

Steel Design Report

Element: **Untitled1 (C:\DCC\steel)**
 Description:
 Date: **10/31/2002 03:16 PM**

Company:
 User:
 Software: **Digital Canal Steel Beam Design**

GENERAL INFORMATION

Description	Value
Design Criteria	Design
Design Code	AISC ASD (1990)
Total Span Length	24.00 Ft
First Node Support	Pinned
Last Node Support	Pinned
Total Load Deflection	L/240.00
Live Load Deflection	L/360.00
Maximum Stress Ratio	1.000
Bending Coefficient	1.0
Steel Yield Stress	36 K/In ²
Section Shape	W
Maximum Section Depth	36.00 In
Minimum Section Depth	12.00 In
Number of Solutions	10
Live Load Patterning	Yes

SPAN LENGTH DATA (Unit: Ft)

Span 1	12.00	Span 2	12.00	-	-	-	-
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LOAD INFORMATION

LOADS

Ref. No.	Load Case	Load Type	Dir	Begin Value	Begin Position	End Value	End Position
1	Dead	Linear	Y	-1.000 (K/Ft)	0.00 (Ft)	-1.000 (K/Ft)	24.000 (Ft)
2	Live	Concen	Y	-4.000 (K)	6.00 (Ft)	-	-

LOAD COMBINATIONS

LC1: DL Only
 LC2: DL + LL on Odd Spans
 LC3: DL + LL on Even Spans
 LC4: DL + LL on Spans-1

CRITICAL STRESS SUMMARY

Ref. No.	Section Name	Status	Governing Criteria	Bending Ratio	LC	Shear Ratio	LC	Deflection Ratio-LL	LC	Deflection Ratio-TL	LC
1	W12x14	OK	BENDING	0.839	2	0.288	2	0.173	2	0.241	2
2	W14x22	OK	BENDING	0.392	2	0.217	2	0.077	2	0.107	2
3	W16x26	OK	BENDING	0.296	2	0.175	2	0.051	2	0.071	2
4	W18x35	OK	BENDING	0.197	2	0.129	2	0.030	2	0.042	2
5	W21x44	OK	BENDING	0.139	2	0.095	2	0.018	2	0.025	2
6	W24x55	OK	BENDING	0.100	2	0.074	2	0.011	2	0.016	2
7	W27x84	OK	SHEAR	0.053	2	0.056	2	0.005	2	0.007	2
8	W30x90	OK	SHEAR	0.046	2	0.049	2	0.004	2	0.006	2
9	W33x118	OK	SHEAR	0.032	2	0.038	2	0.003	2	0.004	2
10	W36x135	OK	SHEAR	0.026	2	0.032	2	0.002	2	0.003	2

Recommended: W12x14