 °C	612.6 °C	703.5 °C	767.0 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m2	438.3 °C	488.5 °C	572.9 °C	675.7 °C	764.5 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Web X/L=0	Web X/L=0.1	Web X/L=0.2	Web X/L=0.3	Web X/L=0.4	Web X/L=0.5
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	447.7 °C	466.4 °C	484.2 °C	508.0 °C	539.2 °C	582.9 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	362.6 °C	376.8 °C	390.7 °C	408.9 °C	432.4 °C	464.7 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	287.8 °C	296.3 °C	306.0 °C	320.6 °C	341.3 °C	369.3 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	224.4 °C	230.4 °C	238.1 °C	249.4 °C	265.2 °C	284.9 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	566.8 °C	588.9 °C	609.1 °C	633.4 °C	665.5 °C	703.5 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	450.9 °C	467.2 °C	482.3 °C	500.5 °C	524.1 °C	552.9 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	347.8 °C	359.9 °C	372.0 °C	387.6 °C	407.6 °C	432.5 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	269.6 °C	278.4 °C	288.0 °C	299.4 °C	313.5 °C	331.2 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	384.9 °C	405.5 °C	428.4 °C	460.2 °C	503.5 °C	559.2 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	318.7 °C	334.7 °C	351.7 °C	374.9 °C	405.9 °C	444.7 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	260.2 °C	269.9 °C	282.4 °C	300.2 °C	323.2 °C	350.5 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	209.6 °C	216.1 °C	225.1 °C	239.0 °C	257.3 °C	278.3 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	536.8 °C	553.8 °C	579.2 °C	611.8 °C	653.2 °C	699.9 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	430.4 °C	440.0 °C	457.5 °C	481.3 °C	511.3 °C	545.6 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	336.6 °C	343.2 °C	356.8 °C	375.2 °C	398.6 °C	426.6 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	266.8 °C	271.6 °C	281.2 °C	293.4 °C	308.7 °C	327.8 °C
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m2	678.8 °C	791.3 °C	823.8 °C	849.1 °C	870.1 °C	896.9 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m2	607.0 °C	696.3 °C	711.4 °C	728.6 °C	750.3 °C	781.5 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m2	660.8 °C	701.8 °C	714.5 °C	735.3 °C	761.8 °C	800.3 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m2	472.6 °C	510.5 °C	522.8 °C	543.0 °C	569.8 °C	607.9 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m2	804.0 °C	932.1 °C	974.4 °C	1007.6 °C	1037.0 °C	1059.6 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m2	769.0 °C	849.1 °C	866.4 °C	882.5 °C	899.7 °C	918.6 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m2	791.8 °C	831.1 °C	839.0 °C	854.0 °C	875.3 °C	904.5 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m2	623.2 °C	660.2 °C	670.1 °C	688.6 °C	713.7 °C	746.2 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m2	713.3 °C	835.3 °C	872.3 °C	897.4 °C	922.9 °C	962.3 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m2	637.8 °C	723.7 °C	737.2 °C	755.3 °C	785.0 °C	831.7 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m2	384.5 °C	422.5 °C	439.5 °C	463.2 °C	496.8 °C	540.9 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m2	337.8 °C	364.6 °C	376.3 °C	398.2 °C	426.1 °C	461.9 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m2	856.7 °C	971.2 °C	1009.3 °C	1037.7 °C	1062.3 °C	1083.0 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m2	813.9 °C	887.0 °C	903.7 °C	917.5 °C	933.7 °C	954.9 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m2	460.4 °C	501.5 °C	517.3 °C	537.0 °C	560.9 °C	589.7 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m2	459.6 °C	492.7 °C	504.5 °C	522.7 °C	547.1 °C	576.6 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Web X/L=0.6	Web X/L=0.7	Web X/L=0.8	Web X/L=0.9	Web X/L=1
1	Abutment	Piers	23.4 m	24 m	5 m	2400 kW/m2	643.6 °C	726.0 °C	827.7 °C	1037.1 °C	1224.9 °C
2	Abutment	Piers	23.4 m	24 m	5 m	1800 kW/m2	510.3 °C	571.2 °C	651.4 °C	852.3 °C	1118.8 °C
5	Abutment	Piers	23.4 m	24 m	9 m	2400 kW/m2	405.0 °C	456.9 °C	521.3 °C	674.7 °C	860.5 °C
6	Abutment	Piers	23.4 m	24 m	9 m	1800 kW/m2	308.3 °C	344.8 °C	390.2 °C	494.7 °C	650.5 °C
9	Abutment	Piers	23.4 m	16 m	5 m	2400 kW/m2	756.9 °C	830.7 °C	954.5 °C	1099.6 °C	1226.4 °C
10	Abutment	Piers	23.4 m	16 m	5 m	1800 kW/m2	594.2 °C	655.7 °C	772.7 °C	936.5 °C	1118.4 °C
13	Abutment	Piers	23.4 m	16 m	9 m	2400 kW/m2	469.5 °C	518.6 °C	609.6 °C	722.5 °C	832.8 °C
14	Abutment	Piers	23.4 m	16 m	9 m	1800 kW/m2	358.3 °C	391.8 °C	452.1 °C	537.2 °C	633.1 °C
17	Abutment	Piers	13.0 m	24 m	5 m	2400 kW/m2	627.8 °C	714.0 °C	819.7 °C	1040.7 °C	1229.0 °C
18	Abutment	Piers	13.0 m	24 m	5 m	1800 kW/m2	493.3 °C	556.6 °C	639.5 °C	846.8 °C	1118.0 °C
21	Abutment	Piers	13.0 m	24 m	9 m	2400 kW/m2	384.0 °C	433.4 °C	496.3 °C	644.6 °C	821.8 °C
22	Abutment	Piers	13.0 m	24 m	9 m	1800 kW/m2	301.8 °C	336.5 °C	379.4 °C	484.6 °C	641.1 °C
25	Abutment	Piers	13.0 m	16 m	5 m	2400 kW/m2	762.0 °C	844.1 °C	982.8 °C	1146.3 °C	1296.3 °C
26	Abutment	Piers	13.0 m	16 m	5 m	1800 kW/m2	592.3 °C	657.0 °C	777.4 °C	949.6 °C	1164.9 °C
29	Abutment	Piers	13.0 m	16 m	9 m	2400 kW/m2	466.1 °C	516.5 °C	609.1 °C	731.0 °C	866.2 °C
30	Abutment	Piers	13.0 m	16 m	9 m	1800 kW/m2	356.1 °C	391.2 °C	456.7 °C	553.6 °C	687.1 °C
33	Abutment	Abutments	23.4 m	24 m	5 m	2400 kW/m2	937.0 °C	991.7 °C	1048.0 °C	1109.3 °C	1123.1 °C
34	Abutment	Abutments	23.4 m	24 m	5 m	1800 kW/m2	825.7 °C	887.7 °C	953.3 °C	1042.2 °C	1074.9 °C
37	Abutment	Abutments	23.4 m	24 m	9 m	2400 kW/m2	853.7 °C	926.8 °C	1000.6 °C	1086.4 °C	1103.3 °C
38	Abutment	Abutments	23.4 m	24 m	9 m	1800 kW/m2	659.4 °C	731.9 °C	811.9 °C	933.6 °C	984.1 °C
41	Abutment	Abutments	23.4 m	16 m	5 m	2400 kW/m2	1081.7 °C	1101.4 °C	1124.3 °C	1143.9 °C	1143.9 °C
42	Abutment	Abutments	23.4 m	16 m	5 m	1800 kW/m2	943.6 °C	975.4 °C	1022.5 °C	1062.7 °C	1073.9 °C
45	Abutment	Abutments	23.4 m	16 m	9 m	2400 kW/m2	944.4 °C	994.6 °C	1057.2 °C	1098.2 °C	1101.9 °C
46	Abutment	Abutments	23.4 m	16 m	9 m	1800 kW/m2	789.0 °C	844.9 °C	922.9 °C	983.7 °C	998.3 °C
49	Abutment	Abutments	13.0 m	24 m	5 m	2400 kW/m2	1015.3 °C	1076.8 °C	1129.5 °C	1162.0 °C	1162.2 °C
50	Abutment	Abutments	13.0 m	24 m	5 m	1800 kW/m2	893.9 °C	963.3 °C	1026.4 °C	1094.6 °C	1106.6 °C
53	Abutment	Abutments	13.0 m	24 m	9 m	2400 kW/m2	589.3 °C	649.8 °C	715.7 °C	818.7 °C	860.8 °C
54	Abutment	Abutments	13.0 m	24 m	9 m	1800 kW/m2	504.2 °C	558.3 °C	620.4 °C	724.6 °C	777.0 °C
57	Abutment	Abutments	13.0 m	16 m	5 m	2400 kW/m2	1109.8 °C	1137.3 °C	1160.1 °C	1162.7 °C	1165.8 °C
58	Abutment	Abutments	13.0 m	16 m	5 m	1800 kW/m2	987.5 °C	1026.6 °C	1073.9 °C	1104.7 °C	1105.8 °C
61	Abutment	Abutments	13.0 m	16 m	9 m	2400 kW/m2	627.2 °C	675.3 °C	744.1 °C	799.0 °C	817.1 °C
62	Abutment	Abutments	13.0 m	16 m	9 m	1800 kW/m2	614.1 °C	662.5 °C	737.4 °C	802.7 °C	826.4 °C

## RELATIVE POSITION TEMPERATURES – FIRE LOCATED MID-SPAN

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Flange X/L=0	Flange X/L=0.1	Flange X/L=0.2	Flange X/L=0.3	Flange X/L=0.4	Flange X/L=0.5
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	491.8 °C	547.2 °C	515.7 °C	540.6 °C	727.9 °C	1123.9 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	378.3 °C	424.1 °C	418.3 °C	470.6 °C	648.6 °C	1053.4 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	297.5 °C	367.7 °C	398.6 °C	479.8 °C	629.4 °C	826.4 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	228.5 °C	284.2 °C	318.3 °C	401.4 °C	497.0 °C	654.8 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	576.2 °C	638.8 °C	624.3 °C	643.9 °C	844.6 °C	1145.3 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	454.9 °C	518.9 °C	525.4 °C	570.5 °C	740.5 °C	1074.5 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	354.1 °C	425.8 °C	474.3 °C	542.7 °C	703.8 °C	841.4 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	280.6 °C	349.2 °C	402.6 °C	450.9 °C	568.0 °C	678.2 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	446.3 °C	467.4 °C	448.5 °C	528.4 °C	734.6 °C	1133.6 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	334.9 °C	353.9 °C	357.1 °C	448.1 °C	645.7 °C	1074.4 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	284.4 °C	345.6 °C	380.6 °C	474.5 °C	622.9 °C	836.8 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	224.5 °C	277.6 °C	314.8 °C	402.7 °C	508.8 °C	667.6 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	782.1 °C	598.1 °C	575.3 °C	631.4 °C	857.4 °C	1156.4 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	621.9 °C	473.1 °C	486.0 °C	555.2 °C	755.8 °C	1092.0 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	495.0 °C	432.6 °C	472.9 °C	541.2 °C	712.1 °C	872.0 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	384.3 °C	350.9 °C	401.0 °C	451.4 °C	567.3 °C	678.0 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m2	726.8 °C	744.5 °C	746.4 °C	732.8 °C	751.9 °C	1148.6 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m2	579.9 °C	581.8 °C	581.5 °C	586.9 °C	655.9 °C	1055.5 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m2	429.9 °C	428.7 °C	432.5 °C	485.7 °C	611.8 °C	826.1 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m2	310.9 °C	321.5 °C	335.5 °C	398.0 °C	477.8 °C	636.8 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m2	713.8 °C	825.5 °C	787.3 °C	787.0 °C	873.7 °C	1050.6 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m2	605.9 °C	696.2 °C	669.8 °C	669.6 °C	739.1 °C	924.6 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m2	428.5 °C	504.1 °C	504.4 °C	552.1 °C	684.8 °C	806.2 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m2	315.6 °C	385.2 °C	406.1 °C	443.1 °C	534.5 °C	604.5 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m2	703.0 °C	693.0 °C	677.1 °C	632.2 °C	716.4 °C	1165.5 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m2	545.8 °C	527.1 °C	521.3 °C	516.8 °C	624.9 °C	1078.7 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m2	389.3 °C	381.8 °C	401.3 °C	471.2 °C	605.5 °C	819.6 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m2	303.8 °C	308.2 °C	328.8 °C	399.8 °C	483.8 °C	636.4 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m2	756.1 °C	845.4 °C	797.1 °C	772.1 °C	894.8 °C	1138.2 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m2	601.8 °C	670.4 °C	635.2 °C	638.9 °C	770.2 °C	1053.1 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m2	381.0 °C	431.4 °C	458.0 °C	553.0 °C	706.9 °C	832.7 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m2	294.4 °C	340.1 °C	369.6 °C	425.3 °C	534.9 °C	633.0 °C



Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Flange X/L=0.6	Flange X/L=0.7	Flange X/L=0.8	Flange X/L=0.9	Flange X/L=1
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	647.7 °C	516.8 °C	507.6 °C	536.7 °C	470.7 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	580.4 °C	437.6 °C	398.6 °C	413.0 °C	362.9 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	558.4 °C	450.6 °C	376.8 °C	344.6 °C	283.1 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	460.8 °C	379.2 °C	308.9 °C	278.9 °C	226.2 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	803.9 °C	640.3 °C	623.5 °C	633.1 °C	574.8 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	706.1 °C	550.8 °C	516.8 °C	506.5 °C	445.9 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	666.5 °C	527.6 °C	467.3 °C	426.6 °C	352.9 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	536.7 °C	443.2 °C	393.8 °C	347.5 °C	279.6 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	660.8 °C	505.8 °C	427.4 °C	452.9 °C	426.9 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	579.0 °C	423.3 °C	351.1 °C	357.4 °C	330.4 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	567.9 °C	450.3 °C	373.3 °C	337.9 °C	272.7 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	464.7 °C	378.3 °C	303.8 °C	268.6 °C	211.0 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	809.8 °C	617.5 °C	573.5 °C	596.3 °C	766.0 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	711.7 °C	534.8 °C	474.5 °C	467.6 °C	608.1 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	694.1 °C	533.0 °C	468.3 °C	432.8 °C	493.3 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	547.1 °C	446.7 °C	394.9 °C	353.1 °C	387.0 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m2	725.4 °C	726.7 °C	740.2 °C	742.4 °C	638.6 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m2	635.7 °C	583.4 °C	577.4 °C	578.8 °C	513.4 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m2	582.2 °C	470.5 °C	427.8 °C	423.1 °C	360.1 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m2	468.0 °C	393.4 °C	340.4 °C	327.6 °C	277.1 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m2	859.7 °C	799.0 °C	803.0 °C	835.1 °C	811.6 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m2	719.9 °C	657.9 °C	655.7 °C	690.8 °C	674.7 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m2	671.6 °C	548.3 °C	504.6 °C	504.3 °C	494.0 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m2	513.2 °C	435.9 °C	400.9 °C	383.8 °C	368.3 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m2	688.7 °C	637.3 °C	677.9 °C	690.2 °C	625.8 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m2	610.6 °C	521.9 °C	522.4 °C	534.9 °C	499.1 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m2	594.2 °C	465.2 °C	400.5 °C	387.2 °C	339.9 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m2	468.3 °C	390.6 °C	324.5 °C	304.4 °C	264.8 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m2	863.9 °C	769.1 °C	791.5 °C	845.8 °C	849.4 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m2	737.0 °C	631.3 °C	628.3 °C	667.6 °C	676.9 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m2	724.5 °C	566.8 °C	467.4 °C	452.5 °C	451.3 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m2	566.3 °C	455.0 °C	387.3 °C	357.7 °C	350.4 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Web X/L=0	Web X/L=0.1	Web X/L=0.2	Web X/L=0.3	Web X/L=0.4	Web X/L=0.5
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	725.2 °C	768.7 °C	828.1 °C	924.1 °C	1081.7 °C	1214.6 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	584.6 °C	625.2 °C	677.5 °C	763.2 °C	925.6 °C	1088.0 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	433.5 °C	461.7 °C	504.5 °C	575.0 °C	688.2 °C	775.1 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	322.9 °C	341.7 °C	372.0 °C	422.1 °C	500.9 °C	570.1 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	835.2 °C	879.5 °C	940.7 °C	1021.5 °C	1141.6 °C	1224.8 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	688.6 °C	728.2 °C	783.4 °C	861.4 °C	992.3 °C	1096.9 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	499.0 °C	525.9 °C	575.0 °C	640.0 °C	735.4 °C	788.0 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	383.3 °C	402.0 °C	436.8 °C	480.6 °C	550.4 °C	591.7 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	703.4 °C	761.2 °C	835.4 °C	941.9 °C	1104.9 °C	1234.4 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	560.0 °C	608.5 °C	671.4 °C	768.4 °C	939.6 °C	1115.1 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	418.7 °C	452.1 °C	497.9 °C	573.4 °C	696.5 °C	792.4 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	321.2 °C	344.6 °C	377.3 °C	429.5 °C	509.0 °C	576.7 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	846.3 °C	879.4 °C	944.4 °C	1031.3 °C	1157.2 °C	1236.8 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	679.7 °C	711.2 °C	773.5 °C	864.1 °C	1002.6 °C	1109.6 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	504.7 °C	529.8 °C	579.8 °C	649.5 °C	751.2 °C	814.7 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	383.5 °C	399.7 °C	433.3 °C	477.5 °C	546.2 °C	592.8 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m2	785.6 °C	877.5 °C	926.7 °C	993.4 °C	1104.2 °C	1243.3 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m2	636.4 °C	704.2 °C	743.6 °C	804.1 °C	926.2 °C	1096.1 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m2	450.5 °C	500.4 °C	528.2 °C	585.7 °C	690.4 °C	777.5 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m2	329.9 °C	364.1 °C	380.9 °C	416.5 °C	476.2 °C	550.4 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m2	833.9 °C	947.7 °C	986.2 °C	1034.1 °C	1109.5 °C	1164.3 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m2	715.1 °C	806.8 °C	837.2 °C	875.3 °C	941.3 °C	1002.1 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m2	494.9 °C	566.3 °C	597.4 °C	646.4 °C	725.8 °C	775.1 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m2	360.1 °C	412.4 °C	434.3 °C	464.6 °C	514.2 °C	544.2 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m2	766.0 °C	840.9 °C	883.7 °C	957.6 °C	1093.2 °C	1251.5 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m2	610.7 °C	666.6 °C	706.6 °C	776.6 °C	922.3 °C	1106.5 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m2	422.9 °C	468.0 °C	505.1 °C	573.7 °C	681.2 °C	773.0 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m2	320.6 °C	356.7 °C	380.7 °C	427.3 °C	493.7 °C	561.2 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m2	879.0 °C	987.4 °C	1029.6 °C	1088.5 °C	1184.3 °C	1253.6 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m2	718.5 °C	802.8 °C	843.9 °C	907.8 °C	1018.6 °C	1108.3 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m2	430.5 °C	508.0 °C	560.8 °C	637.7 °C	740.3 °C	807.3 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m2	324.0 °C	377.3 °C	410.7 °C	457.4 °C	522.9 °C	574.2 °C

Model	Position	Bridge Substructure Configuration	Width	Span	Vertical Clearance	Heat Release Rate (HRR)	Web X/L=0.6	Web X/L=0.7	Web X/L=0.8	Web X/L=0.9	Web X/L=1
3	Mid-Span	Piers	23.4 m	24 m	5 m	2400 kW/m2	1037.2 °C	893.3 °C	805.3 °C	749.8 °C	704.5 °C
4	Mid-Span	Piers	23.4 m	24 m	5 m	1800 kW/m2	864.9 °C	725.1 °C	648.7 °C	601.3 °C	562.1 °C
7	Mid-Span	Piers	23.4 m	24 m	9 m	2400 kW/m2	643.6 °C	540.5 °C	477.3 °C	439.7 °C	416.5 °C
8	Mid-Span	Piers	23.4 m	24 m	9 m	1800 kW/m2	477.0 °C	412.8 °C	369.7 °C	343.9 °C	327.5 °C
11	Mid-Span	Piers	23.4 m	16 m	5 m	2400 kW/m2	1122.5 °C	1004.8 °C	925.8 °C	871.8 °C	833.0 °C
12	Mid-Span	Piers	23.4 m	16 m	5 m	1800 kW/m2	966.7 °C	835.7 °C	759.4 °C	710.0 °C	676.9 °C
15	Mid-Span	Piers	23.4 m	16 m	9 m	2400 kW/m2	716.1 °C	624.7 °C	563.3 °C	521.0 °C	494.6 °C
16	Mid-Span	Piers	23.4 m	16 m	9 m	1800 kW/m2	530.6 °C	465.8 °C	425.1 °C	394.8 °C	375.6 °C
19	Mid-Span	Piers	13.0 m	24 m	5 m	2400 kW/m2	1044.9 °C	895.9 °C	795.7 °C	727.7 °C	674.8 °C
20	Mid-Span	Piers	13.0 m	24 m	5 m	1800 kW/m2	892.7 °C	745.7 °C	658.3 °C	600.2 °C	551.0 °C
23	Mid-Span	Piers	13.0 m	24 m	9 m	2400 kW/m2	665.8 °C	563.6 °C	495.9 °C	447.9 °C	414.0 °C
24	Mid-Span	Piers	13.0 m	24 m	9 m	1800 kW/m2	480.5 °C	412.8 °C	366.7 °C	335.5 °C	314.1 °C
27	Mid-Span	Piers	13.0 m	16 m	5 m	2400 kW/m2	1137.1 °C	1018.5 °C	933.8 °C	876.7 °C	849.4 °C
28	Mid-Span	Piers	13.0 m	16 m	5 m	1800 kW/m2	982.3 °C	848.0 °C	765.2 °C	713.8 °C	689.2 °C
31	Mid-Span	Piers	13.0 m	16 m	9 m	2400 kW/m2	752.4 °C	652.4 °C	583.1 °C	538.5 °C	518.4 °C
32	Mid-Span	Piers	13.0 m	16 m	9 m	1800 kW/m2	539.9 °C	474.1 °C	431.4 °C	402.4 °C	389.2 °C
35	Mid-Span	Abutments	23.4 m	24 m	5 m	2400 kW/m2	1087.9 °C	982.0 °C	922.3 °C	871.1 °C	753.9 °C
36	Mid-Span	Abutments	23.4 m	24 m	5 m	1800 kW/m2	908.9 °C	799.9 °C	745.5 °C	705.3 °C	617.3 °C
39	Mid-Span	Abutments	23.4 m	24 m	9 m	2400 kW/m2	659.2 °C	567.2 °C	516.6 °C	487.7 °C	423.6 °C
40	Mid-Span	Abutments	23.4 m	24 m	9 m	1800 kW/m2	475.9 °C	418.0 °C	384.7 °C	366.9 °C	320.4 °C
43	Mid-Span	Abutments	23.4 m	16 m	5 m	2400 kW/m2	1102.7 °C	1034.7 °C	989.2 °C	954.7 °C	874.7 °C
44	Mid-Span	Abutments	23.4 m	16 m	5 m	1800 kW/m2	927.4 °C	862.7 °C	824.5 °C	797.4 °C	731.3 °C
47	Mid-Span	Abutments	23.4 m	16 m	9 m	2400 kW/m2	716.7 °C	642.9 °C	596.8 °C	570.5 °C	523.8 °C
48	Mid-Span	Abutments	23.4 m	16 m	9 m	1800 kW/m2	503.6 °C	457.3 °C	430.5 °C	412.8 °C	378.2 °C
51	Mid-Span	Abutments	13.0 m	24 m	5 m	2400 kW/m2	1088.9 °C	958.4 °C	889.5 °C	839.1 °C	739.2 °C
52	Mid-Span	Abutments	13.0 m	24 m	5 m	1800 kW/m2	908.7 °C	776.9 °C	713.0 °C	671.5 °C	598.0 °C
55	Mid-Span	Abutments	13.0 m	24 m	9 m	2400 kW/m2	670.0 °C	569.2 °C	503.0 °C	463.8 °C	399.4 °C
56	Mid-Span	Abutments	13.0 m	24 m	9 m	1800 kW/m2	478.3 °C	417.7 °C	376.6 °C	352.4 °C	306.2 °C
59	Mid-Span	Abutments	13.0 m	16 m	5 m	2400 kW/m2	1172.7 °C	1079.2 °C	1023.3 °C	986.9 °C	914.0 °C
60	Mid-Span	Abutments	13.0 m	16 m	5 m	1800 kW/m2	999.2 °C	892.7 °C	833.5 °C	798.9 °C	742.7 °C
63	Mid-Span	Abutments	13.0 m	16 m	9 m	2400 kW/m2	752.6 °C	658.6 °C	579.5 °C	531.5 °C	473.9 °C
64	Mid-Span	Abutments	13.0 m	16 m	9 m	1800 kW/m2	545.3 °C	482.5 °C	432.9 °C	399.0 °C	356.8 °C





## INDIVIDUAL ANOVA TEST RESULTS

### RELATIVE POSITION TEMPERATURES – ALL

X/L = 0					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	27597.9	1	27597.9	8.83	0.0049
B:Bridge Substructure Configuration	713026	1	713026	228.21	0.0000
C:Width	960.148	1	960.148	0.31	0.5823
D:Span	170601	1	170601	54.60	0.0000
E:Vertical Clearance	613678	1	613678	196.41	0.0000
F:HRR	124201	1	124201	39.75	0.0000
<b>Interactions</b>					
AB	231889	1	231889	74.22	0.0000
AC	15592.8	1	15592.8	4.99	0.0309
AD	4965.84	1	4965.84	1.59	0.2144
AE	38370.4	1	38370.4	12.28	0.0011
AF	9030.46	1	9030.46	2.89	0.0965
BC	40321.1	1	40321.1	12.91	0.0009
BD	16471.5	1	16471.5	5.27	0.0267
BE	34046.2	1	34046.2	10.90	0.0020
BF	1233.15	1	1233.15	0.39	0.5333
CD	22490.6	1	22490.6	7.20	0.0104
CE	21448	1	21448	6.86	0.0122
CF	1010.21	1	1010.21	0.32	0.5726
DE	9563.13	1	9563.13	3.06	0.0875
DF	57.703	1	57.703	0.02	0.8926
EF	495.007	1	495.007	0.16	0.6926
<b>Residual</b>	131227	42	3124.44		
<b>Total</b>	2.23E+06	63			

