

[illegible]

17 ROOFS WITHOUT WALLS

ROOF: 30°

Rd: $l = 0.511:5$

C: PRESSURE COEFF. FOR
P TOP AND BOTTOM OF
ROOF

P	A	B	C	D
0°	+0.6	-1.0	-0.5	-0.9
45°	+0.1	-0.3	-0.6	-0.3
90°	-0.3	-0.4	-0.3	-0.4
45° "Tm"	C _{pe} Top = -1.0			
45° "Tm"	C _{pb} Bottom = -0.2			

C: FOR GABLE ENDS

P	J	K	L	M
90°	+0.8	-0.4	+0.3	-0.3

Note: At $\beta = 90^\circ$ Coeff.
for A - D apply only to
length $l' = b$,
at $\beta = 0^\circ$ and 45° to $l = 5b$

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19 ROOFS WITH WALLS

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20 ROOFS WITH WALLS

ROOF: 30°

Rd: $l = 0.511:5$

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P TOP AND BOTTOM OF
ROOF

P	A	B	C	D
0°	+0.6	-1.0	-0.5	-0.9
45°	+0.1	-0.3	-0.6	-0.3
90°	-0.3	-0.4	-0.3	-0.4
45° "Tm"	C _{pe} Top = -1.0			
45° "Tm"	C _{pb} Bottom = -0.2			

C: FOR GABLE ENDS

P	J	K	L	M
90°	+0.8	-0.4	+0.3	-0.3

Note: At $\beta = 90^\circ$ Coeff.
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21 ROOFS WITH WALLS

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P TOP AND BOTTOM OF
ROOF

P	A	B	C	D
0°	+0.6	-1.0	-0.5	-0.9
45°	+0.1	-0.3	-0.6	-0.3
90°	-0.3	-0.4	-0.3	-0.4
45° "Tm"	C _{pe} Top = -1.0			
45° "Tm"	C _{pb} Bottom = -0.2			

ROOF WITHOUT WALLS

ROOF 10' x 10' x 10'

H.D.L. 0.5:1:1.5

C: PRESSURE COEFF.
P FOR TOP AND BOTTOM OF ROOF

P	A	B	C	D
0*	-1.0	+0.3	-0.5	+0.2
45°	-0.3	+0.1	-0.3	+0.1
90°	-0.3	0	-0.3	0

C: FOR CABLE ENDS
P

P	J	K	L	M
0*	+0.8	-0.6	+0.3	-0.4

Note: At $\phi = 90^\circ$ Coeff. for A - D apply only to length $l = b$,
 at $\phi = 0^\circ$ and 45° to $l = 5b$

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P FOR TOP AND BOTTOM OF ROOF

P	A	B	C	D
0*	-1.0	+0.3	-0.5	+0.2
45°	-0.3	+0.1	-0.3	+0.1
90°	-0.3	0	-0.3	0

C: FOR CABLE ENDS
P

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Note: At $\phi = 90^\circ$ Coeff. for A - D apply only to length $l = b$,
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P FOR TOP AND BOTTOM OF ROOF

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45°	-0.3	+0.1	-0.3	+0.1
90°	-0.3	0	-0.3	0

C: FOR CABLE ENDS
P

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19

ROOF WITHOUT WALLS
 ROOF-10°
 h:b:l = 0.5:1:1.5

ROOF WITHOUT WALLS
 ROOF-10°
 h:b:l = 0.5:1:1.5

Diagram illustrating a closed passage with large walls. The passage is rectangular with width b , height h , and length l . The top half is labeled "DOORS CLOSED" and the bottom half is labeled $2h$. The diagram shows the internal pressure distribution and the resulting coefficients for the different sections.

2 | FREE STANDING PLATES, WALLS AND BILLBOARDS

END WALLS

$L/h = 10 \rightarrow \infty$

F_h

L

h

$p = 0^\circ$

p

$L/h = 10$

F_h

L

h

$p = 0^\circ$

p

$L/h = 10$

WALLS ABOVE GROUND

$F = C_n \cdot q \cdot h \cdot L$

C_n - FORCE COEFF. FOR WALLS ABOVE GROUND

L/h	$10 \rightarrow \infty$ [End walls]	10	1
$p = 0^\circ$ $a = .5L$	2.0	1.3	1.15
$p = 40^\circ$ $a = .3L$		1.6	
$p = 50^\circ$ $a = .4L$			1.8

END WALLS

$L/h = 10 \rightarrow \infty$

F_h

L

h

$p = 0^\circ$

p

$L/h = 10$

WALLS ABOVE GROUND

$F = C_n \cdot q \cdot h \cdot L$

C_n - FORCE COEFF. FOR WALLS ABOVE GROUND

L/h	$10 \rightarrow \infty$ [End walls]	10	1
$p = 0^\circ$ $a = .5L$	1.2	1.2	1.1
$p = 40^\circ$ $a = .3L$		1.5	
$p = 50^\circ$ $a = .4L$			1.5

C_{pe}: EXTERNAL PRESS. COEFF. FOR .67 d√q > 1.5 and moderately smooth surface

h/d	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°	165°	180°
25	C _{pe} +1.0 +0.8 +0.1	-0.9	-1.9	-2.5	-2.6	-1.9	-0.9	-0.7	-0.6	+0.6	+0.6	+0.6
7	C _{pe} +1.0 +0.8 +0.1	-0.8	-1.7	-2.2	-2.2	-1.7	-1.2	-0.8	-0.6	-0.5	-0.5	-0.5
1	C _{pe} +1.0 +0.8 +0.1	-0.7	-1.2	-1.6	-1.7	-1.2	-0.7	-0.5	-0.4	+0.4	+0.4	+0.4

Stack fully operating C_{pi} = +0.1
 Stack throttled C_{pi} = -0.8

Δ p = p_i - p_e p_i = C_{pi} · q p_e = C_{pe} · q