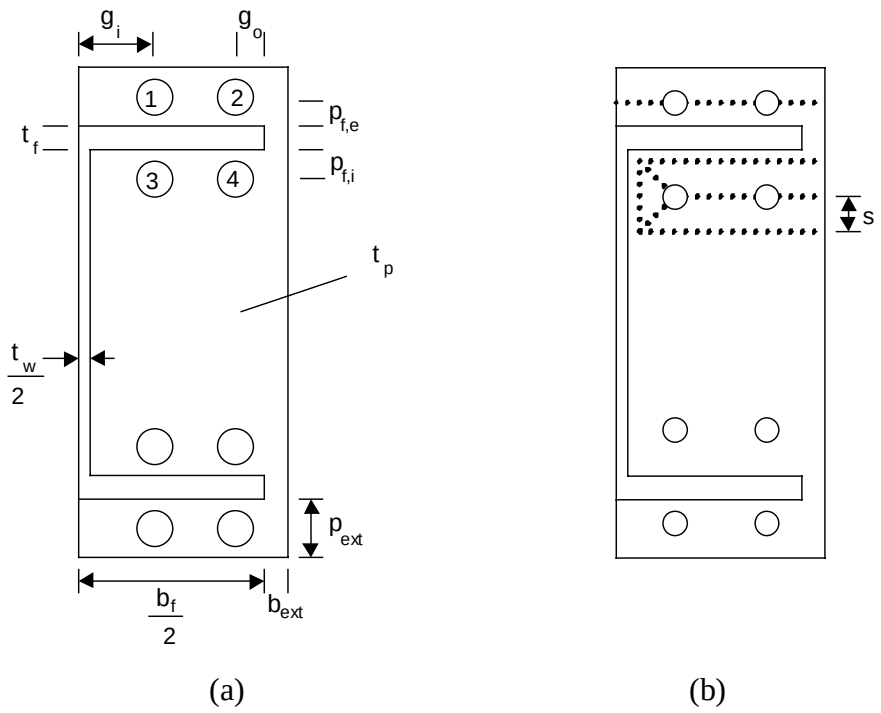


FIGURE 5-1. Four-bolt wide (a) end-plate configuration with bolt numbering scheme, and (b) controlling yield line pattern.

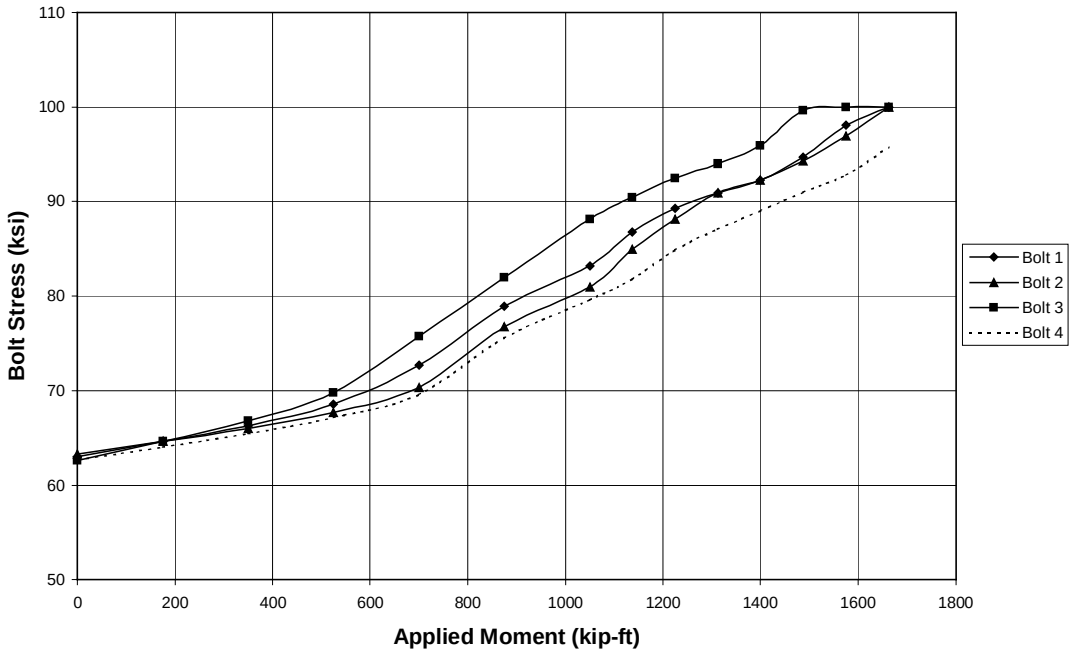


FIGURE 5-2. Bolt stresses vs. applied moment for standard specimen.