X/L = 0.1					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	50910.6	1	50910.6	23.30	0.0000
B:Bridge Substructure Configuration	881526	1	881526	403.36	0.0000
C:Width	45817.9	1	45817.9	20.97	0.0000
D:Span	160766	1	160766	73.56	0.0000
E:Vertical Clearance	674080	1	674080	308.44	0.0000
F:HRR	145450	1	145450	66.55	0.0000
<b>Interactions</b>					
AB	231747	1	231747	106.04	0.0000
AC	5978.58	1	5978.58	2.74	0.1056
AD	1860.74	1	1860.74	0.85	0.3614
AE	9359.84	1	9359.84	4.28	0.0447
AF	5238.32	1	5238.32	2.40	0.1291
BC	3973.57	1	3973.57	1.82	0.1848
BD	2854.36	1	2854.36	1.31	0.2596
BE	103024	1	103024	47.14	0.0000
BF	4633.35	1	4633.35	2.12	0.1528
CD	235.584	1	235.584	0.11	0.7443
CE	8178.72	1	8178.72	3.74	0.0598
CF	2139.41	1	2139.41	0.98	0.3281
DE	6333.57	1	6333.57	2.90	0.0961
DF	30.9553	1	30.9553	0.01	0.9058
EF	1987.93	1	1987.93	0.91	0.3457
<b>Residual</b>	91788.4	42	2185.44		
<b>Total</b>	2.44E+06	63			

X/L = 0.2					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	77618	1	77618	37.66	0.0000
B:Bridge Substructure Configuration	798400	1	798400	387.36	0.0000
C:Width	43550.5	1	43550.5	21.13	0.0000
D:Span	168125	1	168125	81.57	0.0000
E:Vertical Clearance	547485	1	547485	265.62	0.0000
F:HRR	142095	1	142095	68.94	0.0000
<b>Interactions</b>					
AB	259058	1	259058	125.69	0.0000
AC	6338.95	1	6338.95	3.08	0.0868
AD	3226.81	1	3226.81	1.57	0.2178
AE	3.35806	1	3.35806	0.00	0.9680
AF	826.563	1	826.563	0.40	0.5300
BC	3365.16	1	3365.16	1.63	0.2084
BD	640.723	1	640.723	0.31	0.5801
BE	139981	1	139981	67.91	0.0000
BF	9703.73	1	9703.73	4.71	0.0357
CD	173.647	1	173.647	0.08	0.7730
CE	5185.44	1	5185.44	2.52	0.1202
CF	1875.97	1	1875.97	0.91	0.3455
DE	4096.96	1	4096.96	1.99	0.1659
DF	31.6969	1	31.6969	0.02	0.9019
EF	3148.61	1	3148.61	1.53	0.2233
<b>Residual</b>	86567.4	42	2061.13		
<b>Total</b>	2.30E+06	63			

X/L = 0.3					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	215116	1	215116	107.25	0.0000
B:Bridge Substructure Configuration	643627	1	643627	320.89	0.0000
C:Width	36949	1	36949	18.42	0.0001
D:Span	163229	1	163229	81.38	0.0000
E:Vertical Clearance	392986	1	392986	195.93	0.0000
F:HRR	140176	1	140176	69.89	0.0000
<b>Interactions</b>					
AB	324206	1	324206	161.64	0.0000
AC	12968.4	1	12968.4	6.47	0.0148
AD	7974.27	1	7974.27	3.98	0.0527
AE	4071.56	1	4071.56	2.03	0.1616
AF	108.394	1	108.394	0.05	0.8173
BC	9047.58	1	9047.58	4.51	0.0396
BD	3409.83	1	3409.83	1.70	0.1994
BE	114162	1	114162	56.92	0.0000
BF	11315.4	1	11315.4	5.64	0.0222
CD	183.704	1	183.704	0.09	0.7637
CE	3140.34	1	3140.34	1.57	0.2178
CF	1563.12	1	1563.12	0.78	0.3824
DE	5404.64	1	5404.64	2.69	0.1082
DF	224.888	1	224.888	0.11	0.7394
EF	1415.36	1	1415.36	0.71	0.4056
<b>Residual</b>	84241.8	42	2005.76		
<b>Total</b>	2.18E+06	63			

X/L = 0.4					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	983977	1	983977	417.03	0.0000
B:Bridge Substructure Configuration	385624	1	385624	163.44	0.0000
C:Width	22218.5	1	22218.5	9.42	0.0038
D:Span	201331	1	201331	85.33	0.0000
E:Vertical Clearance	374812	1	374812	158.85	0.0000
F:HRR	180140	1	180140	76.35	0.0000
<b>Interactions</b>					
AB	416530	1	416530	176.53	0.0000
AC	26287.4	1	26287.4	11.14	0.0018
AD	3887.37	1	3887.37	1.65	0.2063
AE	437.49	1	437.49	0.19	0.6690
AF	3251.42	1	3251.42	1.38	0.2471
BC	10614.4	1	10614.4	4.50	0.0399
BD	7404.82	1	7404.82	3.14	0.0837
BE	57463.9	1	57463.9	24.35	0.0000
BF	8264.86	1	8264.86	3.50	0.0682
CD	127.267	1	127.267	0.05	0.8175
CE	4845.73	1	4845.73	2.05	0.1592
CF	1111.14	1	1111.14	0.47	0.4963
DE	7331.43	1	7331.43	3.11	0.0852
DF	1362.26	1	1362.26	0.58	0.4516
EF	0.337852	1	0.337852	0.00	0.9905
<b>Residual</b>	99098.4	42	2359.49		
<b>Total</b>	2.80E+06	63			

X/L = 0.5					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	3.76E+06	1	3.76E+06	1201.41	0.0000
B:Bridge Substructure Configuration	246304	1	246304	78.77	0.0000
C:Width	7880.11	1	7880.11	2.52	0.1199
D:Span	53658.2	1	53658.2	17.16	0.0002
E:Vertical Clearance	889603	1	889603	284.51	0.0000
F:HRR	204514	1	204514	65.41	0.0000
<b>Interactions</b>					
AB	385539	1	385539	123.30	0.0000
AC	37277	1	37277	11.92	0.0013
AD	73457.3	1	73457.3	23.49	0.0000
AE	212761	1	212761	68.05	0.0000
AF	6359.27	1	6359.27	2.03	0.1612
BC	7022.44	1	7022.44	2.25	0.1414
BD	171.152	1	171.152	0.05	0.8162
BE	34660.2	1	34660.2	11.09	0.0018
BF	9629.99	1	9629.99	3.08	0.0866
CD	87.1889	1	87.1889	0.03	0.8682
CE	8229.66	1	8229.66	2.63	0.1122
CF	1162.98	1	1162.98	0.37	0.5452
DE	281.736	1	281.736	0.09	0.7655
DF	452.626	1	452.626	0.14	0.7055
EF	4402.32	1	4402.32	1.41	0.2421
<b>Residual</b>	131324	42	3126.76		
<b>Total</b>	6.07E+06	63			

X/L = 0.6					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	512840	1	512840	330.03	0.0000
B:Bridge Substructure Configuration	278028	1	278028	178.92	0.0000
C:Width	8059.33	1	8059.33	5.19	0.0279
D:Span	233025	1	233025	149.96	0.0000
E:Vertical Clearance	232291	1	232291	149.49	0.0000
F:HRR	172062	1	172062	110.73	0.0000
<b>Interactions</b>					
AB	175434	1	175434	112.90	0.0000
AC	16360.6	1	16360.6	10.53	0.0023
AD	525.384	1	525.384	0.34	0.5640
AE	6717.24	1	6717.24	4.32	0.0437
AF	1492.76	1	1492.76	0.96	0.3326
BC	8195.91	1	8195.91	5.27	0.0267
BD	968.377	1	968.377	0.62	0.4343
BE	30701.6	1	30701.6	19.76	0.0001
BF	8049.9	1	8049.9	5.18	0.0280
CD	0.972689	1	0.972689	0.00	0.9802
CE	1866.78	1	1866.78	1.20	0.2793
CF	515.574	1	515.574	0.33	0.5677
DE	7455.67	1	7455.67	4.80	0.0341
DF	1758.44	1	1758.44	1.13	0.2935
EF	9.14306	1	9.14306	0.01	0.9392
<b>Residual</b>	65264.8	42	1553.92		
<b>Total</b>	1.76E+06	63			

X/L = 0.7					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	3916.1	1	3916.1	3.78	0.0587
B:Bridge Substructure Configuration	291731	1	291731	281.32	0.0000
C:Width	8426.09	1	8426.09	8.13	0.0067
D:Span	155042	1	155042	149.51	0.0000
E:Vertical Clearance	218859	1	218859	211.05	0.0000
F:HRR	141563	1	141563	136.51	0.0000
<b>Interactions</b>					
AB	55745	1	55745	53.76	0.0000
AC	1101.99	1	1101.99	1.06	0.3085
AD	1383.56	1	1383.56	1.33	0.2546
AE	7547.92	1	7547.92	7.28	0.0100
AF	199.057	1	199.057	0.19	0.6635
BC	4986.65	1	4986.65	4.81	0.0339
BD	1.75894	1	1.75894	0.00	0.9673
BE	48154.5	1	48154.5	46.44	0.0000
BF	7796.23	1	7796.23	7.52	0.0089
CD	7.58314	1	7.58314	0.01	0.9323
CE	2015.67	1	2015.67	1.94	0.1706
CF	674.636	1	674.636	0.65	0.4245
DE	6376.62	1	6376.62	6.15	0.0172
DF	366.866	1	366.866	0.35	0.5552
EF	2621.31	1	2621.31	2.53	0.1194
<b>Residual</b>	43554.3	42	1037.01		
<b>Total</b>	1.00E+06	63			

X/L = 0.8					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	190712	1	190712	112.87	0.0000
B:Bridge Substructure Configuration	243363	1	243363	144.03	0.0000
C:Width	8494.62	1	8494.62	5.03	0.0303
D:Span	156999	1	156999	92.92	0.0000
E:Vertical Clearance	324525	1	324525	192.06	0.0000
F:HRR	148982	1	148982	88.17	0.0000
<b>Interactions</b>					
AB	5027.34	1	5027.34	2.98	0.0919
AC	728.123	1	728.123	0.43	0.5151
AD	534.592	1	534.592	0.32	0.5768
AE	26430.2	1	26430.2	15.64	0.0003
AF	719.514	1	719.514	0.43	0.5176
BC	1239.66	1	1239.66	0.73	0.3966
BD	5105.28	1	5105.28	3.02	0.0895
BE	33890.5	1	33890.5	20.06	0.0001
BF	3365.6	1	3365.6	1.99	0.1655
CD	57.5133	1	57.5133	0.03	0.8545
CE	4149.78	1	4149.78	2.46	0.1246
CF	568.644	1	568.644	0.34	0.5649
DE	3148.47	1	3148.47	1.86	0.1795
DF	216.127	1	216.127	0.13	0.7224
EF	2966.03	1	2966.03	1.76	0.1924
<b>Residual</b>	70966.8	42	1689.69		
<b>Total</b>	1.23E+06	63			

X/L = 0.9					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	1273220	1	1273220	400.40	0.0000
B:Bridge Substructure Configuration	117665	1	117665	37.00	0.0000
C:Width	8818.38	1	8818.38	2.77	0.1033
D:Span	144842	1	144842	45.55	0.0000
E:Vertical Clearance	583667	1	583667	183.55	0.0000
F:HRR	207789	1	207789	65.35	0.0000
<b>Interactions</b>					
AB	22550.7	1	22550.7	7.09	0.0109
AC	508.559	1	508.559	0.16	0.6912
AD	0.00213906	1	0.00213906	0.00	0.9993
AE	19788.4	1	19788.4	6.22	0.0166
AF	26.0738	1	26.0738	0.01	0.9283
BC	2222.77	1	2222.77	0.70	0.4078
BD	1442.39	1	1442.39	0.45	0.5043
BE	3065.42	1	3065.42	0.96	0.3318
BF	44.2059	1	44.2059	0.01	0.9067
CD	394.469	1	394.469	0.12	0.7264
CE	9581.72	1	9581.72	3.01	0.0899
CF	236.891	1	236.891	0.07	0.7862
DE	7259.68	1	7259.68	2.28	0.1383
DF	483.835	1	483.835	0.15	0.6985
EF	2756.91	1	2756.91	0.87	0.3571
<b>Residual</b>	133554	42	3179.86		
<b>Total</b>	2.54E+06	63			

