

PROJECT TITLE :

	Company		Client	
	Author		File Name	

midas Gen - RC-Mesh Flexural Wall Design [NSR-10] Gen 2025
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- . Information of Parameters.
  Elem No.   : 556
  LCB No.    : 1
  Materials : fc = 27.5790 MPa.
              Fy = 413.6856 MPa.
  Thickness : t = 300.0000 mm.

- . Design Forces.
  Sig_x = 0.0050 MPa.
  Sig_y = -0.0281 MPa.
  Tau_xy = 0.0128 MPa.

  Sig_max = 0.0050 MPa. (x-dir)
  Sig_min = -0.0281 MPa. (y-dir)
  Tau_xy = 0.0128 MPa.

- . Required Reinforcement and Concrete stress.
  (Sig min in Tension or Sig max*Sig min <= Tau xy^2 --> Rebar Required!)
  ft_max = |Tau_xy| - Sig_max = 0.0078 MPa. (x-dir)
  ft_min = |Tau_xy| - Sig_min = 0.0409 MPa. (y-dir)

  f'tx = 0.0078 MPa.
  f'ty = 0.0409 MPa.
  Sig_c = 2*|Tau_xy| = 0.0255 MPa.

  rhoy_req = 0.0015
  rhox_req = 0.0025

- . Tensile Strength provided by Reinforcement.
  b = 1.0 mm. (by Unit Length).
  Asx_Req = 0.7500 mm^2/mm. ( 750.0000 mm^2/m.)
  Asy_Req = 0.4500 mm^2/mm. ( 450.0000 mm^2/m.)
  Asx_use = 0.8000 mm^2/mm. ( 799.9984 mm^2/m.)
  Asy_use = 0.5161 mm^2/mm. ( 516.1280 mm^2/m.)
  ftnx = Asx_use/(b*t)*fy = 1.1032 MPa.
  ftny = Asy_use/(b*t)*fy = 0.7117 MPa.

- . Check the Ratio.
  Rein. Bar_x : (Hor.)
  Rein. Bar_y : (Ver.)
  Rat_x = f'tx/ftnx = 0.007
  Rat_y = f'ty/ftny = 0.057
  Rat_c = Sig_c/fc = 9.263e-04
  Rat = Rat_y = 0.057 < 1.0 ---> O.K !

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