

PROJECT TITLE :

	Company		Client	
	Author		File Name	

midas Gen - RC-Slab Flexural Design [NSR-10] Gen 2025
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[[[*]]] SLAB DESIGN MAXIMUM RESULT DATA : DOMAIN 1-[1], Dir 2.
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Thk	Elem	POS	AsReq	AsUse	Mu (LCB)	fMn	Rat	CHK
200.00	40	BOT	0.2500	0.5161	1450.52 (1)	23145.3	0.063	OK
	105	TOP	0.2500	0.5161	1395.10 (2)	23145.3	0.060	OK

<< BOTTOM >>

-. Information of Parameters.

Elem No. : 40
Node No. : 33
Thickness : 200.0000 mm.
Materials : $f_c = 27.5790$ MPa.
 $F_y = 413.6856$ MPa.
Covering : $d_B = 75.0000$ mm.
 $d_T = 75.0000$ mm.
LCB No. : 1

-. Information of Strength Reduction Factor.

$\phi_{ic} = 0.650$
 $\phi_{it} = 0.900$
 $\epsilon_t = 0.03200$
 $\epsilon_{ty} = 0.00207$
 $\epsilon_{tu} = 0.00500$
 $\epsilon_t > \epsilon_{tu}$; Tension-controlled
 $\phi_i = \phi_{it} = 0.900$

-. Information of Design.

$b = 1.0000$ mm. (by Code Unit Length).
 $d = 125.0000$ mm.

-. Information of Moments and Result.

Rein. Bar : #4 @250
 $As_{req} = 0.2500$ mm²/mm. (250.0000 mm²/m.)
 $As_{use} = 0.5161$ mm²/mm. (516.1280 mm²/m.)
 $M_n = As_{use} * F_y * [d - As_{use} * F_y / (1.7 * f_c * b)] = 25716.9770$ N-mm./mm.
 $\phi_i M_n = \phi_i * M_n = 23145.2793$ N-mm./mm.
 $\mu = 1450.5196$ N-mm./mm.
 $RatM = \mu / \phi_i M_n = 0.063 < 1.0 \rightarrow O.K !$

<< TOP >>

-. Information of Parameters.

Elem No. : 105
Node No. : 119
Thickness : 200.0000 mm.
Materials : $f_c = 27.5790$ MPa.
 $F_y = 413.6856$ MPa.
Covering : $d_B = 75.0000$ mm.
 $d_T = 75.0000$ mm.
LCB No. : 2

-. Information of Strength Reduction Factor.

$\phi_{ic} = 0.650$
 $\phi_{it} = 0.900$
 $\epsilon_t = 0.03200$
 $\epsilon_{ty} = 0.00207$
 $\epsilon_{tu} = 0.00500$
 $\epsilon_t > \epsilon_{tu}$; Tension-controlled
 $\phi_i = \phi_{it} = 0.900$

-. Information of Design.

$b = 1.0000$ mm. (by Code Unit Length).
 $d = 125.0000$ mm.

-. Information of Moments and Result.

Rein. Bar : #4 @250
 $As_{req} = 0.2500$ mm²/mm. (250.0000 mm²/m.)
 $As_{use} = 0.5161$ mm²/mm. (516.1280 mm²/m.)

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Mn      = As_use*Fy*[d-As_use*Fy/(1.7*fc*b)] =   25716.9770   N-mm./mm.
phiMn   = phi * Mn      =   23145.2793   N-mm./mm.
Mu      =      =   1395.0989   N-mm./mm.
RatM    = Mu / phiMn =   0.060 < 1.0 ---> O.K !

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[[[*]]]  SLAB DESIGN MAXIMUM RESULT DATA : DOMAIN 2-[1], Dir 2.
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Thk	Elem	POS	AsReq	AsUse	Mu (LCB)	fMn	Rat	CHK
300.00	364	BOT	0.4500	0.5161	4424.39(2)	42361.6	0.104	OK
	300	TOP	0.4500	0.5161	5970.16(1)	42361.6	0.141	OK

<< BOTTOM >>

-. Information of Parameters.

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Elem No.   : 364
Node No.   : 314
Thickness  : 300.0000 mm.
Materials  : fc   =   27.5790 MPa.
              Fy   =   413.6856 MPa.
Covering   : dB   =   75.0000 mm.
              dT   =   75.0000 mm.
LCB No.    :    2

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-. Information of Strength Reduction Factor.

```

phic      =   0.650
phit      =   0.900
et        =   0.05999
ety       =   0.00207
etu       =   0.00500
et > etu ; Tension-controlled
phi       = phit =   0.900

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-. Information of Design.

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b         =   1.0000 mm. (by Code Unit Length).
d         =  225.0000 mm.

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-. Information of Moments and Result.

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Rein. Bar : #4 @250
As_req    =   0.4500 mm^2/mm. (   450.0000 mm^2/m.)
As_use    =   0.5161 mm^2/mm. (   516.1280 mm^2/m.)
Mn        = As_use*Fy*[d-As_use*Fy/(1.7*fc*b)] =  47068.4474   N-mm./mm.
phiMn     = phi * Mn      =  42361.6026   N-mm./mm.
Mu        =      =  4424.3864   N-mm./mm.
RatM      = Mu / phiMn =   0.104 < 1.0 ---> O.K !

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-. Information of Parameters.

Elem No. : 300
Node No. : 400
Thickness : 300.0000 mm.
Materials : fc = 27.5790 MPa.
 Fy = 413.6856 MPa.
Covering : dB = 75.0000 mm.
 dT = 75.0000 mm.
LCB No. : 1

-. Information of Strength Reduction Factor.

phic = 0.650
phit = 0.900
et = 0.05999
ety = 0.00207
etu = 0.00500
et > etu ; Tension-controlled
phi = phit = 0.900

-. Information of Design.

b = 1.0000 mm. (by Code Unit Length).
d = 225.0000 mm.

-. Information of Moments and Result.

Rein. Bar : #4 @250
As_req = 0.4500 mm²/mm. (450.0000 mm²/m.)
As_use = 0.5161 mm²/mm. (516.1280 mm²/m.)
Mn = As_use * Fy * [d - As_use * Fy / (1.7 * fc * b)] = 47068.4474 N-mm./mm.
phiMn = phi * Mn = 42361.6026 N-mm./mm.
Mu = 5970.1620 N-mm./mm.
RatM = Mu / phiMn = 0.141 < 1.0 ---> O.K !