X/L = 1					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	4372380	1	4372380	1309.06	0.0000
B:Bridge Substructure Configuration	8580.09	1	8580.09	2.57	0.1165
C:Width	926.061	1	926.061	0.28	0.6013
D:Span	126913	1	126913	38.00	0.0000
E:Vertical Clearance	913355	1	913355	273.45	0.0000
F:HRR	149451	1	149451	44.74	0.0000
<b>Interactions</b>					
AB	111131	1	111131	33.27	0.0000
AC	5526.62	1	5526.62	1.65	0.2054
AD	69758.7	1	69758.7	20.89	0.0000
AE	104.986	1	104.986	0.03	0.8601
AF	2231.97	1	2231.97	0.67	0.4183
BC	46851.1	1	46851.1	14.03	0.0005
BD	4303.2	1	4303.2	1.29	0.2628
BE	18.0306	1	18.0306	0.01	0.9418
BF	385.877	1	385.877	0.12	0.7356
CD	22358.8	1	22358.8	6.69	0.0132
CE	25181.3	1	25181.3	7.54	0.0088
CF	15.1029	1	15.1029	0.00	0.9467
DE	8082.68	1	8082.68	2.42	0.1273
DF	1063.17	1	1063.17	0.32	0.5756
EF	264.835	1	264.835	0.08	0.7796
<b>Residual</b>	140284	42	3340.1		
<b>Total</b>	6.01E+06	63			

X/L = 0					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	75346.1	1	75346.1	35.97	0.0000
B:Bridge Substructure Configuration	324712	1	324712	155.01	0.0000
C:Width	20517.7	1	20517.7	9.79	0.0032
D:Span	138712	1	138712	66.22	0.0000
E:Vertical Clearance	1.04E+06	1	1.04E+06	495.94	0.0000
F:HRR	175882	1	175882	83.96	0.0000
<b>Interactions</b>					
AB	273100	1	273100	130.37	0.0000
AC	9214.08	1	9214.08	4.40	0.0420
AD	5850.72	1	5850.72	2.79	0.1021
AE	74388.5	1	74388.5	35.51	0.0000
AF	10637.3	1	10637.3	5.08	0.0295
BC	5790.07	1	5790.07	2.76	0.1039
BD	54.2801	1	54.2801	0.03	0.8729
BE	11268.9	1	11268.9	5.38	0.0253
BF	0.0009	1	0.0009	0.00	0.9995
CD	282.828	1	282.828	0.14	0.7151
CE	18063.4	1	18063.4	8.62	0.0054
CF	1713.13	1	1713.13	0.82	0.3710
DE	10609	1	10609	5.06	0.0297
DF	7.1824	1	7.1824	0.00	0.9536
EF	654.72	1	654.72	0.31	0.5791
<b>Residual</b>	87981	42	2094.79		
<b>Total</b>	2.28E+06	63			

X/L = 0.1					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	100533	1	100533	52.01	0.0000
B:Bridge Substructure Configuration	569861	1	569861	294.80	0.0000
C:Width	23305.5	1	23305.5	12.06	0.0012
D:Span	150933	1	150933	78.08	0.0000
E:Vertical Clearance	1.31E+06	1	1.31E+06	677.28	0.0000
F:HRR	222573	1	222573	115.14	0.0000
<b>Interactions</b>					
AB	316982	1	316982	163.98	0.0000
AC	9640.54	1	9640.54	4.99	0.0309
AD	3350.24	1	3350.24	1.73	0.1951
AE	63541.2	1	63541.2	32.87	0.0000
AF	10785.6	1	10785.6	5.58	0.0229
BC	7008.41	1	7008.41	3.63	0.0638
BD	1503.99	1	1503.99	0.78	0.3828
BE	31045.1	1	31045.1	16.06	0.0002
BF	915.138	1	915.138	0.47	0.4952
CD	62.7066	1	62.7066	0.03	0.8579
CE	16509.4	1	16509.4	8.54	0.0056
CF	1503.6	1	1503.6	0.78	0.3828
DE	9770.58	1	9770.58	5.05	0.0299
DF	65.3874	1	65.3874	0.03	0.8550
EF	1841.8	1	1841.8	0.95	0.3346
<b>Residual</b>	81187.6	42	1933.04		
<b>Total</b>	2.93E+06	63			

X/L = 0.2					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	177623	1	177623	94.86	0.0000
B:Bridge Substructure Configuration	539125	1	539125	287.93	0.0000
C:Width	18520.1	1	18520.1	9.89	0.0030
D:Span	155426	1	155426	83.01	0.0000
E:Vertical Clearance	1435450	1	1435450	766.64	0.0000
F:HRR	257768	1	257768	137.67	0.0000
<b>Interactions</b>					
AB	363746	1	363746	194.27	0.0000
AC	11341.5	1	11341.5	6.06	0.0180
AD	3294.04	1	3294.04	1.76	0.1919
AE	68197.4	1	68197.4	36.42	0.0000
AF	11540.9	1	11540.9	6.16	0.0171
BC	6861.84	1	6861.84	3.66	0.0624
BD	1495.66	1	1495.66	0.80	0.3765
BE	29020.4	1	29020.4	15.50	0.0003
BF	1343.68	1	1343.68	0.72	0.4017
CD	87.3057	1	87.3057	0.05	0.8301
CE	16037.4	1	16037.4	8.57	0.0055
CF	1286.21	1	1286.21	0.69	0.4119
DE	8614.39	1	8614.39	4.60	0.0378
DF	69.3264	1	69.3264	0.04	0.8483
EF	2177.74	1	2177.74	1.16	0.2870
<b>Residual</b>	78640.2	42	1872.39		
<b>Total</b>	3.19E+06	63			

X/L = 0.3					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	361416	1	361416	192.79	0.0000
B:Bridge Substructure Configuration	489470	1	489470	261.10	0.0000
C:Width	12019.6	1	12019.6	6.41	0.0152
D:Span	141050	1	141050	75.24	0.0000
E:Vertical Clearance	1563840	1	1563840	834.22	0.0000
F:HRR	298721	1	298721	159.35	0.0000
<b>Interactions</b>					
AB	414554	1	414554	221.14	0.0000
AC	15195.8	1	15195.8	8.11	0.0068
AD	5517.33	1	5517.33	2.94	0.0936
AE	83287.8	1	83287.8	44.43	0.0000
AF	15078.3	1	15078.3	8.04	0.0070
BC	6183.66	1	6183.66	3.30	0.0765
BD	1449.99	1	1449.99	0.77	0.3841
BE	19585.7	1	19585.7	10.45	0.0024
BF	1337.46	1	1337.46	0.71	0.4031
CD	165.09	1	165.09	0.09	0.7681
CE	16602	1	16602	8.86	0.0048
CF	1237.54	1	1237.54	0.66	0.4211
DE	7333.14	1	7333.14	3.91	0.0545
DF	65.9547	1	65.9547	0.04	0.8521
EF	1241.24	1	1241.24	0.66	0.4204
<b>Residual</b>	78734	42	1874.62		
<b>Total</b>	3.53E+06	63			

X/L = 0.4					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	856698	1	856698	424.93	0.0000
B:Bridge Substructure Configuration	419739	1	419739	208.20	0.0000
C:Width	5825.89	1	5825.89	2.89	0.0965
D:Span	102506	1	102506	50.84	0.0000
E:Vertical Clearance	1806360	1	1806360	895.98	0.0000
F:HRR	342079	1	342079	169.67	0.0000
<b>Interactions</b>					
AB	479733	1	479733	237.95	0.0000
AC	19955.1	1	19955.1	9.90	0.0030
AD	14432.4	1	14432.4	7.16	0.0106
AE	130809	1	130809	64.88	0.0000
AF	19886.6	1	19886.6	9.86	0.0031
BC	4525.93	1	4525.93	2.24	0.1415
BD	1152.43	1	1152.43	0.57	0.4538
BE	9432.78	1	9432.78	4.68	0.0363
BF	1150.74	1	1150.74	0.57	0.4542
CD	204.705	1	204.705	0.10	0.7516
CE	19943.8	1	19943.8	9.89	0.0030
CF	1213.65	1	1213.65	0.60	0.4422
DE	3797.02	1	3797.02	1.88	0.1772
DF	41.7962	1	41.7962	0.02	0.8862
EF	24.6512	1	24.6512	0.01	0.9125
<b>Residual</b>	84675.6	42	2016.08		
<b>Total</b>	4.32E+06	63			



X/L = 0.5					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	1362870	1	1362870	564.57	0.0000
B:Bridge Substructure Configuration	410993	1	410993	170.26	0.0000
C:Width	2474.07	1	2474.07	1.02	0.3172
D:Span	39666.7	1	39666.7	16.43	0.0002
E:Vertical Clearance	2136850	1	2136850	885.20	0.0000
F:HRR	344408	1	344408	142.67	0.0000
<b>Interactions</b>					
AB	489192	1	489192	202.65	0.0000
AC	22866	1	22866	9.47	0.0037
AD	43921.7	1	43921.7	18.19	0.0001
AE	210275	1	210275	87.11	0.0000
AF	15325.8	1	15325.8	6.35	0.0156
BC	3394.52	1	3394.52	1.41	0.2424
BD	31.6688	1	31.6688	0.01	0.9094
BE	4763.76	1	4763.76	1.97	0.1674
BF	796.086	1	796.086	0.33	0.5689
CD	256.48	1	256.48	0.11	0.7461
CE	22895.5	1	22895.5	9.48	0.0036
CF	1184.91	1	1184.91	0.49	0.4874
DE	121.275	1	121.275	0.05	0.8237
DF	115.187	1	115.187	0.05	0.8281
EF	2350.31	1	2350.31	0.97	0.3294
<b>Residual</b>	101387	42	2413.98		
<b>Total</b>	5.22E+06	63			

X/L = 0.6					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	308979	1	308979	145.59	0.0000
B:Bridge Substructure Configuration	470982	1	470982	221.92	0.0000
C:Width	2323.12	1	2323.12	1.09	0.3014
D:Span	104262	1	104262	49.13	0.0000
E:Vertical Clearance	1816330	1	1816330	855.83	0.0000
F:HRR	364567	1	364567	171.78	0.0000
<b>Interactions</b>					
AB	422921	1	422921	199.27	0.0000
AC	19826.4	1	19826.4	9.34	0.0039
AD	2711.15	1	2711.15	1.28	0.2648
AE	97112.5	1	97112.5	45.76	0.0000
AF	14017.1	1	14017.1	6.60	0.0138
BC	4453.73	1	4453.73	2.10	0.1549
BD	58.1597	1	58.1597	0.03	0.8693
BE	2945.91	1	2945.91	1.39	0.2454
BF	55.0008	1	55.0008	0.03	0.8729
CD	268.427	1	268.427	0.13	0.7239
CE	21759.6	1	21759.6	10.25	0.0026
CF	886.476	1	886.476	0.42	0.5216
DE	1718.21	1	1718.21	0.81	0.3734
DF	128.397	1	128.397	0.06	0.8069
EF	28.8772	1	28.8772	0.01	0.9077
<b>Residual</b>	89136.6	42	2122.3		
<b>Total</b>	3.75E+06	63			

X/L = 0.7					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	2968.48	1	2968.48	1.32	0.2567
B:Bridge Substructure Configuration	515838	1	515838	229.78	<b>0.0000</b>
C:Width	5109.93	1	5109.93	2.28	0.1389
D:Span	109984	1	109984	48.99	<b>0.0000</b>
E:Vertical Clearance	1649690	1	1649690	734.86	<b>0.0000</b>
F:HRR	344711	1	344711	153.55	<b>0.0000</b>
<b>Interactions</b>					
AB	356040	1	356040	158.60	<b>0.0000</b>
AC	13502.7	1	13502.7	6.01	<b>0.0184</b>
AD	52.1104	1	52.1104	0.02	0.8796
AE	45781.6	1	45781.6	20.39	<b>0.0001</b>
AF	6004.89	1	6004.89	2.67	0.1094
BC	7567.48	1	7567.48	3.37	<b>0.0734</b>
BD	340.172	1	340.172	0.15	0.6990
BE	1438.21	1	1438.21	0.64	0.4280
BF	230.47	1	230.47	0.10	0.7502
CD	231.002	1	231.002	0.10	0.7500
CE	22432.9	1	22432.9	9.99	<b>0.0029</b>
CF	726.235	1	726.235	0.32	0.5725
DE	2841.82	1	2841.82	1.27	0.2669
DF	240.521	1	240.521	0.11	0.7450
EF	1606.51	1	1606.51	0.72	0.4024
<b>Residual</b>	94285.3	42	2244.89		
<b>Total</b>	3.18E+06	63			

