DIAGRAMAS DE INTERACCIÓN ADIMENSIONALES

Secciones rectangulares

Aceros de dureza natural

$400 \leq f_{yk} \leq 500$ N/mm^2

($4.000 \leq f_{yk} \leq 5.100$ kp/cm^2)

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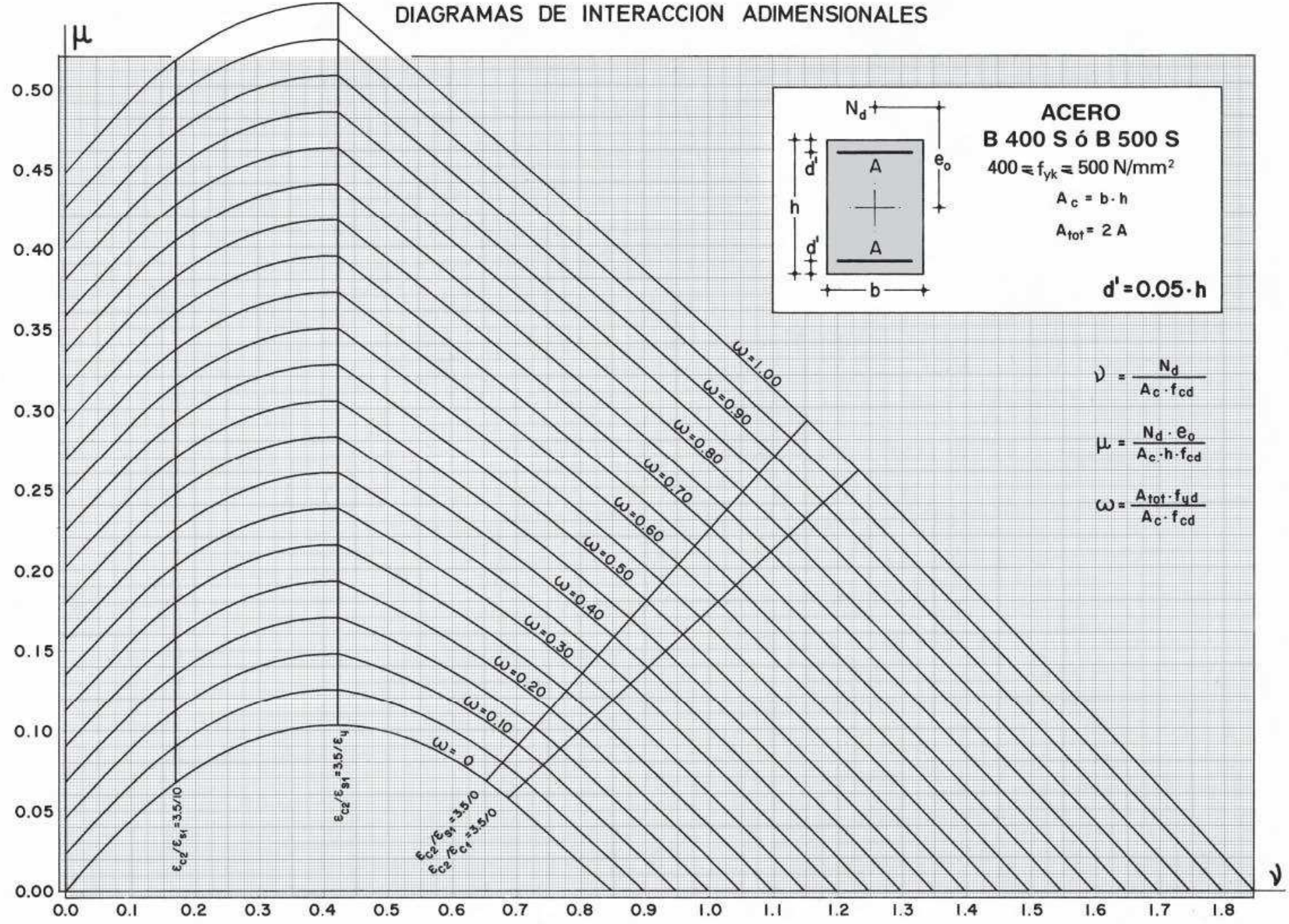
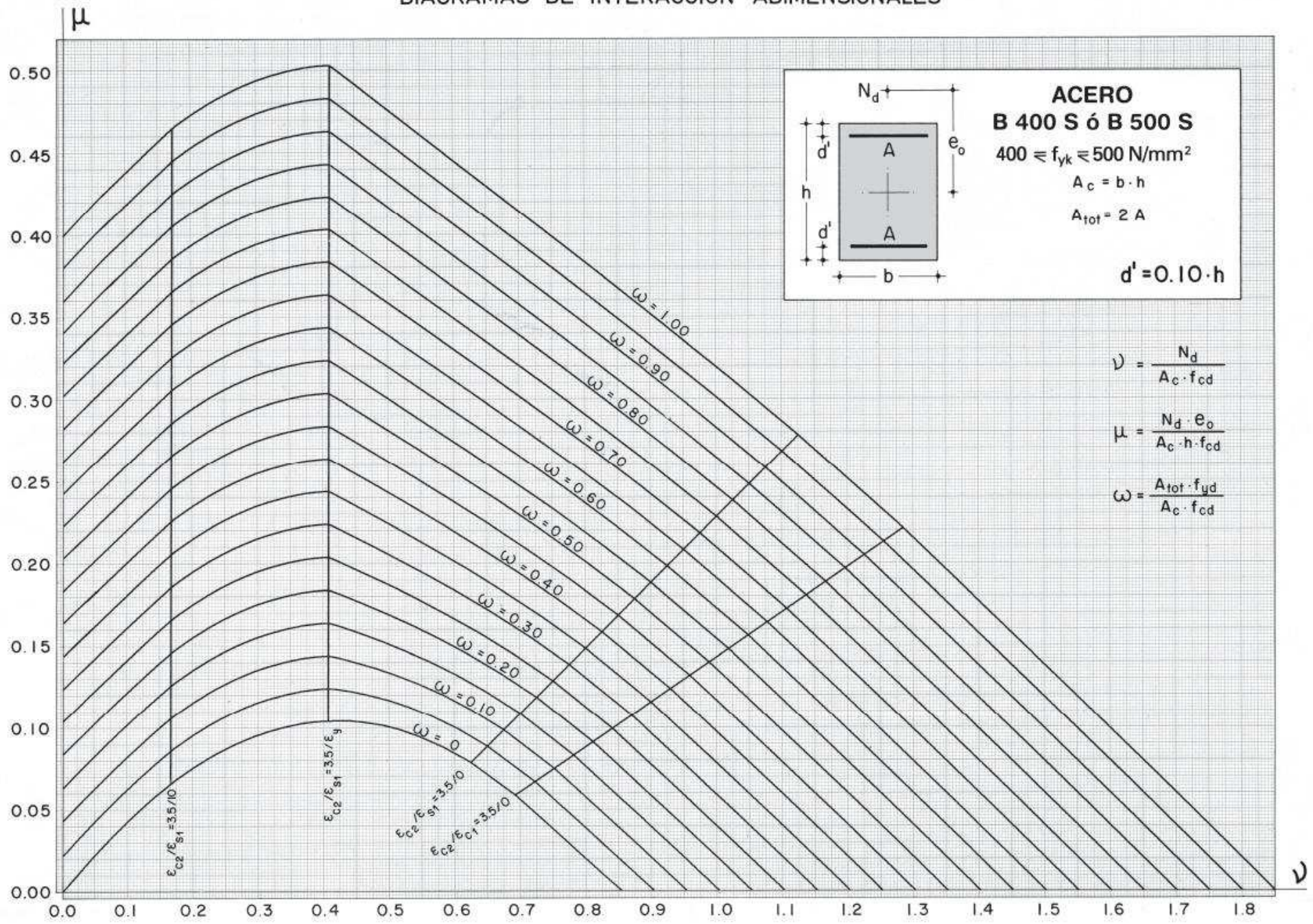
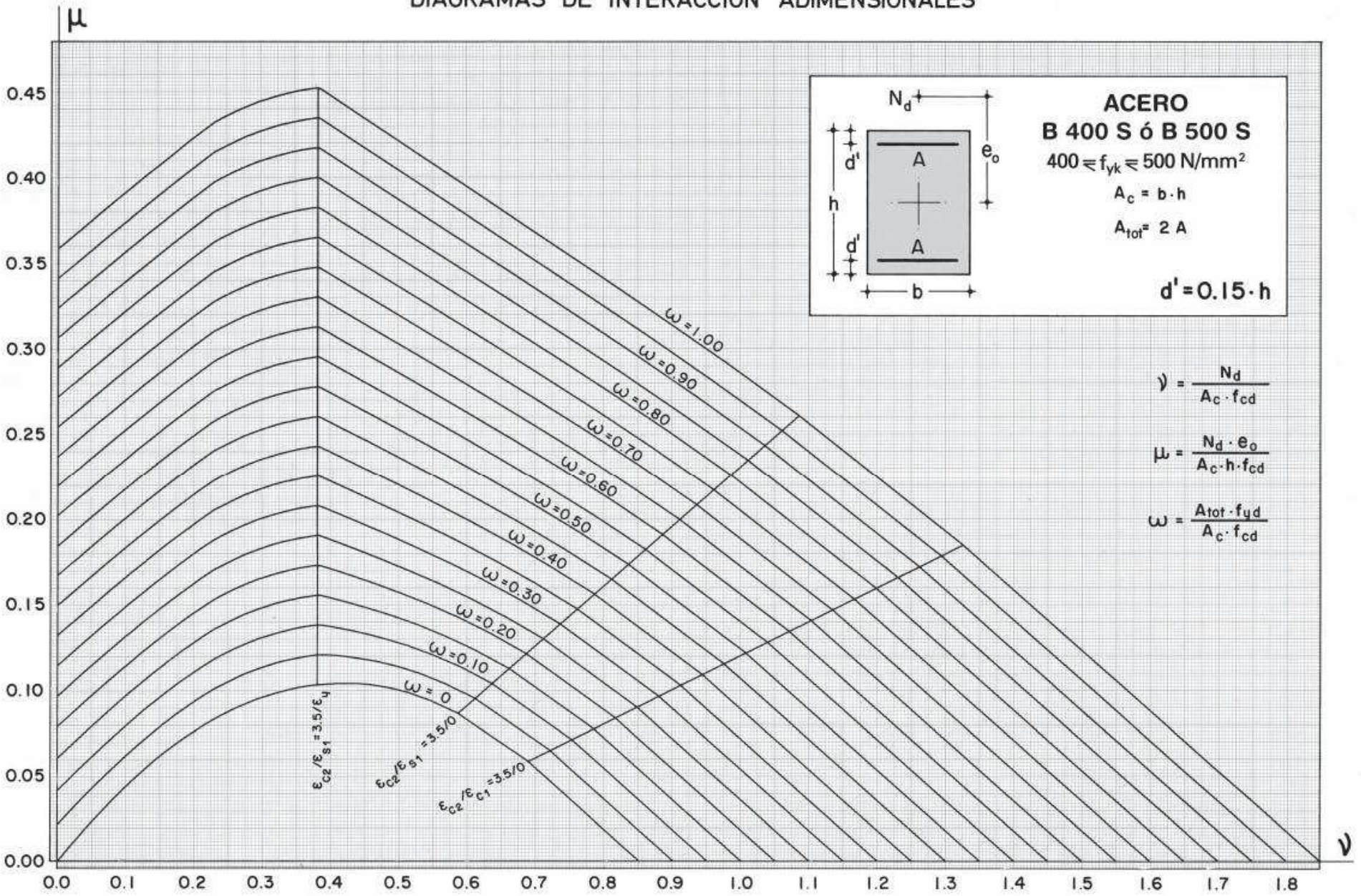
DIAGRAMAS DE INTERACCION ADIMENSIONALES