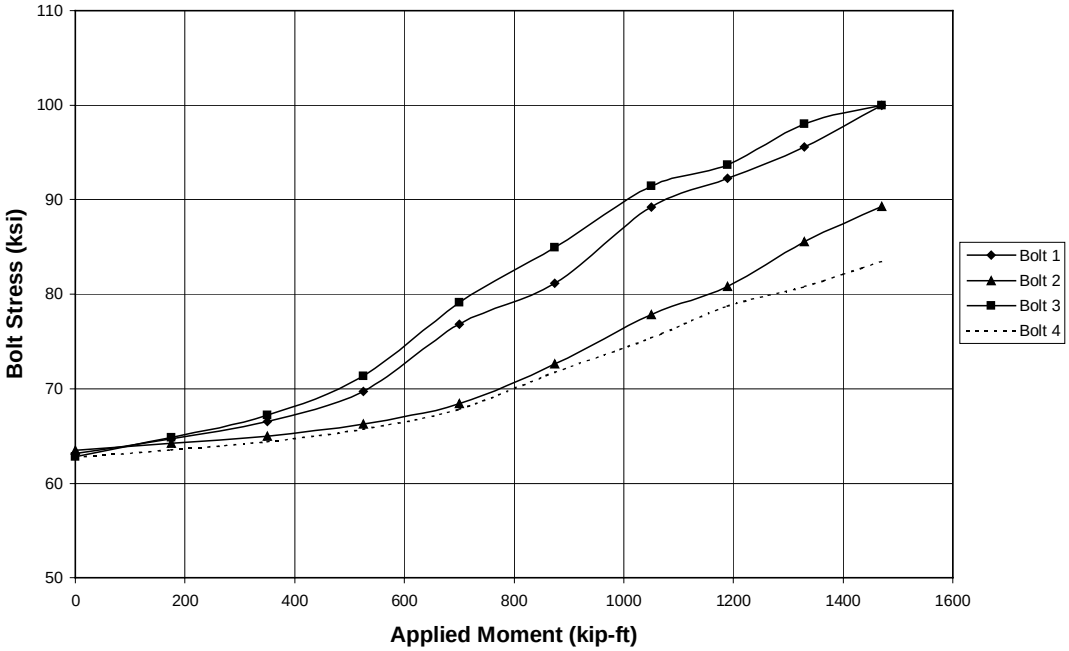


FIGURE 5-3. Bolt stresses vs. applied moment for standard specimen with $g_0$=-0.50 in. (outside the flange tip).

