PROJECT TITLE :

MIDAS	Company		Client	
	Author		File Name	

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 midas Gen - RC-Mesh Flexural Wall Design    [ NSR-10 ]                      Gen 2025
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    [[[*]]]   MESHED WALL DESIGN MAXIMUM RESULT DATA : DOMAIN 3-[1]. (Horizontal)
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 -. Information of Parameters.
    Elem No.  : 949
    LCB No.   :    1
    Materials :  fc  =     27.5790 MPa.
                 Fy  =    413.6856 MPa.
    Thickness :  t   = 300.0000 mm.

 -. Design Forces.
    Sig_x  =     -0.1533 MPa.
    Sig_y  =      0.0699 MPa.
    Tau_xy =     -0.0615 MPa.

    Sig_max =      0.0699 MPa. (y-dir)
    Sig_min =     -0.1533 MPa. (x-dir)
    Tau_xy  =     -0.0615 MPa.

 -. Required Reinforcement and Concrete stress.
    (Sig min in Tension or Sig max*Sig_min <= Tau_xy^2 --> Rebar Required!)
    ft_max  =      0.0000 MPa. (y-dir)
    ft_min  = Tau_xy^2/Sig_max - Sig_min        =      0.2075 MPa. (x-dir)

    f'tx    =      0.2075 MPa.
    f'ty    =      0.0000 MPa.
    Sig_c   = Sig_max*[1 + (Tau_xy/Sig_max)^2 ] =      0.1240 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       =   0.188
    Rat_y   = f'ty/ftny       =   0.000
    Rat_c   = Sig_c/fc  =   0.004
    Rat     = Rat_x =   0.188  <  1.0  --->  O.K !
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