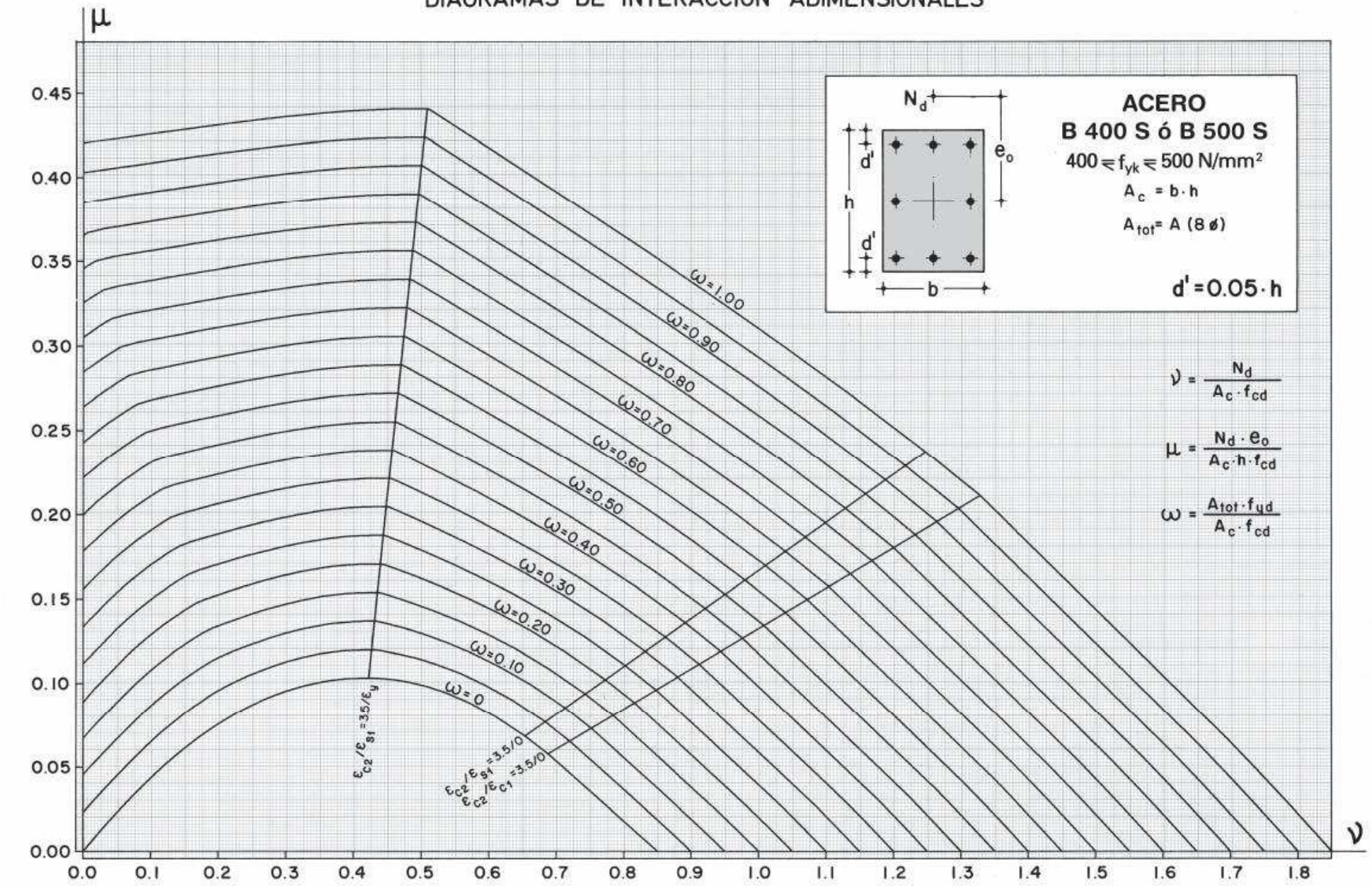
DIAGRAMAS DE INTERACCION ADIMENSIONALES



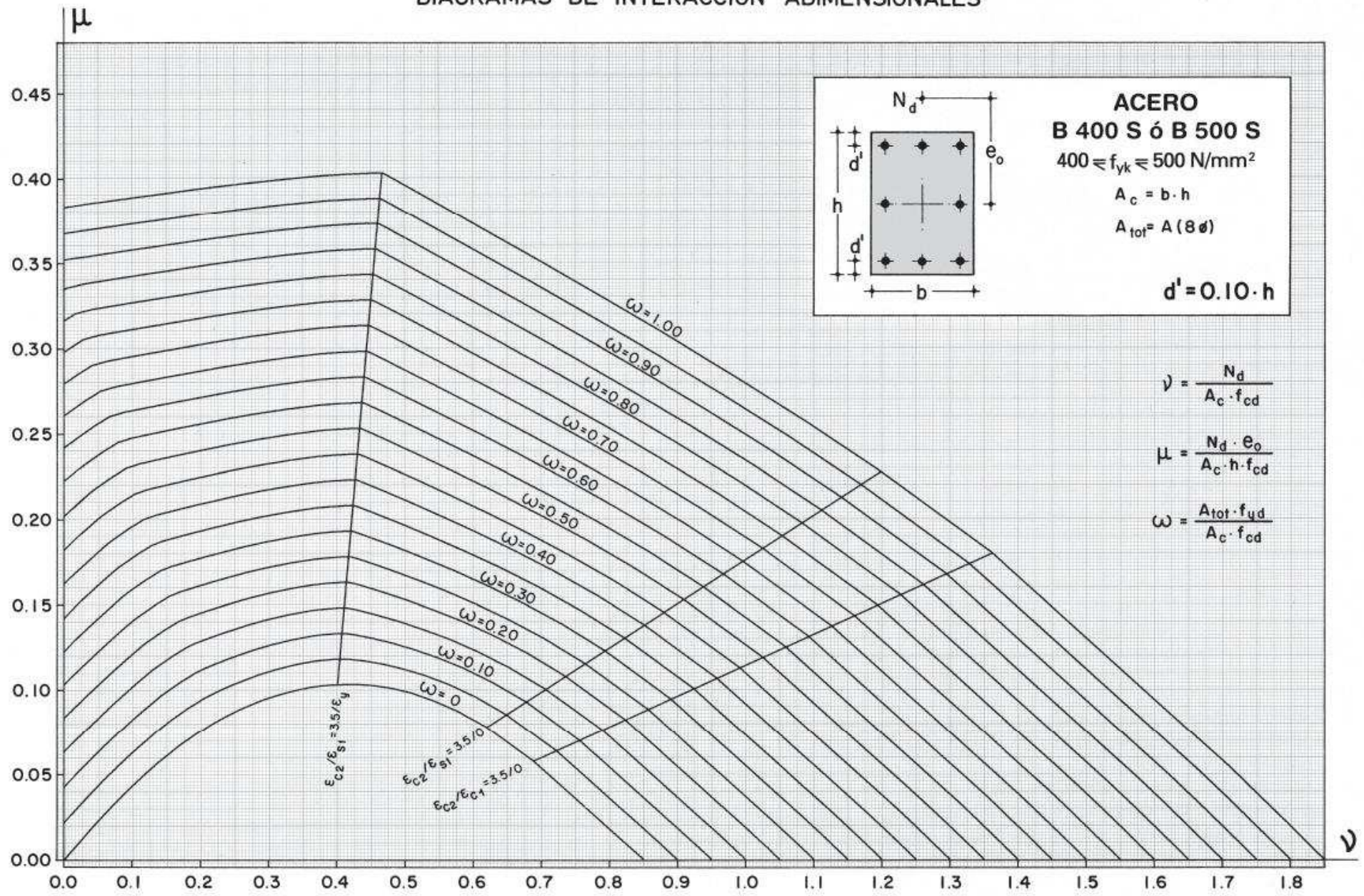
DIAGRAMAS DE INTERACCION ADIMENSIONALES