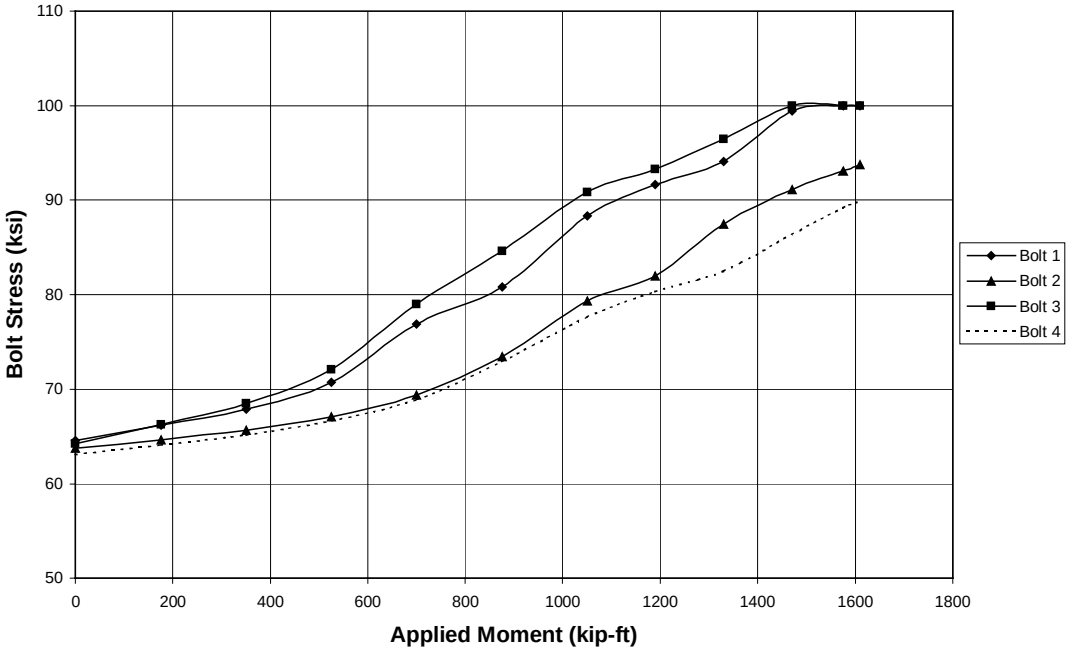


FIGURE 5-4. Bolt stresses vs. applied moment for standard specimen with $g_0$=0.00 in. (at the flange tip)

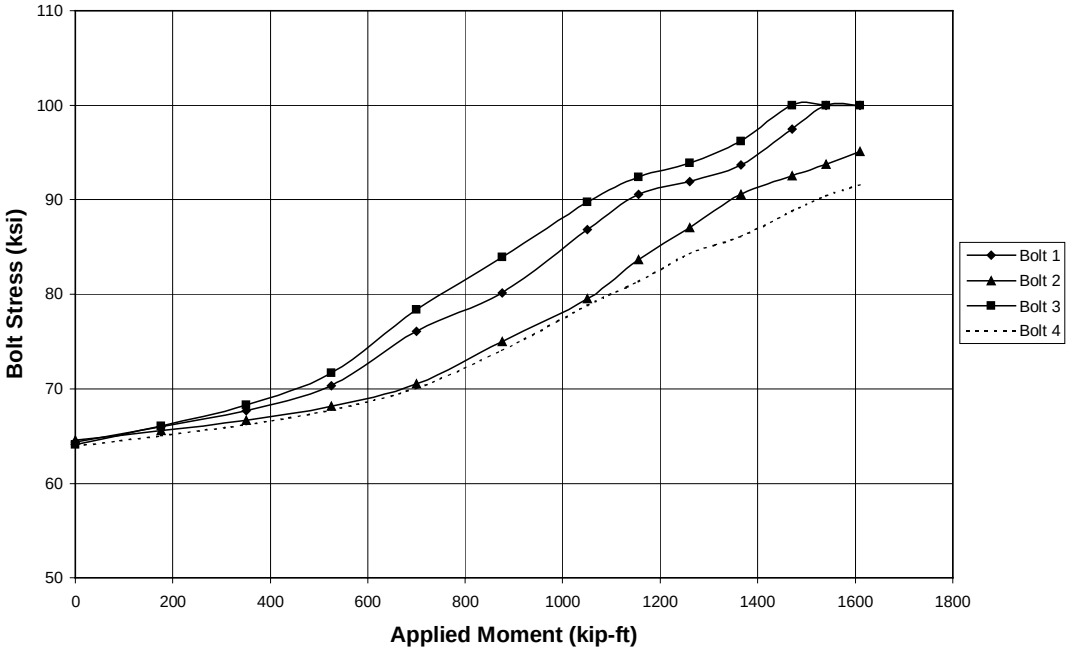


FIGURE 5-5. Bolt stresses vs. applied moment for standard specimen with $g_0$=0.50 in.(inside the flange tip).