X/L = 0.8					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	348506	1	348506	123.43	<b>0.0000</b>
B:Bridge Substructure Configuration	483778	1	483778	171.33	<b>0.0000</b>
C:Width	8898.38	1	8898.38	3.15	<b>0.0831</b>
D:Span	127309	1	127309	45.09	<b>0.0000</b>
E:Vertical Clearance	1.61E+06	1	1.61E+06	568.80	<b>0.0000</b>
F:HRR	323060	1	323060	114.41	<b>0.0000</b>
<b>Interactions</b>					
AB	256387	1	256387	90.80	<b>0.0000</b>
AC	8746.22	1	8746.22	3.10	<b>0.0857</b>
AD	0.103202	1	0.103202	0.00	0.9952
AE	24843.7	1	24843.7	8.80	<b>0.0050</b>
AF	1620.57	1	1620.57	0.57	0.4529
BC	10741	1	10741	3.80	<b>0.0578</b>
BD	3349.37	1	3349.37	1.19	0.2823
BE	27.8388	1	27.8388	0.01	0.9214
BF	2112.67	1	2112.67	0.75	0.3920
CD	318.756	1	318.756	0.11	0.7385
CE	24339.5	1	24339.5	8.62	<b>0.0054</b>
CF	641.672	1	641.672	0.23	0.6360
DE	3076.5	1	3076.5	1.09	0.3025
DF	124.629	1	124.629	0.04	0.8346
EF	2322.88	1	2322.88	0.82	0.3696
<b>Residual</b>	118591	42	2823.59		
<b>Total</b>	3.35E+06	63			

X/L = 0.9					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	1379550	1	1379550	361.69	0.0000
B:Bridge Substructure Configuration	290471	1	290471	76.16	0.0000
C:Width	11588.8	1	11588.8	3.04	0.0886
D:Span	80069.9	1	80069.9	20.99	0.0000
E:Vertical Clearance	1615780	1	1615780	423.62	0.0000
F:HRR	294956	1	294956	77.33	0.0000
<b>Interactions</b>					
AB	93230.2	1	93230.2	24.44	0.0000
AC	6318.46	1	6318.46	1.66	0.2051
AD	7434.1	1	7434.1	1.95	0.1700
AE	9177.4	1	9177.4	2.41	0.1284
AF	624.688	1	624.688	0.16	0.6878
BC	14606.2	1	14606.2	3.83	0.0570
BD	3971.99	1	3971.99	1.04	0.3133
BE	10456.3	1	10456.3	2.74	0.1052
BF	7216.71	1	7216.71	1.89	0.1763
CD	766.528	1	766.528	0.20	0.6562
CE	23083.9	1	23083.9	6.05	0.0181
CF	511.269	1	511.269	0.13	0.7161
DE	3403.7	1	3403.7	0.89	0.3502
DF	31.8237	1	31.8237	0.01	0.9277
EF	884.393	1	884.393	0.23	0.6326
<b>Residual</b>	160196	42	3814.18		
<b>Total</b>	4.01E+06	63			

X/L = 1					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Position	3049590	1	3049590	689.77	0.0000
B:Bridge Substructure Configuration	26334.4	1	26334.4	5.96	0.0190
C:Width	7794.02	1	7794.02	1.76	0.1914
D:Span	56471	1	56471	12.77	0.0009
E:Vertical Clearance	1584690	1	1584690	358.44	0.0000
F:HRR	228961	1	228961	51.79	0.0000
<b>Interactions</b>					
AB	5121.73	1	5121.73	1.16	0.2879
AC	4540.91	1	4540.91	1.03	0.3166
AD	35033.1	1	35033.1	7.92	0.0074
AE	123.793	1	123.793	0.03	0.8679
AF	1543.61	1	1543.61	0.35	0.5578
BC	16992.1	1	16992.1	3.84	0.0566
BD	325.397	1	325.397	0.07	0.7875
BE	36038.8	1	36038.8	8.15	0.0067
BF	6867.64	1	6867.64	1.55	0.2195
CD	2491.38	1	2491.38	0.56	0.4570
CE	22639.3	1	22639.3	5.12	0.0289
CF	463.702	1	463.702	0.10	0.7477
DE	5551.55	1	5551.55	1.26	0.2688
DF	309.452	1	309.452	0.07	0.7926
EF	149.665	1	149.665	0.03	0.8549
<b>Residual</b>	185688	42	4421.14		
<b>Total</b>	5.28E+06	63			



## RELATIVE POSITION TEMPERATURES – FIRE ADJACENT TO ABUTMENT/PIERS

X/L = 0					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	879082	1	879082	226.04	<b>0.0000</b>
B:Width	12145.8	1	12145.8	3.12	<b>0.0963</b>
C:Span	116890	1	116890	30.06	<b>0.0001</b>
D:Vertical Clearance	172574	1	172574	44.37	<b>0.0000</b>
E:HRR	33125.4	1	33125.4	8.52	<b>0.0100</b>
<b>Interactions</b>					
AB	28713.1	1	28713.1	7.38	<b>0.0152</b>
AC	516.088	1	516.088	0.13	0.7204
AD	12547.3	1	12547.3	3.23	<b>0.0914</b>
AE	527.232	1	527.232	0.14	0.7176
BC	5022.27	1	5022.27	1.29	0.2725
BD	32417.6	1	32417.6	8.34	<b>0.0107</b>
BE	3117.54	1	3117.54	0.80	0.3839
CD	3636.55	1	3636.55	0.94	0.3479
CE	0.559153	1	0.559153	0.00	0.9906
DE	987.124	1	987.124	0.25	0.6213
<b>Residual</b>	62225.4	16	3889.09		
<b>Total</b>	1.36E+06	31			

X/L = 0.1					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	1008620	1	1.01E+06	282.69	<b>0.0000</b>
B:Width	42449	1	42449	11.90	<b>0.0033</b>
C:Span	98609.1	1	98609.1	27.64	<b>0.0001</b>
D:Vertical Clearance	262289	1	262289	73.51	<b>0.0000</b>
E:HRR	47741.3	1	47741.3	13.38	<b>0.0021</b>
<b>Interactions</b>					
AB	6925.76	1	6925.76	1.94	0.1826
AC	5921.17	1	5921.17	1.66	0.2160
AD	50608.9	1	50608.9	14.18	<b>0.0017</b>
AE	3035.96	1	3035.96	0.85	0.3700
BC	13.4033	1	13.4033	0.00	0.9519
BD	23855.3	1	23855.3	6.69	<b>0.0199</b>
BE	3676.32	1	3676.32	1.03	0.3252
CD	1424.31	1	1424.31	0.40	0.5364
CE	18.1052	1	18.1052	0.01	0.9441
DE	101.353	1	101.353	0.03	0.8683
<b>Residual</b>	57086.6	16	3567.91		
<b>Total</b>	1.61E+06	31			

X/L = 0.2					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	983517	1	983517	291.09	0.0000
B:Width	41559.9	1	41559.9	12.30	0.0029
C:Span	108967	1	108967	32.25	0.0000
D:Vertical Clearance	272388	1	272388	80.62	0.0000
E:HRR	60623.4	1	60623.4	17.94	0.0006
<b>Interactions</b>					
AB	5790.49	1	5790.49	1.71	0.2090
AC	5234.18	1	5234.18	1.55	0.2312
AD	80088	1	80088	23.70	0.0002
AE	7770.68	1	7770.68	2.30	0.1489
BC	5.28125	1	5.28125	0.00	0.9690
BD	20101.1	1	20101.1	5.95	0.0267
BE	3144.25	1	3144.25	0.93	0.3491
CD	2052.16	1	2052.16	0.61	0.4472
CE	10.0352	1	10.0352	0.00	0.9572
DE	430.271	1	430.271	0.13	0.7259
<b>Residual</b>	54060.7	16	3378.8		
<b>Total</b>	1.65E+06	31			

X/L = 0.3					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	940719	1	940719	320.97	0.0000
B:Width	46848.6	1	46848.6	15.98	0.0010
C:Span	121680	1	121680	41.52	0.0000
D:Vertical Clearance	238530	1	238530	81.39	0.0000
E:HRR	66244.4	1	66244.4	22.60	0.0002
<b>Interactions</b>					
AB	10596.8	1	10596.8	3.62	0.0754
AC	7517.22	1	7517.22	2.56	0.1288
AD	94523.3	1	94523.3	32.25	0.0000
AE	10340.7	1	10340.7	3.53	0.0787
BC	15.4012	1	15.4012	0.01	0.9431
BD	14980.1	1	14980.1	5.11	0.0381
BE	2975.68	1	2975.68	1.02	0.3286
CD	1545.4	1	1545.4	0.53	0.4782
CE	15.125	1	15.125	0.01	0.9436
DE	1470.45	1	1470.45	0.50	0.4889
<b>Residual</b>	46893.7	16	2930.85		
<b>Total</b>	1.60E+06	31			

X/L = 0.4					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	801856	1	801856	363.06	<b>0.0000</b>
B:Width	48420.4	1	48420.4	21.92	<b>0.0002</b>
C:Span	130585	1	130585	59.13	<b>0.0000</b>
D:Vertical Clearance	174819	1	174819	79.15	<b>0.0000</b>
E:HRR	67494.1	1	67494.1	30.56	<b>0.0000</b>
<b>Interactions</b>					
AB	19376.4	1	19376.4	8.77	<b>0.0092</b>
AC	11711	1	11711	5.30	<b>0.0351</b>
AD	87838.1	1	87838.1	39.77	<b>0.0000</b>
AE	11384.3	1	11384.3	5.15	<b>0.0374</b>
BC	189.492	1	189.492	0.09	0.7734
BD	10307.2	1	10307.2	4.67	<b>0.0463</b>
BE	2102.6	1	2102.6	0.95	0.3437
CD	2632.3	1	2632.3	1.19	0.2911
CE	229.676	1	229.676	0.10	0.7513
DE	2447.73	1	2447.73	1.11	0.3081
<b>Residual</b>	35337.2	16	2208.58		
<b>Total</b>	1.41E+06	31			

X/L = 0.5					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	624076	1	624076	402.58	<b>0.0000</b>
B:Width	39717.6	1	39717.6	25.62	<b>0.0001</b>
C:Span	126340	1	126340	81.50	<b>0.0000</b>
D:Vertical Clearance	116127	1	116127	74.91	<b>0.0000</b>
E:HRR	69373.5	1	69373.5	44.75	<b>0.0000</b>
<b>Interactions</b>					
AB	23191.6	1	23191.6	14.96	<b>0.0014</b>
AC	11092.7	1	11092.7	7.16	<b>0.0166</b>
AD	67374.8	1	67374.8	43.46	<b>0.0000</b>
AE	10626.3	1	10626.3	6.85	<b>0.0186</b>
BC	882.945	1	882.945	0.57	0.4614
BD	8194.88	1	8194.88	5.29	<b>0.0353</b>
BE	1630.06	1	1630.06	1.05	0.3204
CD	4382.12	1	4382.12	2.83	0.1121
CE	241.286	1	241.286	0.16	0.6984
DE	2539.17	1	2539.17	1.64	0.2189
<b>Residual</b>	24803.2	16	1550.2		
<b>Total</b>	1.13E+06	31			

X/L = 0.6					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	447583	1	447583	342.96	0.0000
B:Width	23692.8	1	23692.8	18.15	0.0006
C:Span	127840	1	127840	97.96	0.0000
D:Vertical Clearance	80003	1	80003	61.30	0.0000
E:HRR	70751	1	70751	54.21	0.0000
<b>Interactions</b>					
AB	16534.3	1	16534.3	12.67	0.0026
AC	3241.94	1	3241.94	2.48	0.1346
AD	41507.3	1	41507.3	31.80	0.0000
AE	9424.62	1	9424.62	7.22	0.0162
BC	1166.08	1	1166.08	0.89	0.3586
BD	8865.46	1	8865.46	6.79	0.0191
BE	1327.8	1	1327.8	1.02	0.3281
CD	4112.11	1	4112.11	3.15	0.0949
CE	43.4079	1	43.4079	0.03	0.8576
DE	2430.96	1	2430.96	1.86	0.1912
<b>Residual</b>	20880.9	16	1305.06		
<b>Total</b>	8.59E+05	31			

X/L = 0.7					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	301263	1	301263	235.26	0.0000
B:Width	7811.25	1	7811.25	6.10	0.0252
C:Span	92859	1	92859	72.51	0.0000
D:Vertical Clearance	72559.5	1	72559.5	56.66	0.0000
E:HRR	65572.7	1	65572.7	51.21	0.0000
<b>Interactions</b>					
AB	6144.42	1	6144.42	4.80	0.0436
AC	242.11	1	242.11	0.19	0.6695
AD	18653.5	1	18653.5	14.57	0.0015
AE	6071.47	1	6071.47	4.74	0.0448
BC	789.634	1	789.634	0.62	0.4438
BD	13943.7	1	13943.7	10.89	0.0045
BE	931.393	1	931.393	0.73	0.4063
CD	4263.8	1	4263.8	3.33	0.0868
CE	16.302	1	16.302	0.01	0.9116
DE	1624.79	1	1624.79	1.27	0.2766
<b>Residual</b>	20489.1	16	1280.57		
<b>Total</b>	6.13E+05	31			

