

SB-0034.

Calculation C-CSS-099.20-054, Revision 0:

Page 9: At the top of the page, equation  $y = \text{Max}(0, c-h)$

Please explain how this is used in the calculation. Given that  $c$  is always less than  $h$ , the above equation will always return  $y = 0$ .

#### BECHTEL RESPONSE

Please refer to Figure 1 below for a graphical explanation of the meaning of  $y$ . As can be seen, the variable  $y$  is always measured from the location of the neutral axis, which lies outside of the concrete cross section only when the compression force  $P$  is very large (i.e., for demands nearing the compressive capacity of the section). Therefore, for a section under the large compression demand shown in figure 1, the internal compressive force  $C$  is obtain by integrating the compressive stress between  $(c-h)$  and  $c$ .

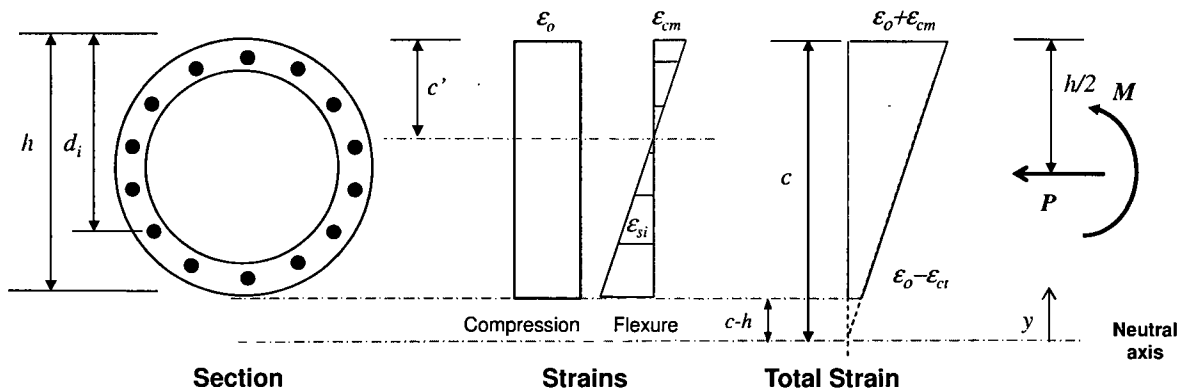


Figure 1: Strains and demands for a section under large compression demand and moment

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