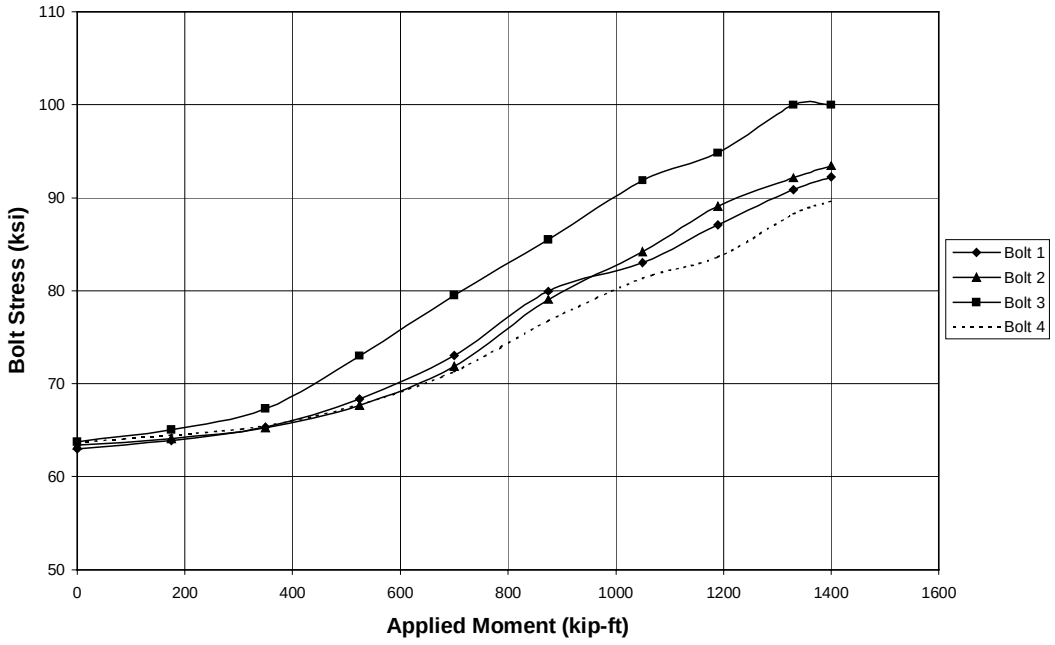


FIGURE 5-6. Bolt stresses vs. applied moment for standard specimen with $p_f$=2.25 in.

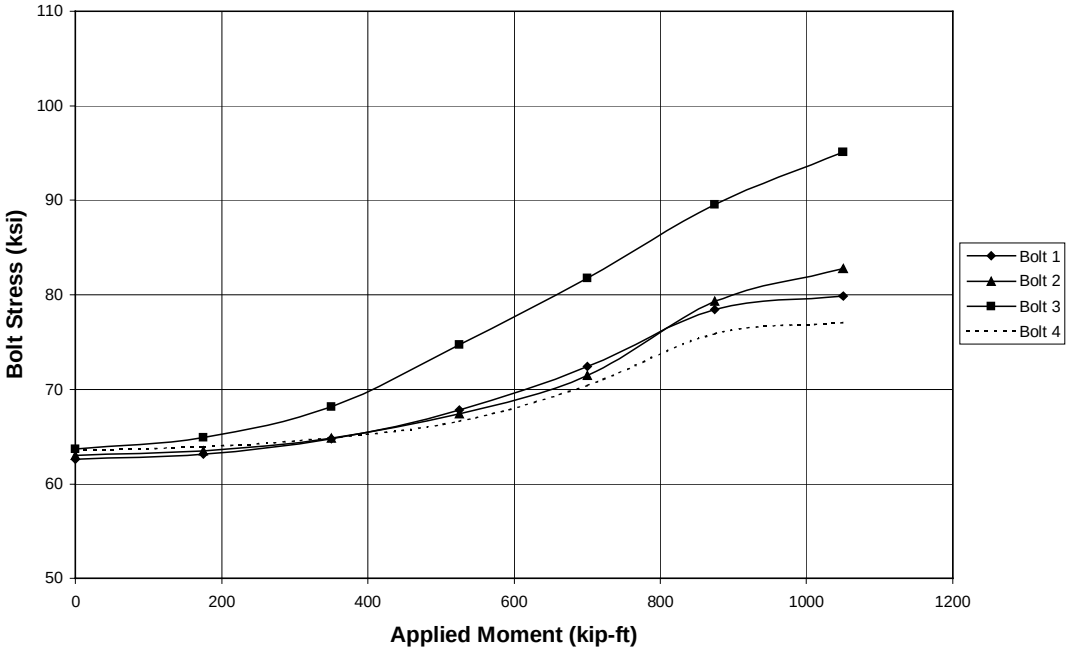


FIGURE 5-7. Bolt stresses vs. applied moment for standard specimen with $p_f$=2.75 in.

