

ANALYSIS OF VALMONT INDUSTRIES LIGHTING STRUCTURE
IN ACCORDANCE WITH AASHTO-1994 RQMTS. (FINAL DEFLECTED POSITION)
BY MLS 03/31/2010 VERSION Fuse 1.9.0.363

SUBJECT: MASSACHUSETTS, 20' MAST ARM (WORST CASE LOAD)

FOLDER: MATR335 FILE: 20

R E S U L T S S U M M A R Y

MAXIMUM COMBINED STRESS RATIO
IN EACH MAJOR COMPONENT
==== (GROUPS I, II & III) =====

MAXIMUM REACTIONS APPLIED TO FOUNDATION
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POLE (AT 0.00 (FT)) = 0.69
SIGNAL AND SIGNAL ARM 1 = 0.72
BASE PLATE = 0.57
ANCHOR BOLTS = 0.55
S/S ARM 1 ATTACH. BOLTS = 0.25
S/S ARM 1 ATTACH. PLATE = 0.66

BENDING MOMENT = 26782 FT-LBS
TORSION = 14361 FT-LBS
SHEAR FORCE = 1523 LBS
AXIAL FORCE = 1082 LBS

MAXIMUM BENDING + AXIAL DEAD WT. STRESS
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POLE = 9.62 KSI
SIGNAL/SIGNAL ARM 1 = 9.97 KSI

RESULTANT DEFLECTION OF POLE TOP
CAUSED BY DEAD WEIGHT
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0.87 DEGREES