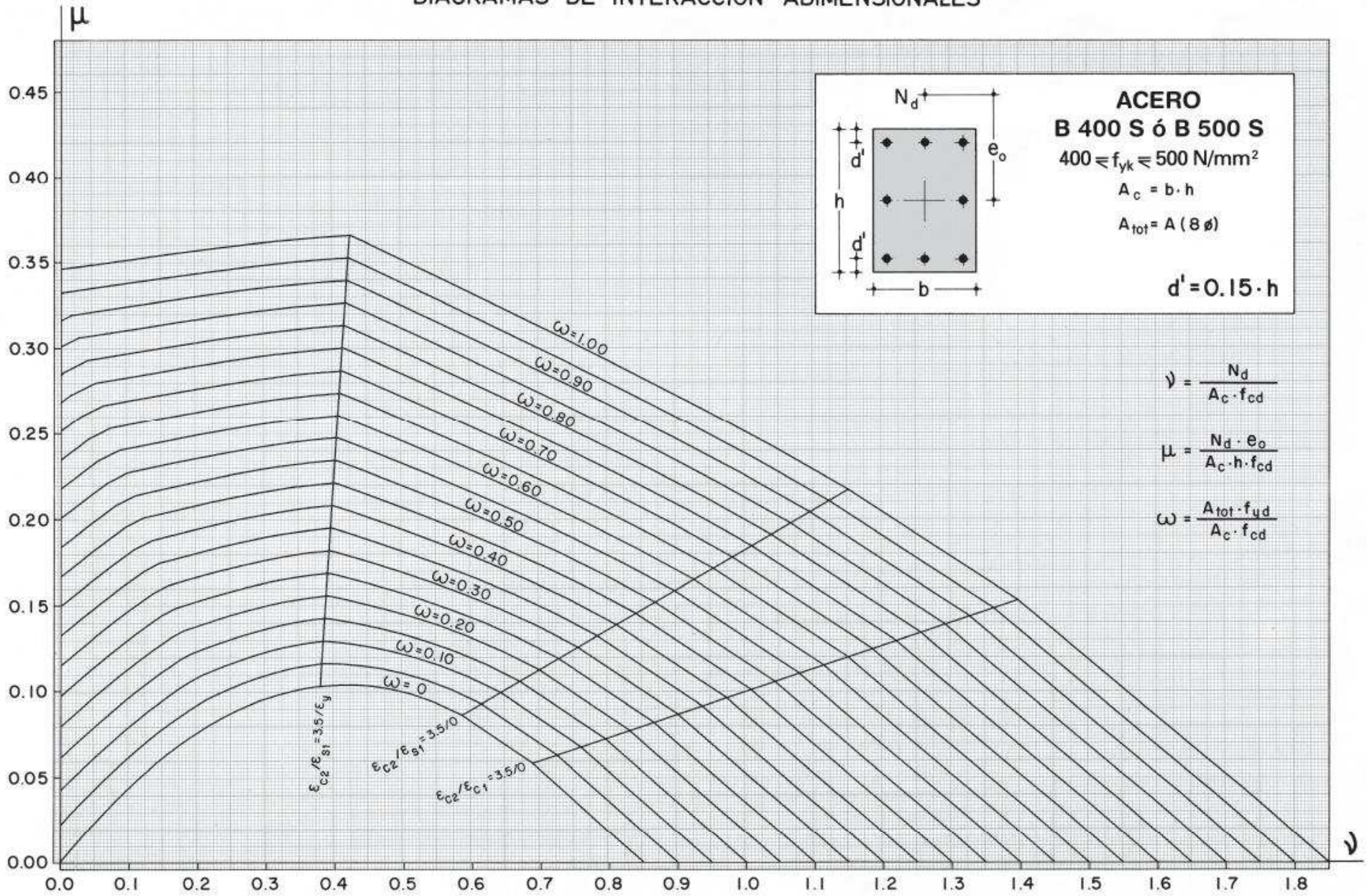
DIAGRAMAS DE INTERACCION ADIMENSIONALES



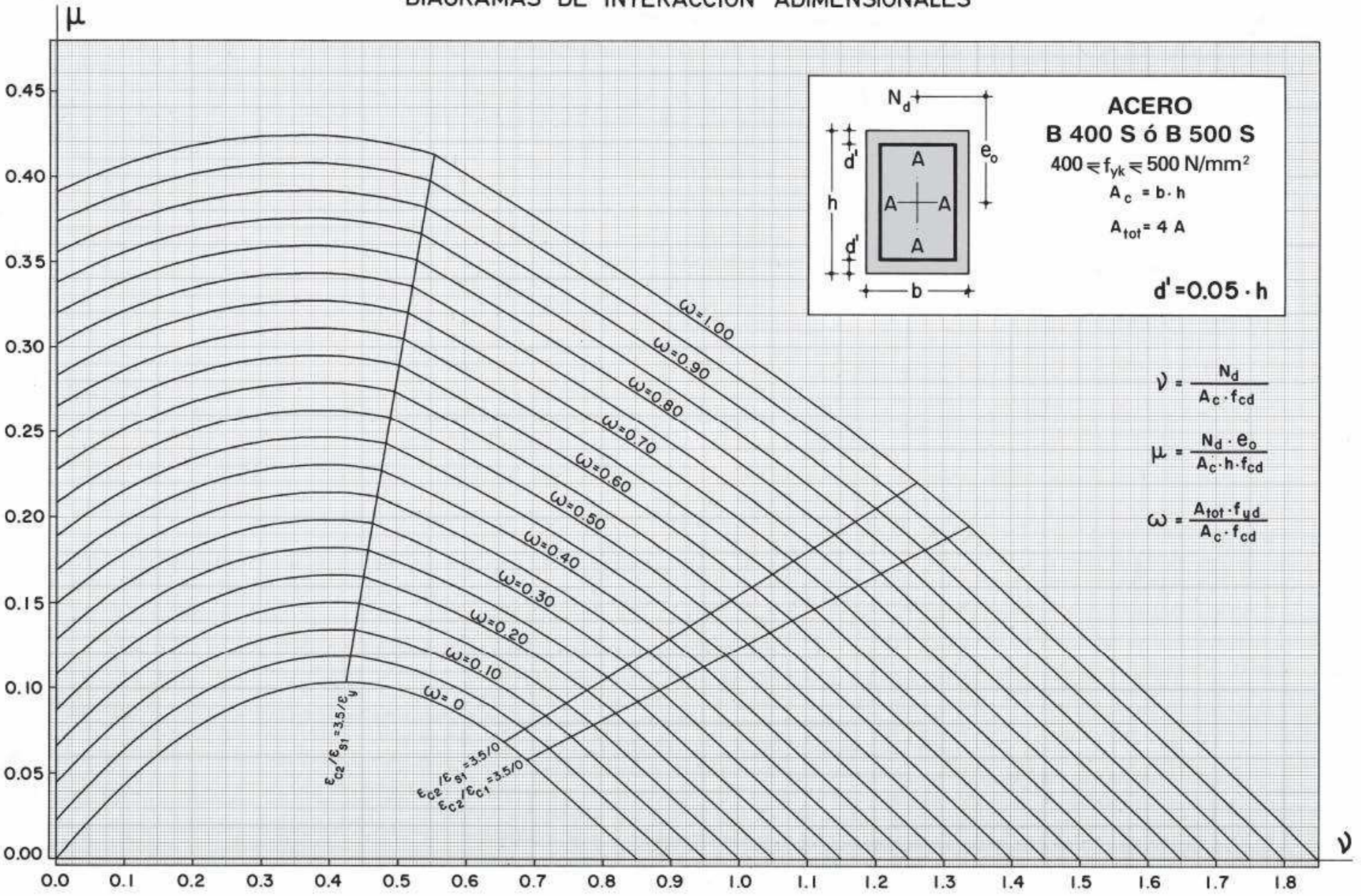
DIAGRAMAS DE INTERACCION ADIMENSIONALES