X/L = 0.8					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	159174	1	159174	112.06	<b>0.0000</b>
B:Width	2124.38	1	2124.38	1.50	0.2391
C:Span	87928.3	1	87928.3	61.90	<b>0.0000</b>
D:Vertical Clearance	82864.2	1	82864.2	58.34	<b>0.0000</b>
E:HRR	64497.1	1	64497.1	45.41	<b>0.0000</b>
<b>Interactions</b>					
AB	2079.96	1	2079.96	1.46	0.2438
AC	3490.51	1	3490.51	2.46	0.1365
AD	418.256	1	418.256	0.29	0.5949
AE	835.281	1	835.281	0.59	0.4543
BC	99.088	1	99.088	0.07	0.7951
BD	19546.1	1	19546.1	13.76	<b>0.0019</b>
BE	494.944	1	494.944	0.35	0.5632
CD	1421.11	1	1421.11	1.00	0.3321
CE	176.391	1	176.391	0.12	0.7291
DE	70.3002	1	70.3002	0.05	0.8268
<b>Residual</b>	22727.3	16	1420.46		
<b>Total</b>	4.48E+05	31			

X/L = 0.9					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	18596.5	1	18596.5	9.75	<b>0.0066</b>
B:Width	2545.77	1	2545.77	1.33	0.2649
C:Span	72403.4	1	72403.4	37.96	<b>0.0000</b>
D:Vertical Clearance	194258	1	194258	101.84	<b>0.0000</b>
E:HRR	106235	1	106235	55.70	<b>0.0000</b>
<b>Interactions</b>					
AB	3869.36	1	3869.36	2.03	0.1736
AC	2441.61	1	2441.61	1.28	0.2746
AD	21456.6	1	21456.6	11.25	<b>0.0040</b>
AE	1424.18	1	1424.18	0.75	0.4003
BC	0.08405	1	0.08405	0.00	0.9948
BD	29053.8	1	29053.8	15.23	<b>0.0013</b>
BE	244.205	1	244.205	0.13	0.7252
CD	3423.37	1	3423.37	1.79	0.1991
CE	179.551	1	179.551	0.09	0.7629
DE	2.17361	1	2.17361	0.00	0.9735
<b>Residual</b>	30518.3	16	1907.4		
<b>Total</b>	4.87E+05	31			



X/L = 1					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	28976.7	1	28976.7	13.27	<b>0.0022</b>
B:Width	964.044	1	964.044	0.44	0.5159
C:Span	4243.97	1	4243.97	1.94	0.1824
D:Vertical Clearance	446938	1	446938	204.67	<b>0.0000</b>
E:HRR	57577.5	1	57577.5	26.37	<b>0.0001</b>
<b>Interactions</b>					
AB	41499.4	1	41499.4	19.00	<b>0.0005</b>
AC	4027.08	1	4027.08	1.84	0.1933
AD	27477.5	1	27477.5	12.58	<b>0.0027</b>
AE	3084.27	1	3084.27	1.41	0.2520
BC	6434.32	1	6434.32	2.95	0.1054
BD	38414.4	1	38414.4	17.59	<b>0.0007</b>
BE	258.895	1	258.895	0.12	0.7351
CD	460.561	1	460.561	0.21	0.6522
CE	2.25781	1	2.25781	0.00	0.9747
DE	1787.72	1	1787.72	0.82	0.3790
<b>Residual</b>	34939.4	16	2183.71		
<b>Total</b>	6.97E+05	31			

X/L = 0					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	596696	1	596696	165.85	<b>0.0000</b>
B:Width	28615.5	1	28615.5	7.95	<b>0.0123</b>
C:Span	100769	1	100769	28.01	<b>0.0001</b>
D:Vertical Clearance	278642	1	278642	77.45	<b>0.0000</b>
E:HRR	50005.5	1	50005.5	13.90	<b>0.0018</b>
<b>Interactions</b>					
AB	8756.94	1	8756.94	2.43	0.1383
AC	4430.23	1	4430.23	1.23	0.2835
AD	4838.82	1	4838.82	1.34	0.2632
AE	1.11751	1	1.11751	0.00	0.9862
BC	34.3206	1	34.3206	0.01	0.9234
BD	29291.7	1	29291.7	8.14	<b>0.0115</b>
BE	3772.33	1	3772.33	1.05	0.3211
CD	4038.31	1	4038.31	1.12	0.3051
CE	27.4541	1	27.4541	0.01	0.9315
DE	141.709	1	141.709	0.04	0.8452
<b>Residual</b>	57566.2	16	3597.89		
<b>Total</b>	1.17E+06	31			

X/L = 0.1					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	868433	1	868433	253.47	<b>0.0000</b>
B:Width	31462.2	1	31462.2	9.18	<b>0.0080</b>
C:Span	99628.7	1	99628.7	29.08	<b>0.0001</b>
D:Vertical Clearance	397950	1	397950	116.15	<b>0.0000</b>
E:HRR	67683.5	1	67683.5	19.75	<b>0.0004</b>
<b>Interactions</b>					
AB	9263.31	1	9263.31	2.70	0.1196
AC	4324.27	1	4324.27	1.26	0.2778
AD	21710.6	1	21710.6	6.34	<b>0.0229</b>
AE	562.382	1	562.382	0.16	0.6907
BC	2.14763	1	2.14763	0.00	0.9803
BD	29378.3	1	29378.3	8.57	<b>0.0098</b>
BE	3325.41	1	3325.41	0.97	0.3392
CD	3465.07	1	3465.07	1.01	0.3295
CE	0.00427813	1	0.00427813	0.00	0.9991
DE	144.458	1	144.458	0.04	0.8399
<b>Residual</b>	54818.9	16	3426.18		
<b>Total</b>	1.59E+06	31			

X/L = 0.2					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	894273	1	894273	276.47	<b>0.0000</b>
B:Width	29423.7	1	29423.7	9.10	<b>0.0082</b>
C:Span	101987	1	101987	31.53	<b>0.0000</b>
D:Vertical Clearance	438942	1	438942	135.70	<b>0.0000</b>
E:HRR	80112	1	80112	24.77	<b>0.0001</b>
<b>Interactions</b>					
AB	9605.67	1	9605.67	2.97	0.1041
AC	4219.59	1	4219.59	1.30	0.2702
AD	24273.8	1	24273.8	7.50	<b>0.0145</b>
AE	1176.13	1	1176.13	0.36	0.5550
BC	5.56111	1	5.56111	0.00	0.9674
BD	29070.6	1	29070.6	8.99	<b>0.0085</b>
BE	2913.9	1	2913.9	0.90	0.3567
CD	4008.26	1	4008.26	1.24	0.2821
CE	0.9248	1	0.9248	0.00	0.9867
DE	784.08	1	784.08	0.24	0.6292
<b>Residual</b>	51754.3	16	3234.64		
<b>Total</b>	1.67E+06	31			

X/L = 0.3					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	902469	1	902469	295.73	0.0000
B:Width	27122.4	1	27122.4	8.89	0.0088
C:Span	101180	1	101180	33.16	0.0000
D:Vertical Clearance	462664	1	462664	151.61	0.0000
E:HRR	89786.3	1	89786.3	29.42	0.0001
<b>Interactions</b>					
AB	10792.7	1	10792.7	3.54	0.0784
AC	3964.06	1	3964.06	1.30	0.2712
AD	20993	1	20993	6.88	0.0185
AE	1184.63	1	1184.63	0.39	0.5420
BC	16.0461	1	16.0461	0.01	0.9431
BD	29197.4	1	29197.4	9.57	0.0070
BE	2705.54	1	2705.54	0.89	0.3604
CD	4535.33	1	4535.33	1.49	0.2405
CE	14.7968	1	14.7968	0.00	0.9453
DE	1465.84	1	1465.84	0.48	0.4982
<b>Residual</b>	48826.6	16	3051.66		
<b>Total</b>	1.71E+06	31			

X/L = 0.4					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	898470	1	898470	308.47	0.0000
B:Width	23672.7	1	23672.7	8.13	0.0116
C:Span	96932	1	96932	33.28	0.0000
D:Vertical Clearance	482491	1	482491	165.65	0.0000
E:HRR	98503.6	1	98503.6	33.82	0.0000
<b>Interactions</b>					
AB	11858.8	1	11858.8	4.07	0.0607
AC	3454.88	1	3454.88	1.19	0.2922
AD	14867.8	1	14867.8	5.10	0.0382
AE	686.722	1	686.722	0.24	0.6339
BC	81.856	1	81.856	0.03	0.8690
BD	30576.2	1	30576.2	10.50	0.0051
BE	2498.54	1	2498.54	0.86	0.3681
CD	4839.31	1	4839.31	1.66	0.2157
CE	53.976	1	53.976	0.02	0.8934
DE	1911.78	1	1911.78	0.66	0.4297
<b>Residual</b>	46602.5	16	2912.66		
<b>Total</b>	1.72E+06	31			

X/L = 0.5					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	898484	1	898484	306.06	<b>0.0000</b>
B:Width	20191.5	1	20191.5	6.88	<b>0.0185</b>
C:Span	83534.2	1	83534.2	28.46	<b>0.0001</b>
D:Vertical Clearance	503245	1	503245	171.43	<b>0.0000</b>
E:HRR	107215	1	107215	36.52	<b>0.0000</b>
<b>Interactions</b>					
AB	12221.9	1	12221.9	4.16	<b>0.0582</b>
AC	2183.28	1	2183.28	0.74	0.4012
AD	8068.31	1	8068.31	2.75	0.1168
AE	125.691	1	125.691	0.04	0.8387
BC	232.525	1	232.525	0.08	0.7820
BD	34119.3	1	34119.3	11.62	<b>0.0036</b>
BE	2299.1	1	2299.1	0.78	0.3893
CD	3894.03	1	3894.03	1.33	0.2664
CE	46.9965	1	46.9965	0.02	0.9009
DE	2002.5	1	2002.5	0.68	0.4210
<b>Residual</b>	46970	16	2935.62		
<b>Total</b>	1.72E+06	31			

X/L = 0.6					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	893256	1	893256	283.62	<b>0.0000</b>
B:Width	17861.4	1	17861.4	5.67	<b>0.0300</b>
C:Span	70299.4	1	70299.4	22.32	<b>0.0002</b>
D:Vertical Clearance	536736	1	536736	170.42	<b>0.0000</b>
E:HRR	117807	1	117807	37.41	<b>0.0000</b>
<b>Interactions</b>					
AB	12418.1	1	12418.1	3.94	<b>0.0645</b>
AC	591.508	1	591.508	0.19	0.6705
AD	2483.36	1	2483.36	0.79	0.3877
AE	109.372	1	109.372	0.03	0.8545
BC	247.42	1	247.42	0.08	0.7828
BD	40162	1	40162	12.75	<b>0.0026</b>
BE	2189.9	1	2189.9	0.70	0.4166
CD	2145.45	1	2145.45	0.68	0.4213
CE	17.1113	1	17.1113	0.01	0.9422
DE	1881.3	1	1881.3	0.60	0.4509
<b>Residual</b>	50390.9	16	3149.43		
<b>Total</b>	1.75E+06	31			

X/L = 0.7					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	864494	1	864494	252.12	0.0000
B:Width	17612.8	1	17612.8	5.14	0.0376
C:Span	52624.2	1	52624.2	15.35	0.0012
D:Vertical Clearance	572916	1	572916	167.08	0.0000
E:HRR	129861	1	129861	37.87	0.0000
<b>Interactions</b>					
AB	13534.2	1	13534.2	3.95	0.0644
AC	37.2385	1	37.2385	0.01	0.9183
AD	74.97	1	74.97	0.02	0.8843
AE	1687.22	1	1687.22	0.49	0.4931
BC	92.412	1	92.412	0.03	0.8717
BD	46698.7	1	46698.7	13.62	0.0020
BE	1926.65	1	1926.65	0.56	0.4644
CD	1056.85	1	1056.85	0.31	0.5865
CE	4.3218	1	4.3218	0.00	0.9721
DE	1493.58	1	1493.58	0.44	0.5187
<b>Residual</b>	54863.2	16	3428.95		
<b>Total</b>	1.76E+06	31			

X/L = 0.8					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	722267	1	722267	204.35	0.0000
B:Width	17644.3	1	17644.3	4.99	0.0401
C:Span	63539.9	1	63539.9	17.98	0.0006
D:Vertical Clearance	615703	1	615703	174.20	0.0000
E:HRR	139459	1	139459	39.46	0.0000
<b>Interactions</b>					
AB	15965.5	1	15965.5	4.52	0.0495
AC	3885.87	1	3885.87	1.10	0.3100
AD	10627.7	1	10627.7	3.01	0.1021
AE	7532.86	1	7532.86	2.13	0.1637
BC	0.346528	1	0.346528	0.00	0.9922
BD	49734.6	1	49734.6	14.07	0.0017
BE	1515.39	1	1515.39	0.43	0.5219
CD	445.586	1	445.586	0.13	0.7272
CE	113.967	1	113.967	0.03	0.8597
DE	670.787	1	670.787	0.19	0.6689
<b>Residual</b>	56552.5	16	3534.53		
<b>Total</b>	1.71E+06	31			