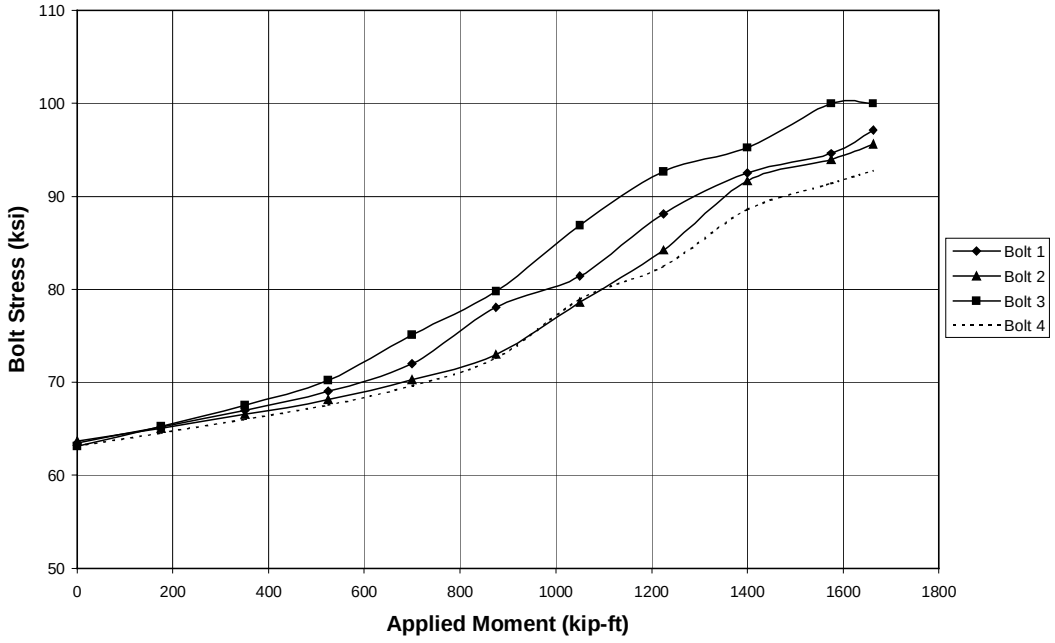


FIGURE 5-8. Bolt stresses vs. applied moment for standard specimen with $t_p$=0.875 in.