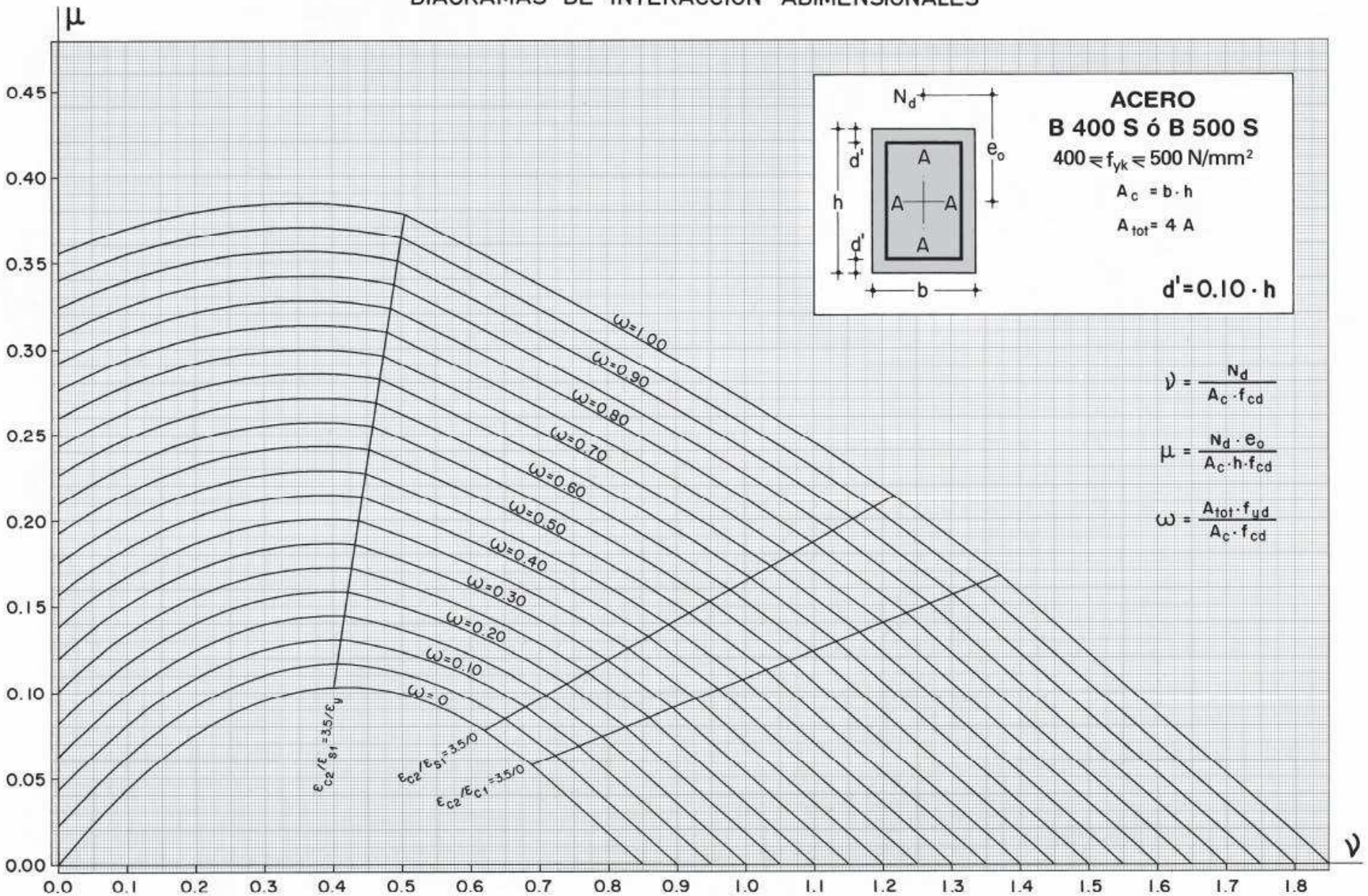
DIAGRAMAS DE INTERACCION ADIMENSIONALES



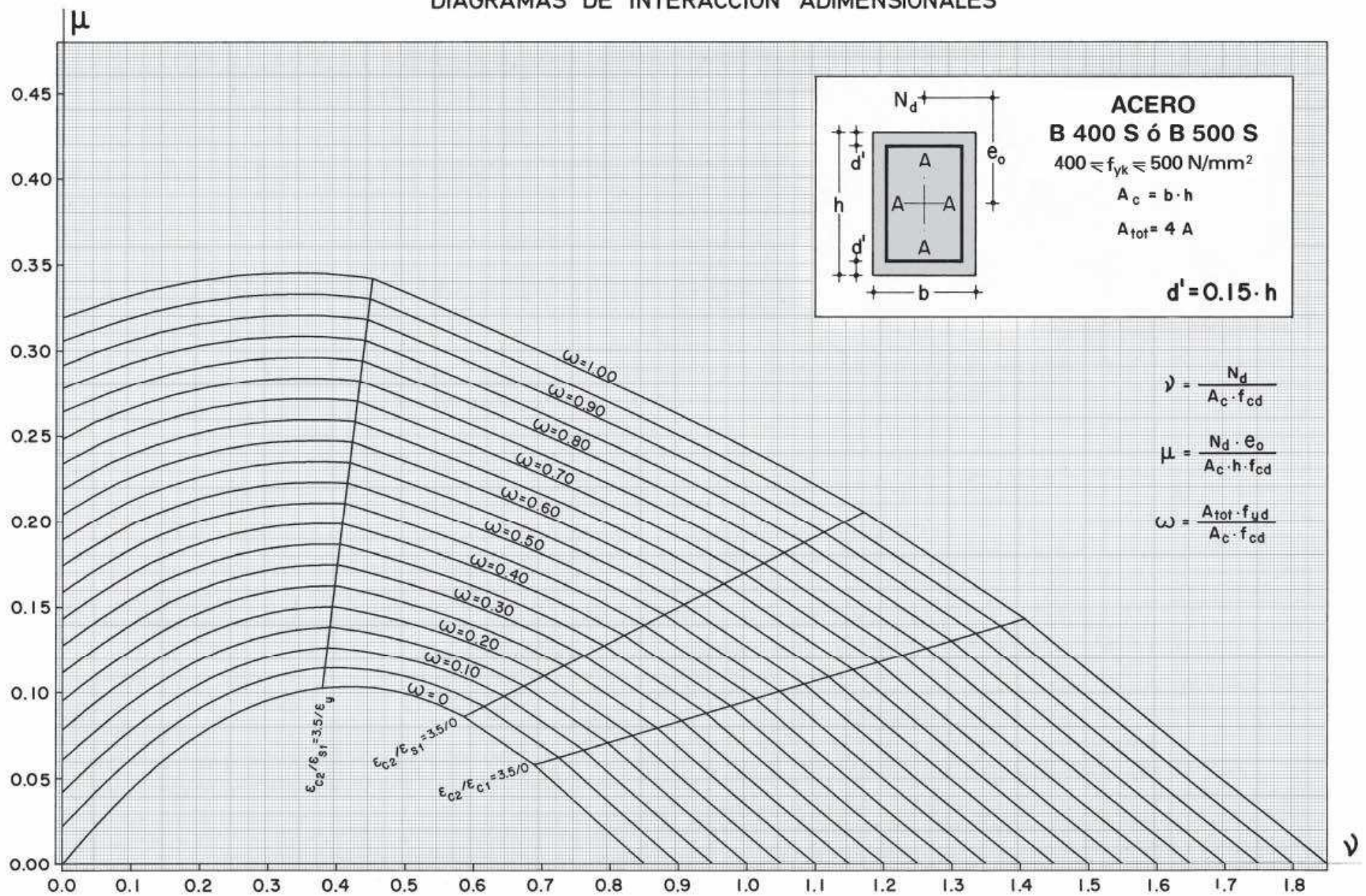
DIAGRAMAS DE INTERACCION ADIMENSIONALES