X/L = 0.9					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	356413	1	356413	134.16	<b>0.0000</b>
B:Width	17510.7	1	17510.7	6.59	<b>0.0207</b>
C:Span	19354.3	1	19354.3	7.29	<b>0.0158</b>
D:Vertical Clearance	690706	1	690706	260.00	<b>0.0000</b>
E:HRR	134216	1	134216	50.52	<b>0.0000</b>
<b>Interactions</b>					
AB	21698.6	1	21698.6	8.17	<b>0.0114</b>
AC	5380.48	1	5380.48	2.03	0.1739
AD	63972.9	1	63972.9	24.08	<b>0.0002</b>
AE	20477.8	1	20477.8	7.71	<b>0.0135</b>
BC	195.921	1	195.921	0.07	0.7894
BD	44690	1	44690	16.82	<b>0.0008</b>
BE	1070.69	1	1070.69	0.40	0.5345
CD	94.2565	1	94.2565	0.04	0.8530
CE	509.443	1	509.443	0.19	0.6673
DE	73.4472	1	73.4472	0.03	0.8700
<b>Residual</b>	42505.2	16	2656.57		
<b>Total</b>	1.42E+06	31			

X/L = 1					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	27341.7	1	27341.7	11.75	<b>0.0035</b>
B:Width	12116.6	1	12116.6	5.21	<b>0.0365</b>
C:Span	1273.36	1	1273.36	0.55	0.4702
D:Vertical Clearance	778403	1	778403	334.49	<b>0.0000</b>
E:HRR	96452.7	1	96452.7	41.45	<b>0.0000</b>
<b>Interactions</b>					
AB	27657.2	1	27657.2	11.88	<b>0.0033</b>
AC	447.155	1	447.155	0.19	0.6670
AD	127048	1	127048	54.59	<b>0.0000</b>
AE	15091.1	1	15091.1	6.48	<b>0.0216</b>
BC	1574.17	1	1574.17	0.68	0.4229
BD	38582.3	1	38582.3	16.58	<b>0.0009</b>
BE	931.609	1	931.609	0.40	0.5359
CD	172.237	1	172.237	0.07	0.7891
CE	161.64	1	161.64	0.07	0.7955
DE	4434.47	1	4434.47	1.91	0.1864
<b>Residual</b>	37233.7	16	2327.11		
<b>Total</b>	1.17E+06	31			

## RELATIVE POSITION TEMPERATURES – FIRE LOCATED MID-SPAN

X/L = 0					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	65833.7	1	65833.7	52.74	0.0000
B:Width	4407.2	1	4407.2	3.53	0.0786
C:Span	58677.1	1	58677.1	47.00	0.0000
D:Vertical Clearance	479475	1	479475	384.08	0.0000
E:HRR	100106	1	100106	80.19	0.0000
<b>Interactions</b>					
AB	13116.3	1	13116.3	10.51	0.0051
AC	41705.6	1	41705.6	33.41	0.0000
AD	22180.4	1	22180.4	17.77	0.0007
AE	712.909	1	712.909	0.57	0.4608
BC	19943	1	19943	15.98	0.0010
BD	732.488	1	732.488	0.59	0.4548
BE	118.503	1	118.503	0.09	0.7620
CD	6083.05	1	6083.05	4.87	0.0422
CE	132.031	1	132.031	0.11	0.7492
DE	3954.27	1	3954.27	3.17	0.0941
<b>Residual</b>	19974	16	1248.37		
<b>Total</b>	8.37E+05	31			

X/L = 0.1					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	104651	1	104651	277.66	0.0000
B:Width	9347.55	1	9347.55	24.80	0.0001
C:Span	64017.6	1	64017.6	169.85	0.0000
D:Vertical Clearance	421151	1	421151	1117.41	0.0000
E:HRR	102947	1	102947	273.14	0.0000
<b>Interactions</b>					
AB	35.1122	1	35.1122	0.09	0.7641
AC	1.94045	1	1.94045	0.01	0.9437
AD	52423.2	1	52423.2	139.09	0.0000
AE	1694.49	1	1694.49	4.50	0.0500
BC	643.508	1	643.508	1.71	0.2098
BD	705.189	1	705.189	1.87	0.1903
BE	22.8488	1	22.8488	0.06	0.8086
CD	5596.29	1	5596.29	14.85	0.0014
CE	13.056	1	13.056	0.03	0.8547
DE	5346.81	1	5346.81	14.19	0.0017
<b>Residual</b>	6030.36	16	376.898		
<b>Total</b>	7.75E+05	31			

X/L = 0.2					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	73941.3	1	73941.3	298.91	0.0000
B:Width	8329.53	1	8329.53	33.67	0.0000
C:Span	62384	1	62384	252.19	0.0000
D:Vertical Clearance	275100	1	275100	1112.08	0.0000
E:HRR	82298.3	1	82298.3	332.69	0.0000
<b>Interactions</b>					
AB	35.322	1	35.322	0.14	0.7105
AC	1335.93	1	1335.93	5.40	0.0336
AD	60572.9	1	60572.9	244.86	0.0000
AE	2617.26	1	2617.26	10.58	0.0050
BC	438.228	1	438.228	1.77	0.2019
BD	1595.28	1	1595.28	6.45	0.0219
BE	26.8278	1	26.8278	0.11	0.7462
CD	2044.8	1	2044.8	8.27	0.0110
CE	22.9842	1	22.9842	0.09	0.7644
DE	3435.38	1	3435.38	13.89	0.0018
<b>Residual</b>	3957.98	16	247.374		
<b>Total</b>	5.78E+05	31			

X/L = 0.3					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	27114.8	1	27114.8	116.76	0.0000
B:Width	3068.77	1	3068.77	13.21	0.0022
C:Span	49523.6	1	49523.6	213.26	0.0000
D:Vertical Clearance	158528	1	158528	682.65	0.0000
E:HRR	74040.3	1	74040.3	318.83	0.0000
<b>Interactions</b>					
AB	997.146	1	997.146	4.29	0.0548
AC	16.9799	1	16.9799	0.07	0.7903
AD	29031.5	1	29031.5	125.01	0.0000
AE	2376.19	1	2376.19	10.23	0.0056
BC	533.256	1	533.256	2.30	0.1492
BD	1861.26	1	1861.26	8.01	0.0120
BE	1.85763	1	1.85763	0.01	0.9298
CD	4180.41	1	4180.41	18.00	0.0006
CE	299.941	1	299.941	1.29	0.2725
DE	220.763	1	220.763	0.95	0.3441
<b>Residual</b>	3715.59	16	232.225		
<b>Total</b>	3.56E+05	31			



X/L = 0.4					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	297.802	1	297.802	2.53	0.1312
B:Width	85.4778	1	85.4778	0.73	0.4066
C:Span	74633.2	1	74633.2	634.38	0.0000
D:Vertical Clearance	200430	1	200430	1703.64	0.0000
E:HRR	115897	1	115897	985.12	0.0000
<b>Interactions</b>					
AB	42.274	1	42.274	0.36	0.5573
AC	181.642	1	181.642	1.54	0.2319
AD	1817.74	1	1817.74	15.45	0.0012
AE	478.332	1	478.332	4.07	0.0609
BC	883.26	1	883.26	7.51	0.0145
BD	9.48301	1	9.48301	0.08	0.7801
BE	1.6562	1	1.6562	0.01	0.9070
CD	4869.86	1	4869.86	41.39	0.0000
CE	1372.09	1	1372.09	11.66	0.0035
DE	2529.74	1	2529.74	21.50	0.0003
<b>Residual</b>	1882.37	16	117.648		
<b>Total</b>	4.05E+05	31			

X/L = 0.5					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	7766.01	1	7766.01	19.56	0.0004
B:Width	5439.51	1	5439.51	13.70	0.0019
C:Span	775.688	1	775.688	1.95	0.1813
D:Vertical Clearance	986236	1	986236	2483.79	0.0000
E:HRR	141500	1	141500	356.36	0.0000
<b>Interactions</b>					
AB	1140.87	1	1140.87	2.87	0.1094
AC	7537.77	1	7537.77	18.98	0.0005
AD	13.847	1	13.847	0.03	0.8542
AE	1274.24	1	1274.24	3.21	0.0922
BC	1842.09	1	1842.09	4.64	0.0468
BD	1426.45	1	1426.45	3.59	0.0763
BE	61.6883	1	61.6883	0.16	0.6987
CD	1802.85	1	1802.85	4.54	0.0490
CE	211.82	1	211.82	0.53	0.4757
DE	20800.4	1	20800.4	52.38	0.0000
<b>Residual</b>	6353.09	16	397.068		
<b>Total</b>	1.18E+06	31			

X/L = 0.6					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	5879.07	1	5879.07	54.96	0.0000
B:Width	727.139	1	727.139	6.80	0.0191
C:Span	105710	1	105710	988.22	0.0000
D:Vertical Clearance	159006	1	159006	1486.44	0.0000
E:HRR	102804	1	102804	961.05	0.0000
<b>Interactions</b>					
AB	0.308113	1	0.308113	0.00	0.9579
AC	167.171	1	167.171	1.56	0.2292
AD	1941.58	1	1941.58	18.15	0.0006
AE	888.311	1	888.311	8.30	0.0108
BC	1263.29	1	1263.29	11.81	0.0034
BD	1092.55	1	1092.55	10.21	0.0056
BE	18.7272	1	18.7272	0.18	0.6812
CD	3362.41	1	3362.41	31.43	0.0000
CE	2778.85	1	2778.85	25.98	0.0001
DE	2027.57	1	2027.57	18.95	0.0005
<b>Residual</b>	1711.53	16	106.97		
<b>Total</b>	3.89E+05	31			

X/L = 0.7					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	46213.3	1	46213.3	254.47	0.0000
B:Width	1716.83	1	1716.83	9.45	0.0073
C:Span	63566.6	1	63566.6	350.03	0.0000
D:Vertical Clearance	153847	1	153847	847.15	0.0000
E:HRR	76189.5	1	76189.5	419.53	0.0000
<b>Interactions</b>					
AB	461.396	1	461.396	2.54	0.1305
AC	187.26	1	187.26	1.03	0.3250
AD	30192.2	1	30192.2	166.25	0.0000
AE	2204.31	1	2204.31	12.14	0.0031
BC	585.932	1	585.932	3.23	0.0914
BD	2980.11	1	2980.11	16.41	0.0009
BE	38.6101	1	38.6101	0.21	0.6509
CD	2268.85	1	2268.85	12.49	0.0028
CE	531.299	1	531.299	2.93	0.1065
DE	1030.24	1	1030.24	5.67	0.0300
<b>Residual</b>	2905.69	16	181.606		
<b>Total</b>	3.85E+05	31			

X/L = 0.8					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	89217.2	1	89217.2	523.28	0.0000
B:Width	7098.36	1	7098.36	41.63	0.0000
C:Span	69605.5	1	69605.5	408.25	0.0000
D:Vertical Clearance	268091	1	268091	1572.42	0.0000
E:HRR	85204	1	85204	499.74	0.0000
<b>Interactions</b>					
AB	17.5232	1	17.5232	0.10	0.7527
AC	1761.21	1	1761.21	10.33	0.0054
AD	57550.4	1	57550.4	337.55	0.0000
AE	2824.14	1	2824.14	16.56	0.0009
BC	427.635	1	427.635	2.51	0.1328
BD	2372.23	1	2372.23	13.91	0.0018
BE	131.706	1	131.706	0.77	0.3925
CD	1735.19	1	1735.19	10.18	0.0057
CE	56.3922	1	56.3922	0.33	0.5732
DE	4710.81	1	4710.81	27.63	0.0001
<b>Residual</b>	2727.94	16	170.496		
<b>Total</b>	5.94E+05	31			

X/L = 0.9					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	121619	1	121619	496.95	0.0000
B:Width	6781.17	1	6781.17	27.71	0.0001
C:Span	72438.6	1	72438.6	295.99	0.0000
D:Vertical Clearance	409198	1	409198	1672.04	0.0000
E:HRR	101580	1	101580	415.07	0.0000
<b>Interactions</b>					
AB	19.987	1	19.987	0.08	0.7787
AC	18.468	1	18.468	0.08	0.7871
AD	50526.2	1	50526.2	206.46	0.0000
AE	2222.28	1	2222.28	9.08	0.0082
BC	772.736	1	772.736	3.16	0.0946
BD	1025.25	1	1025.25	4.19	0.0575
BE	37.6929	1	37.6929	0.15	0.6999
CD	3842.36	1	3842.36	15.70	0.0011
CE	313.563	1	313.563	1.28	0.2743
DE	5734.94	1	5734.94	23.43	0.0002
<b>Residual</b>	3915.69	16	244.731		
<b>Total</b>	7.80E+05	31			