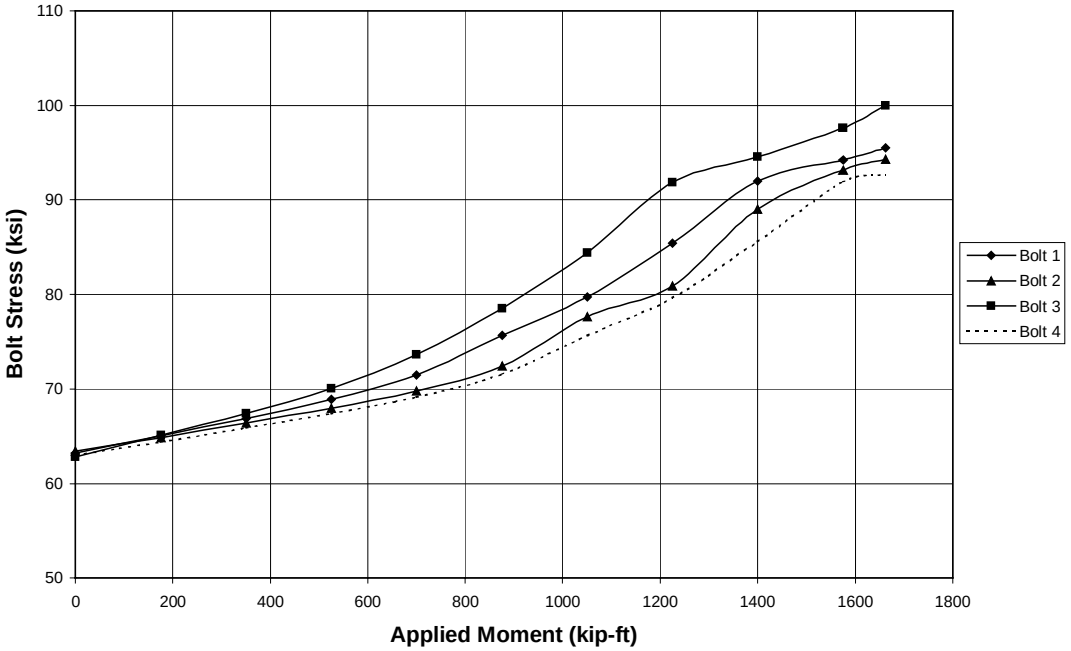


FIGURE 5-9. Bolt stresses vs. applied moment for standard specimen with $t_p$=1.00 in.

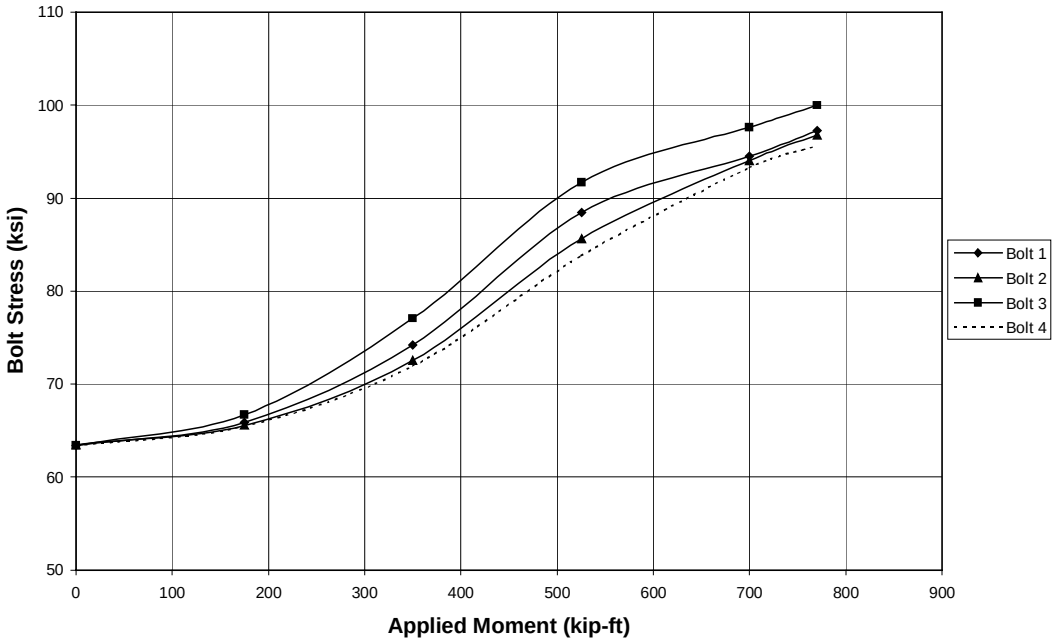


FIGURE 5-10. Bolt stresses vs. applied moment for standard specimen with $d_b$=0.75 in.