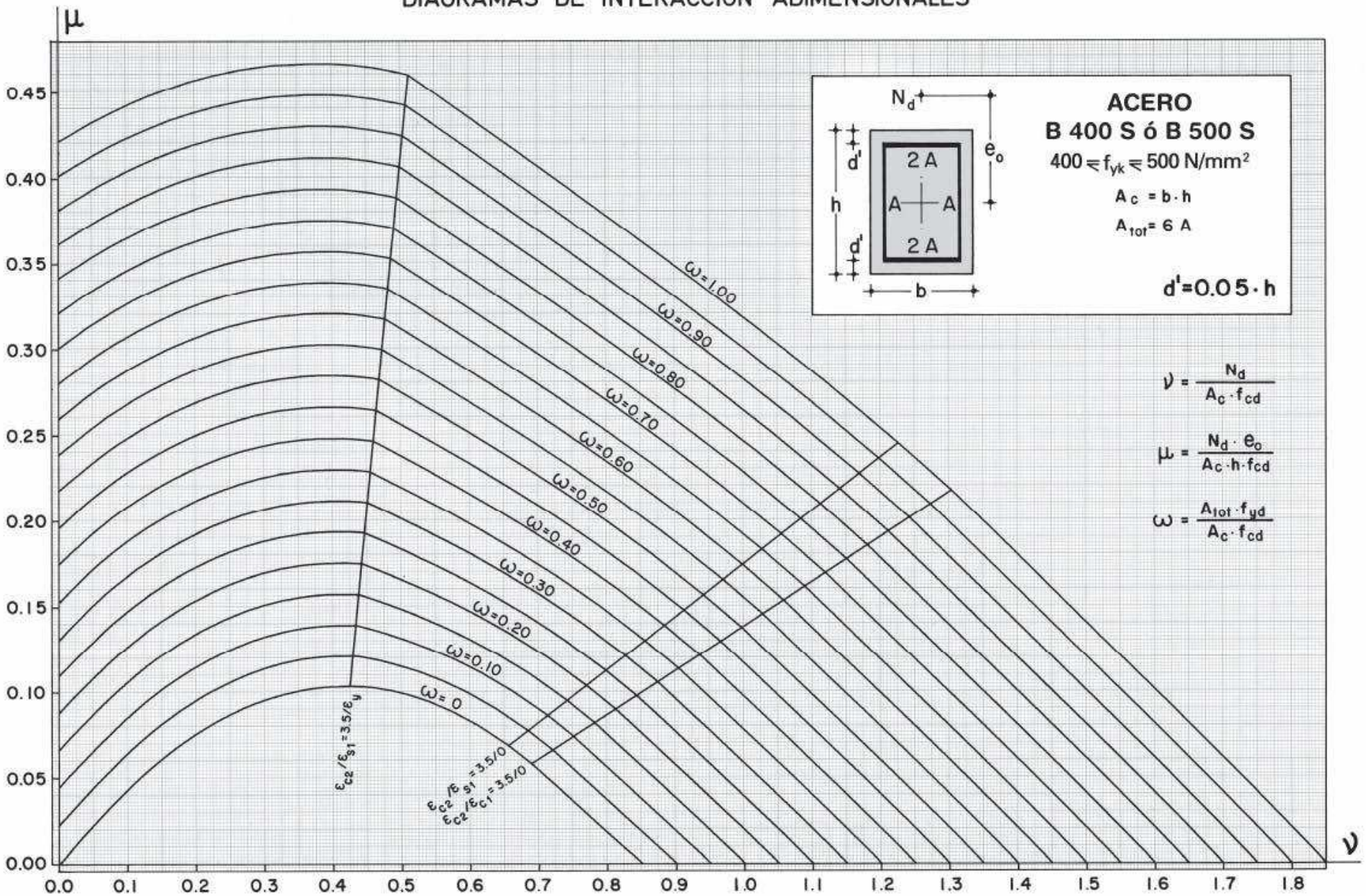
DIAGRAMAS DE INTERACCION ADIMENSIONALES



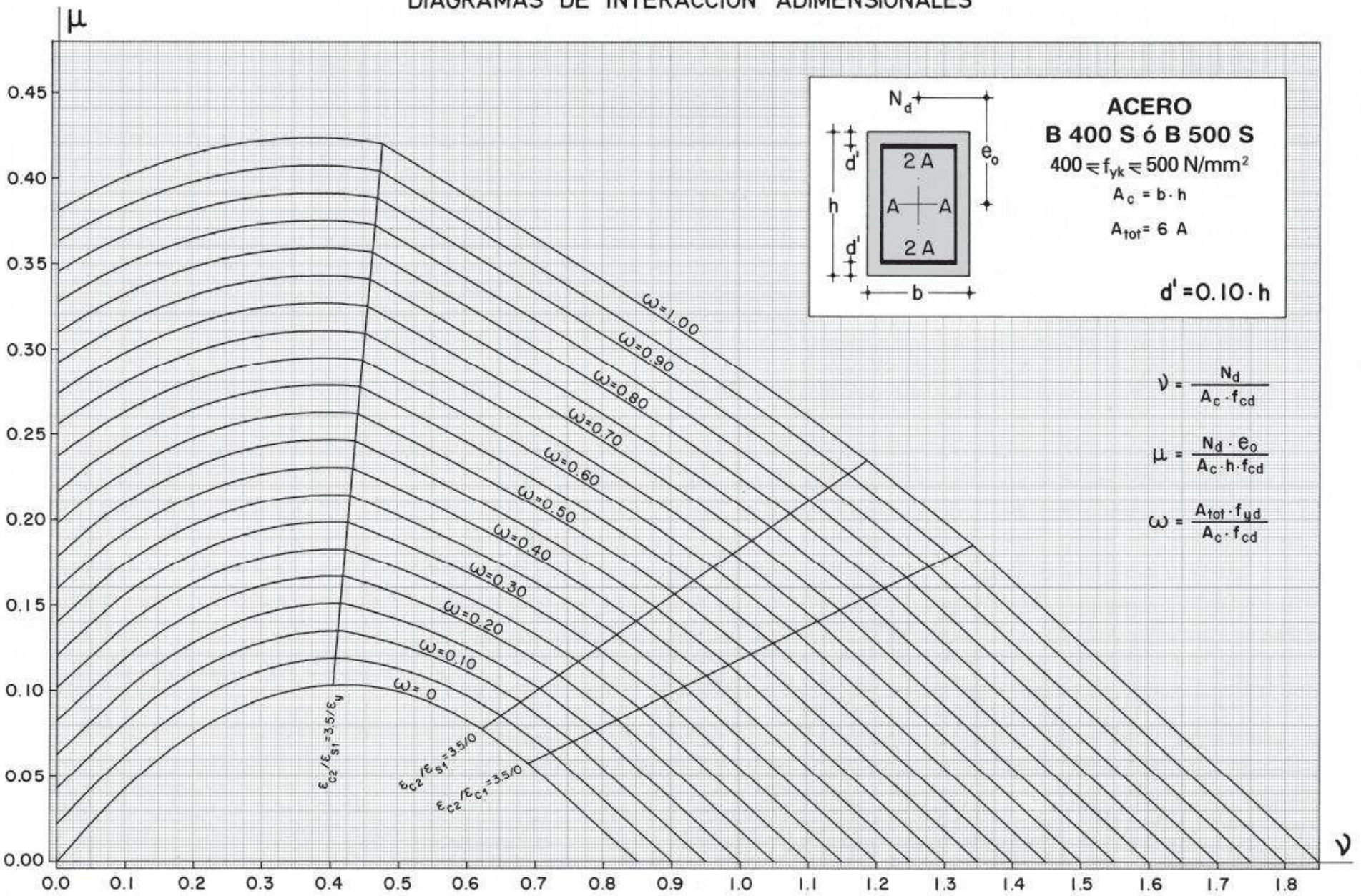
DIAGRAMAS DE INTERACCION ADIMENSIONALES