X/L = 1					
FLANGE TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	90734.8	1	90734.8	85.70	<b>0.0000</b>
B:Width	5488.64	1	5488.64	5.18	<b>0.0369</b>
C:Span	192428	1	192428	181.76	<b>0.0000</b>
D:Vertical Clearance	466522	1	466522	440.65	<b>0.0000</b>
E:HRR	94105.3	1	94105.3	88.89	<b>0.0000</b>
<b>Interactions</b>					
AB	10484.6	1	10484.6	9.90	<b>0.0062</b>
AC	859.155	1	859.155	0.81	0.3810
AD	25522.7	1	25522.7	24.11	<b>0.0002</b>
AE	770.379	1	770.379	0.73	0.4062
BC	17226.9	1	17226.9	16.27	<b>0.0010</b>
BD	807.719	1	807.719	0.76	0.3953
BE	112.238	1	112.238	0.11	0.7489
CD	11168.8	1	11168.8	10.55	<b>0.0050</b>
CE	2267.17	1	2267.17	2.14	0.1627
DE	4263.57	1	4263.57	4.03	<b>0.0620</b>
<b>Residual</b>	16939.4	16	1058.71		
<b>Total</b>	9.40E+05	31			

X/L = 0					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	1116.05	1	1116.05	4.63	<b>0.0471</b>
B:Width	1116.28	1	1116.28	4.63	<b>0.0471</b>
C:Span	43793.2	1	43793.2	181.52	<b>0.0000</b>
D:Vertical Clearance	834632	1	834632	3459.55	<b>0.0000</b>
E:HRR	136514	1	136514	565.85	<b>0.0000</b>
<b>Interactions</b>					
AB	196.912	1	196.912	0.82	0.3797
AC	3151.78	1	3151.78	13.06	<b>0.0023</b>
AD	6490.59	1	6490.59	26.90	<b>0.0001</b>
AE	1.02961	1	1.02961	0.00	0.9487
BC	321.311	1	321.311	1.33	0.2654
BD	358.049	1	358.049	1.48	0.2408
BE	8.3232	1	8.3232	0.03	0.8550
CD	6743.09	1	6743.09	27.95	<b>0.0001</b>
CE	81.5364	1	81.5364	0.34	0.5691
DE	2312.68	1	2312.68	9.59	<b>0.0069</b>
<b>Residual</b>	3860.07	16	241.254		
<b>Total</b>	1.04E+06	31			

X/L = 0.1					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	18409	1	18409	78.53	0.0000
B:Width	1483.76	1	1483.76	6.33	0.0229
C:Span	54654.8	1	54654.8	233.15	0.0000
D:Vertical Clearance	974799	1	974799	4158.37	0.0000
E:HRR	165675	1	165675	706.75	0.0000
<b>Interactions</b>					
AB	490.471	1	490.471	2.09	0.1674
AC	119.12	1	119.12	0.51	0.4862
AD	10370.2	1	10370.2	44.24	0.0000
AE	363.556	1	363.556	1.55	0.2309
BC	160.384	1	160.384	0.68	0.4203
BD	106.288	1	106.288	0.45	0.5103
BE	8	1	8	0.03	0.8558
CD	6548.83	1	6548.83	27.94	0.0001
CE	132.275	1	132.275	0.56	0.4635
DE	2369.13	1	2369.13	10.11	0.0058
<b>Residual</b>	3750.7	16	234.419		
<b>Total</b>	1.24E+06	31			

X/L = 0.2					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	8598.52	1	8598.52	41.78	0.0000
B:Width	437.858	1	437.858	2.13	0.1640
C:Span	56733.1	1	56733.1	275.69	0.0000
D:Vertical Clearance	1064700	1	1064700	5173.74	0.0000
E:HRR	189197	1	189197	919.37	0.0000
<b>Interactions</b>					
AB	366.325	1	366.325	1.78	0.2008
AC	105.379	1	105.379	0.51	0.4846
AD	7244.77	1	7244.77	35.20	0.0000
AE	307.83	1	307.83	1.50	0.2390
BC	242.495	1	242.495	1.18	0.2938
BD	73.8416	1	73.8416	0.36	0.5575
BE	10.6376	1	10.6376	0.05	0.8230
CD	4616.88	1	4616.88	22.43	0.0002
CE	116.93	1	116.93	0.57	0.4619
DE	1443.59	1	1443.59	7.01	0.0175
<b>Residual</b>	3292.63	16	205.79		
<b>Total</b>	1.34E+06	31			

X/L = 0.3					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	1554.73	1	1554.73	7.57	<b>0.0142</b>
B:Width	92.9907	1	92.9907	0.45	0.5105
C:Span	45387.1	1	45387.1	221.09	<b>0.0000</b>
D:Vertical Clearance	1184460	1	1184460	5769.68	<b>0.0000</b>
E:HRR	224013	1	224013	1091.20	<b>0.0000</b>
<b>Interactions</b>					
AB	53.5871	1	53.5871	0.26	0.6164
AC	82.9794	1	82.9794	0.40	0.5339
AD	2811.94	1	2811.94	13.70	<b>0.0019</b>
AE	299.329	1	299.329	1.46	0.2448
BC	491.803	1	491.803	2.40	0.1412
BD	128.761	1	128.761	0.63	0.4400
BE	5.128	1	5.128	0.02	0.8764
CD	2890.09	1	2890.09	14.08	<b>0.0017</b>
CE	58.347	1	58.347	0.28	0.6013
DE	133.13	1	133.13	0.65	0.4325
<b>Residual</b>	3284.66	16	205.291		
<b>Total</b>	1.47E+06	31			

X/L = 0.4					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	1001.51	1	1001.51	4.78	<b>0.0440</b>
B:Width	2108.28	1	2108.28	10.07	<b>0.0059</b>
C:Span	20006	1	20006	95.53	<b>0.0000</b>
D:Vertical Clearance	1454680	1	1454680	6946.16	<b>0.0000</b>
E:HRR	263462	1	263462	1258.04	<b>0.0000</b>
<b>Interactions</b>					
AB	189.249	1	189.249	0.90	0.3559
AC	115.976	1	115.976	0.55	0.4676
AD	237.729	1	237.729	1.14	0.3025
AE	473.858	1	473.858	2.26	0.1520
BC	857.394	1	857.394	4.09	<b>0.0601</b>
BD	617.937	1	617.937	2.95	0.1051
BE	0.515113	1	0.515113	0.00	0.9611
CD	309.01	1	309.01	1.48	0.2421
CE	3.2258	1	3.2258	0.02	0.9028
DE	2575.11	1	2575.11	12.30	<b>0.0029</b>
<b>Residual</b>	3350.75	16	209.422		
<b>Total</b>	1.75E+06	31			

X/L = 0.5					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	1701.49	1	1701.49	5.97	0.0265
B:Width	5148.59	1	5148.59	18.07	0.0006
C:Span	54.184	1	54.184	0.19	0.6686
D:Vertical Clearance	1843880	1	1843880	6471.75	0.0000
E:HRR	252519	1	252519	886.30	0.0000
<b>Interactions</b>					
AB	792.816	1	792.816	2.78	0.1147
AC	1502.89	1	1502.89	5.27	0.0355
AD	60.61	1	60.61	0.21	0.6508
AE	823.165	1	823.165	2.89	0.1085
BC	1436.21	1	1436.21	5.04	0.0392
BD	856.98	1	856.98	3.01	0.1021
BE	0.535612	1	0.535612	0.00	0.9660
CD	2192.88	1	2192.88	7.70	0.0135
CE	69.2664	1	69.2664	0.24	0.6287
DE	12839.2	1	12839.2	45.06	0.0000
<b>Residual</b>	4558.6	16	284.913		
<b>Total</b>	2.13E+06	31			

X/L = 0.6					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	646.471	1	646.471	3.52	0.0791
B:Width	4288.07	1	4288.07	23.33	0.0002
C:Span	36673.8	1	36673.8	199.53	0.0000
D:Vertical Clearance	1376710	1	1376710	7490.22	0.0000
E:HRR	260777	1	260777	1418.80	0.0000
<b>Interactions</b>					
AB	290.948	1	290.948	1.58	0.2264
AC	1232.44	1	1232.44	6.71	0.0198
AD	724.948	1	724.948	3.94	0.0644
AE	438.746	1	438.746	2.39	0.1419
BC	1513.19	1	1513.19	8.23	0.0111
BD	67.367	1	67.367	0.37	0.5534
BE	21.995	1	21.995	0.12	0.7339
CD	151.337	1	151.337	0.82	0.3777
CE	141.33	1	141.33	0.77	0.3935
DE	1279.8	1	1279.8	6.96	0.0179
<b>Residual</b>	2940.81	16	183.801		
<b>Total</b>	1.69E+06	31			

X/L = 0.7					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	7384.47	1	7384.47	59.00	0.0000
B:Width	999.827	1	999.827	7.99	0.0122
C:Span	57412.2	1	57412.2	458.68	0.0000
D:Vertical Clearance	1122550	1	1122550	8968.32	0.0000
E:HRR	220855	1	220855	1764.46	0.0000
<b>Interactions</b>					
AB	44.7222	1	44.7222	0.36	0.5584
AC	399.243	1	399.243	3.19	0.0931
AD	3880.14	1	3880.14	31.00	0.0000
AE	384.407	1	384.407	3.07	0.0988
BC	967.67	1	967.67	7.73	0.0134
BD	18.3467	1	18.3467	0.15	0.7069
BE	33.4358	1	33.4358	0.27	0.6123
CD	1838.76	1	1838.76	14.69	0.0015
CE	576.556	1	576.556	4.61	0.0475
DE	325.316	1	325.316	2.60	0.1265
<b>Residual</b>	2002.7	16	125.169		
<b>Total</b>	1.42E+06	31			

X/L = 0.8					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	17897.4	1	17897.4	159.54	0.0000
B:Width	0.32805	1	0.32805	0.00	0.9575
C:Span	63769.1	1	63769.1	568.43	0.0000
D:Vertical Clearance	1015210	1	1015210	9049.46	0.0000
E:HRR	185221	1	185221	1651.05	0.0000
<b>Interactions</b>					
AB	408.551	1	408.551	3.64	0.0745
AC	380.604	1	380.604	3.39	0.0841
AD	9144.93	1	9144.93	81.52	0.0000
AE	474.782	1	474.782	4.23	0.0563
BC	608.133	1	608.133	5.42	0.0333
BD	5.66161	1	5.66161	0.05	0.8251
BE	9.63605	1	9.63605	0.09	0.7732
CD	3286.98	1	3286.98	29.30	0.0001
CE	700.315	1	700.315	6.24	0.0237
DE	1785.93	1	1785.93	15.92	0.0011
<b>Residual</b>	1794.95	16	112.184		
<b>Total</b>	1.30E+06	31			



X/L = 0.9					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	27288.6	1	27288.6	223.64	0.0000
B:Width	396.563	1	396.563	3.25	0.0903
C:Span	68149.7	1	68149.7	558.51	0.0000
D:Vertical Clearance	934252	1	934252	7656.55	0.0000
E:HRR	161365	1	161365	1322.44	0.0000
<b>Interactions</b>					
AB	557.53	1	557.53	4.57	0.0483
AC	248.924	1	248.924	2.04	0.1724
AD	11732.4	1	11732.4	96.15	0.0000
AE	527.232	1	527.232	4.32	0.0541
BC	632.879	1	632.879	5.19	0.0368
BD	12.0173	1	12.0173	0.10	0.7577
BE	0.553878	1	0.553878	0.00	0.9471
CD	5299.61	1	5299.61	43.43	0.0000
CE	933.228	1	933.228	7.65	0.0138
DE	2563.1	1	2563.1	21.01	0.0003
<b>Residual</b>	1952.32	16	122.02		
<b>Total</b>	1.22E+06	31			

X/L = 1					
WEB TEMPERATURES	Sum of squares	Degrees of freedom	Mean Square	F-ratio	p-value
<b>Main Effects</b>					
A:Bridge Substructure Configuration	4114.38	1	4114.38	26.41	0.0001
B:Width	218.353	1	218.353	1.40	0.2538
C:Span	90230.7	1	90230.7	579.13	0.0000
D:Vertical Clearance	806415	1	806415	5175.84	0.0000
E:HRR	134052	1	134052	860.39	0.0000
<b>Interactions</b>					
AB	325.571	1	325.571	2.09	0.1676
AC	19.0499	1	19.0499	0.12	0.7311
AD	7737.99	1	7737.99	49.66	0.0000
AE	31.9001	1	31.9001	0.20	0.6570
BC	955.61	1	955.61	6.13	0.0248
BD	267.788	1	267.788	1.72	0.2084
BE	0.00475313	1	0.00475313	0.00	0.9957
CD	8509.58	1	8509.58	54.62	0.0000
CE	1413.13	1	1413.13	9.07	0.0083
DE	2429.57	1	2429.57	15.59	0.0011
<b>Residual</b>	2492.86	16	155.804		
<b>Total</b>	1.06E+06	31			