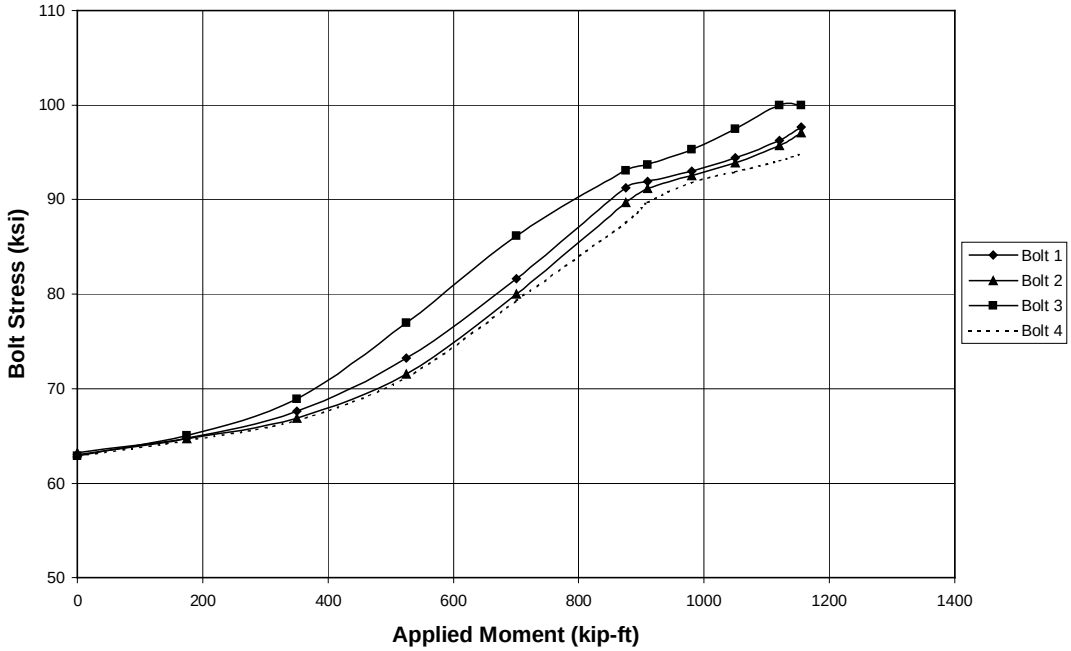


FIGURE 5-11. Bolt stresses vs. applied moment for standard specimen with $d_b$=1.00 in.

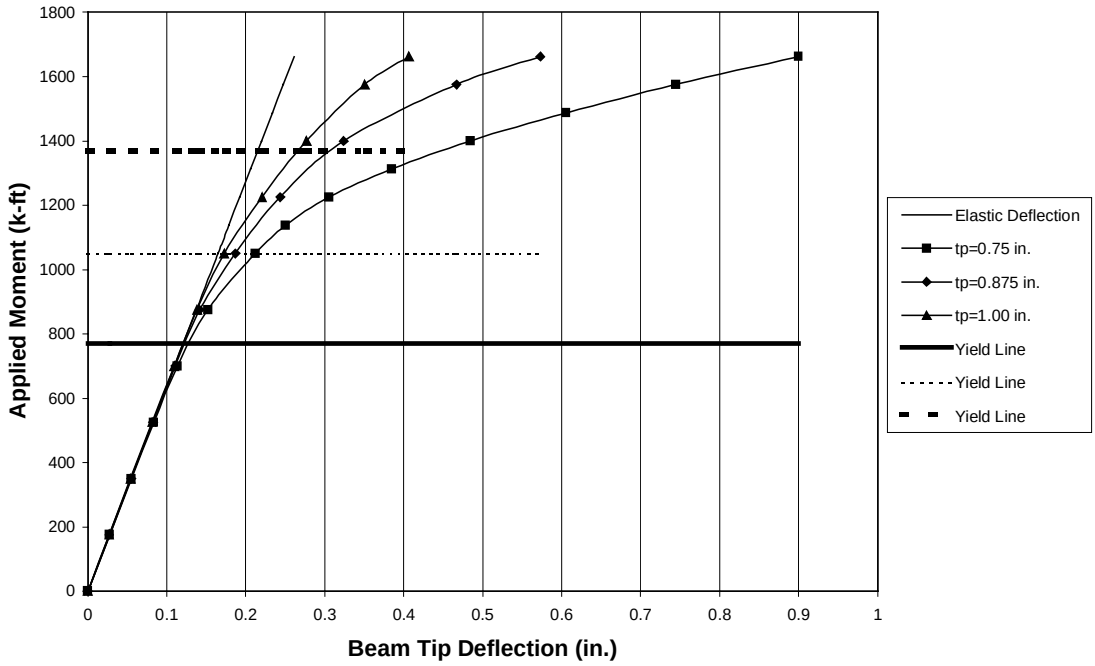


FIGURE 5-12. Applied moment vs. beam tip deflection for standard specimen with varying end-plate thicknesses.