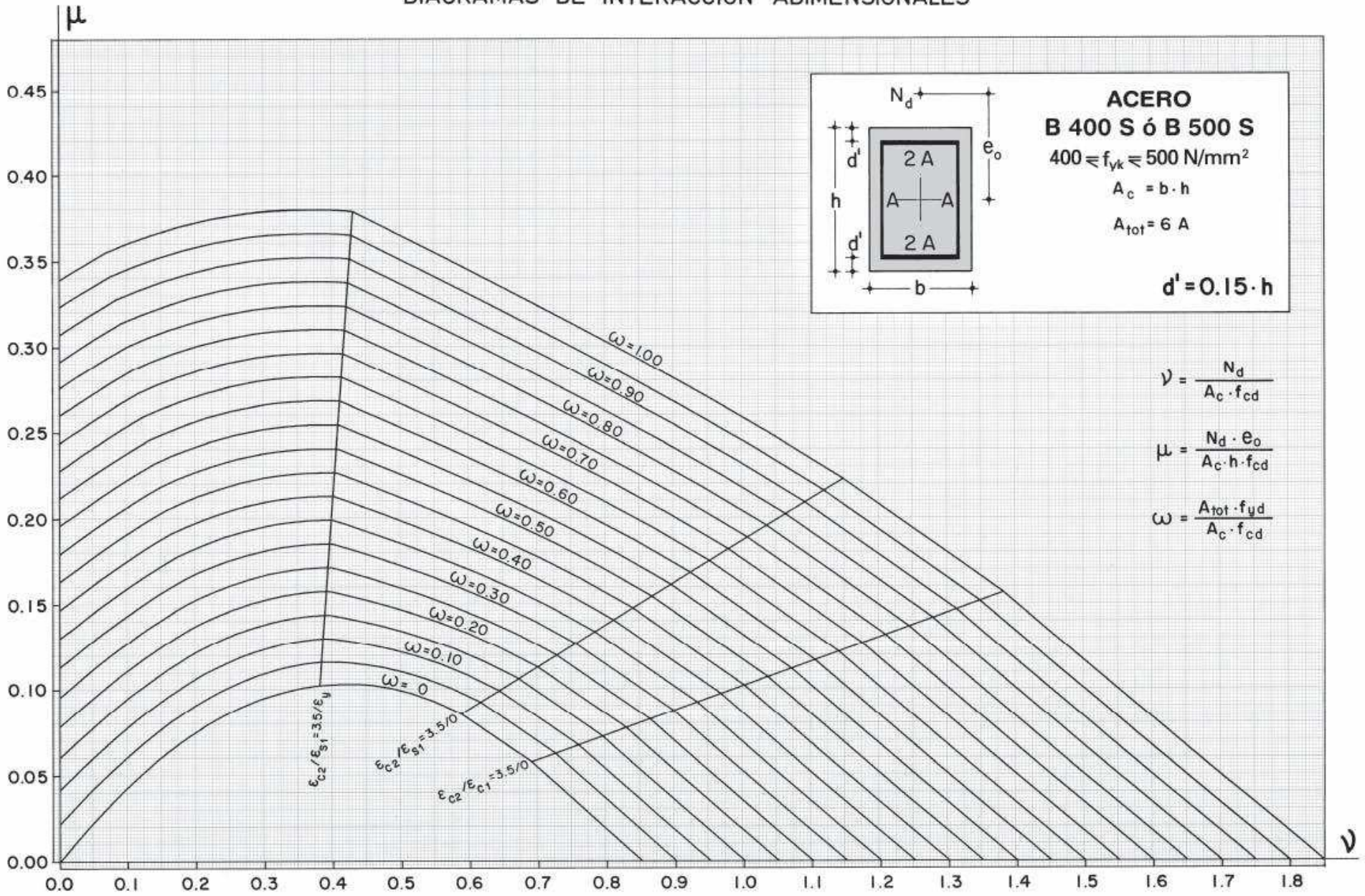
DIAGRAMAS DE INTERACCION ADIMENSIONALES



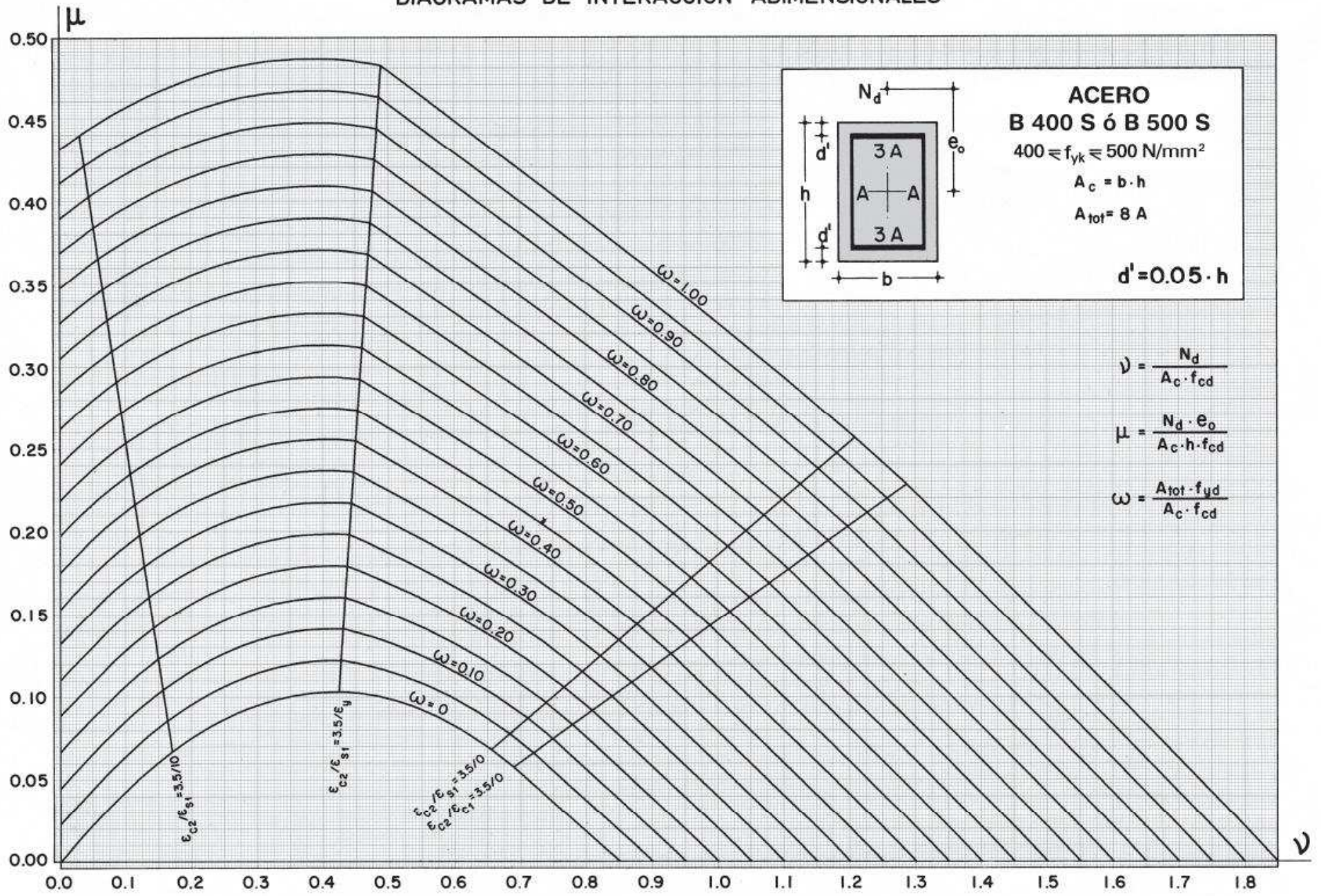
DIAGRAMAS DE INTERACCION ADIMENSIONALES



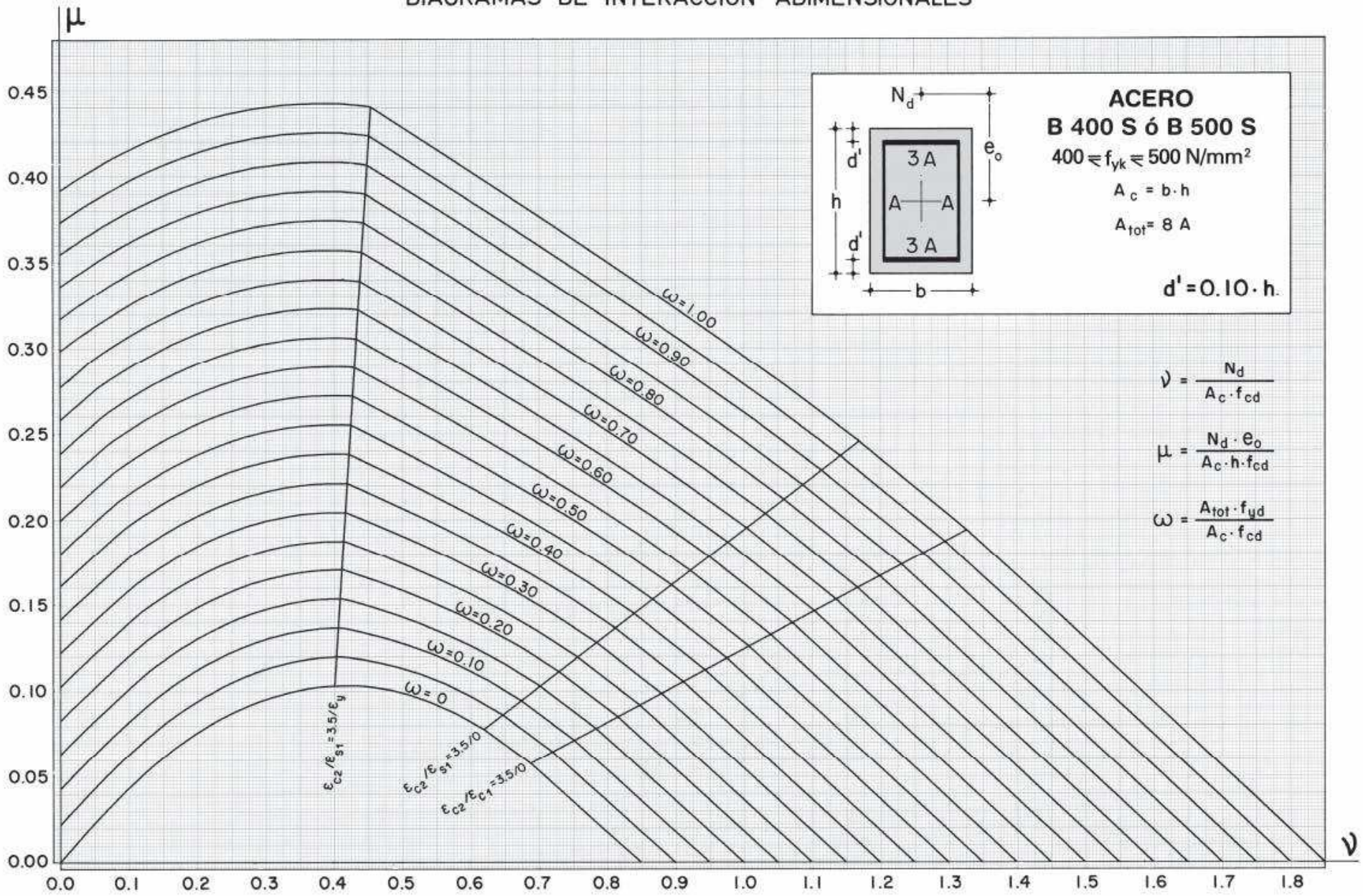
DIAGRAMAS DE INTERACCION ADIMENSIONALES



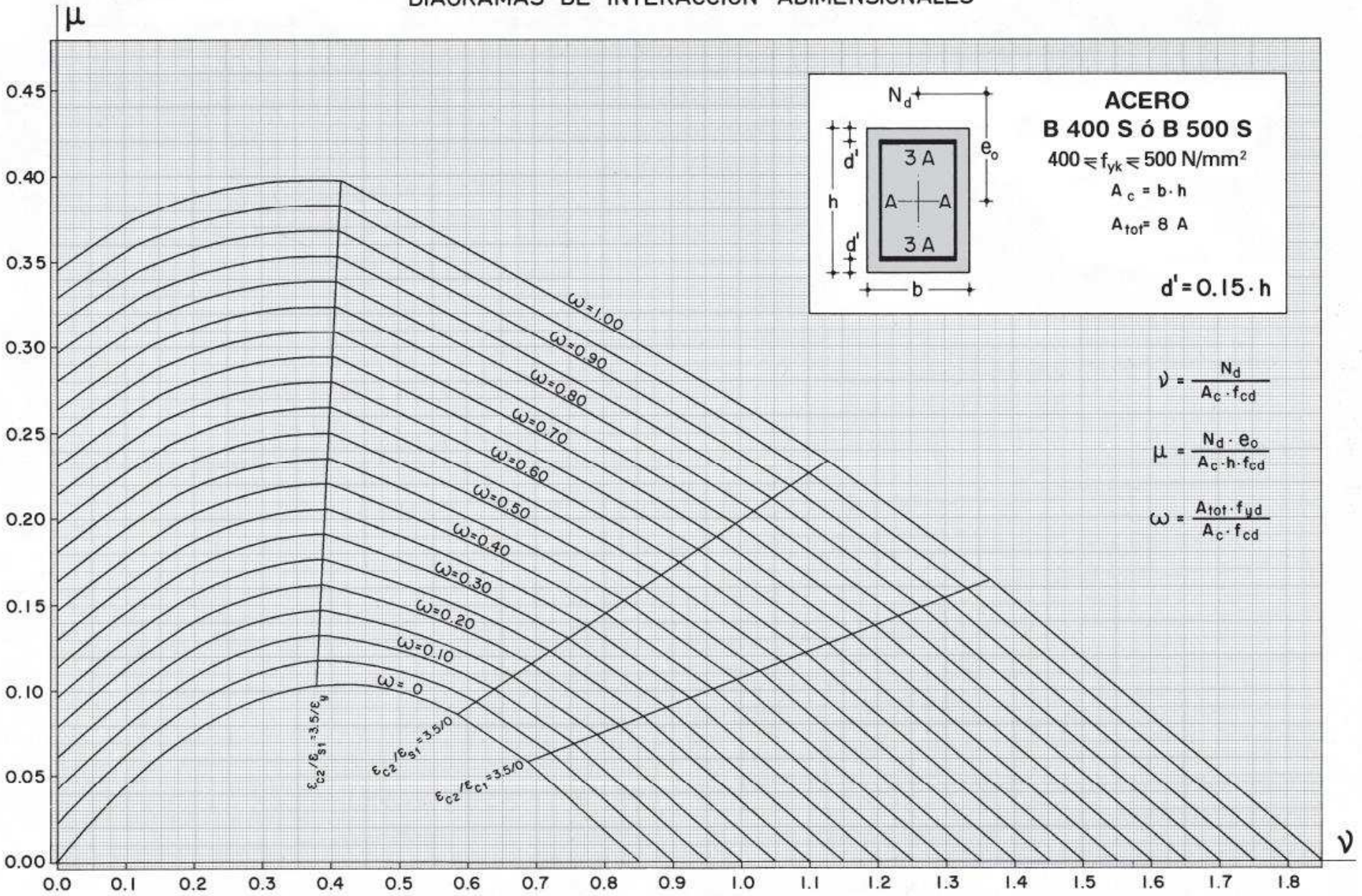
DIAGRAMAS DE INTERACCION ADIMENSIONALES



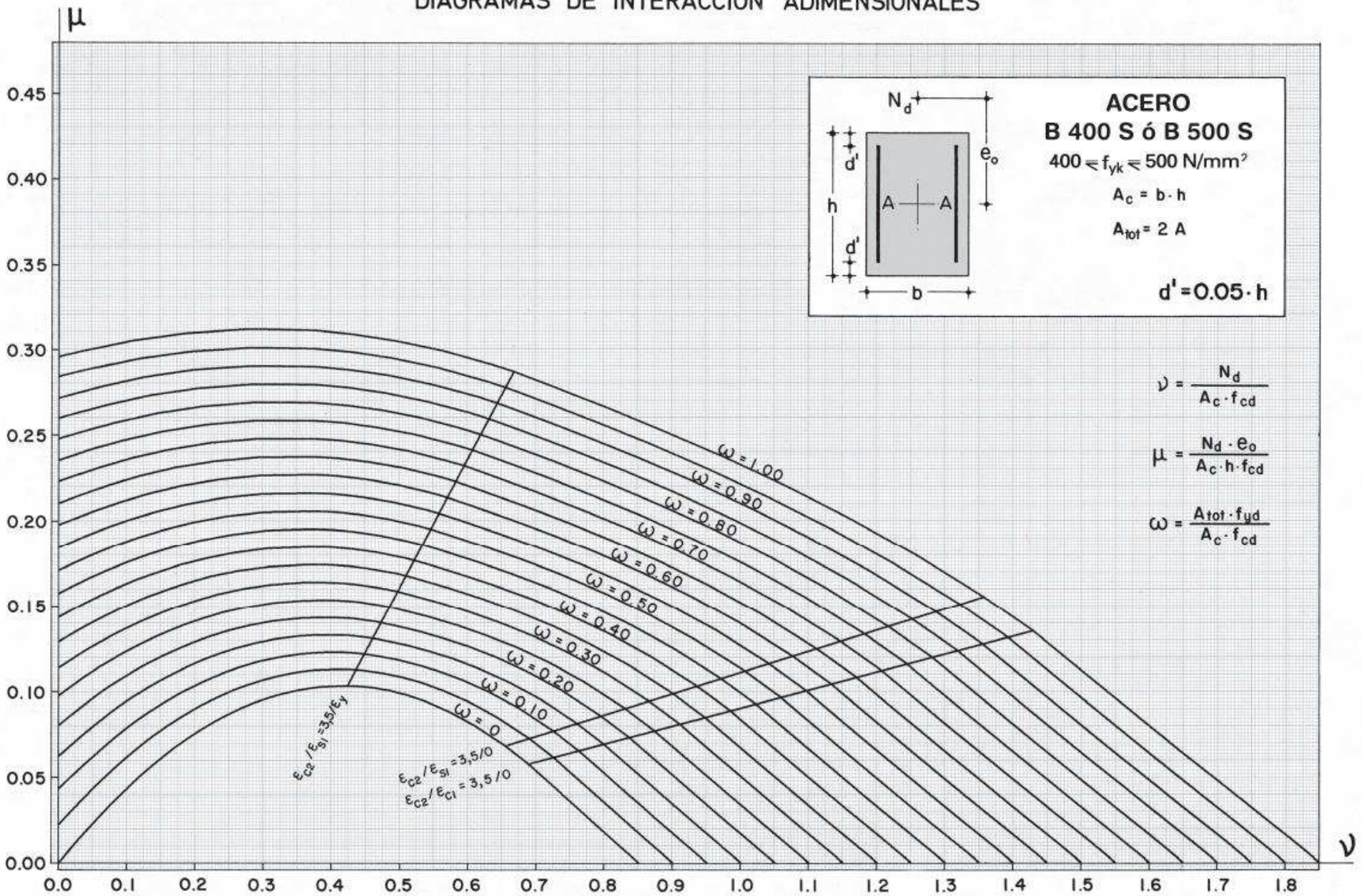
DIAGRAMAS DE INTERACCION ADIMENSIONALES



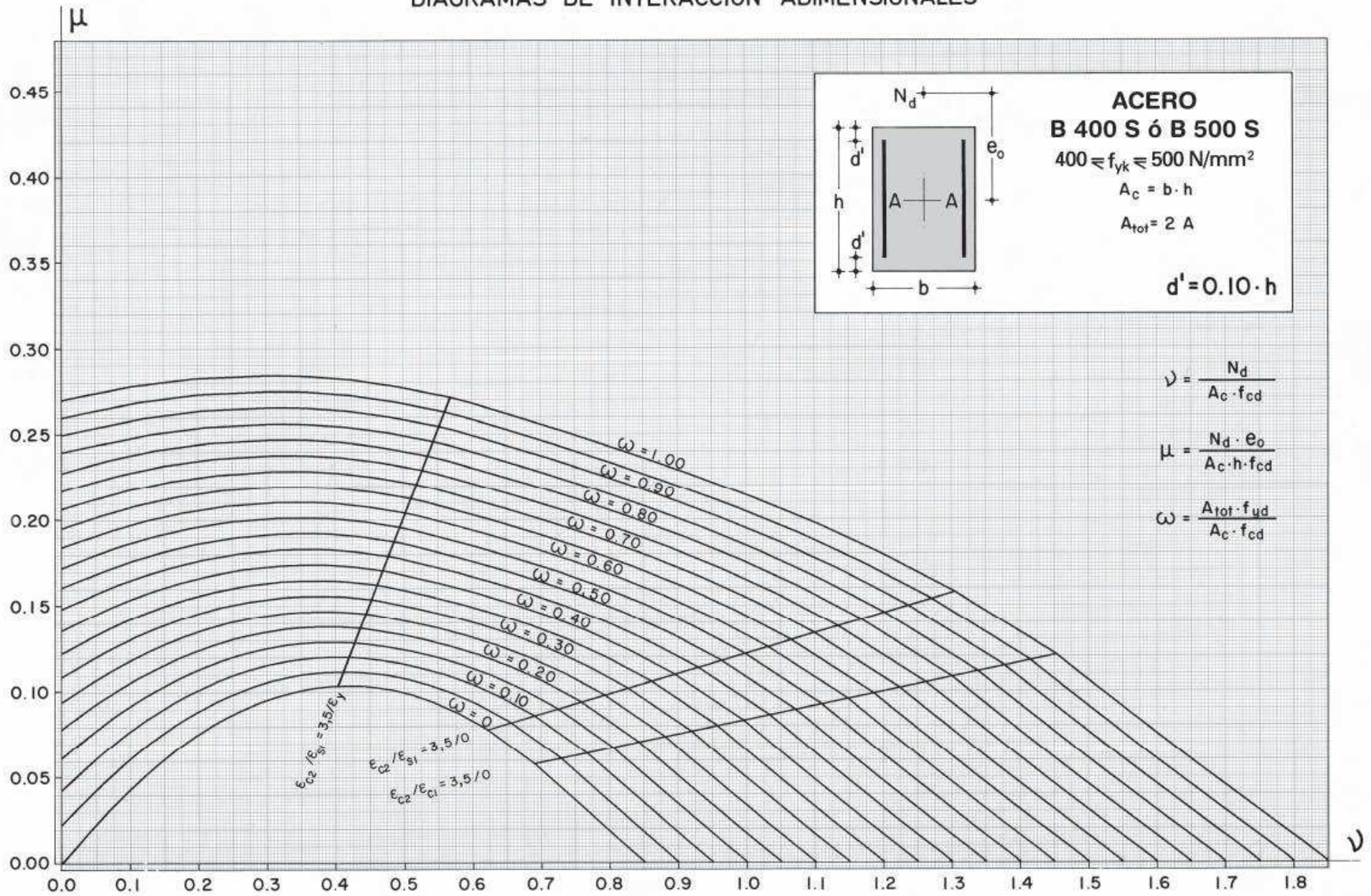
DIAGRAMAS DE INTERACCION ADIMENSIONALES



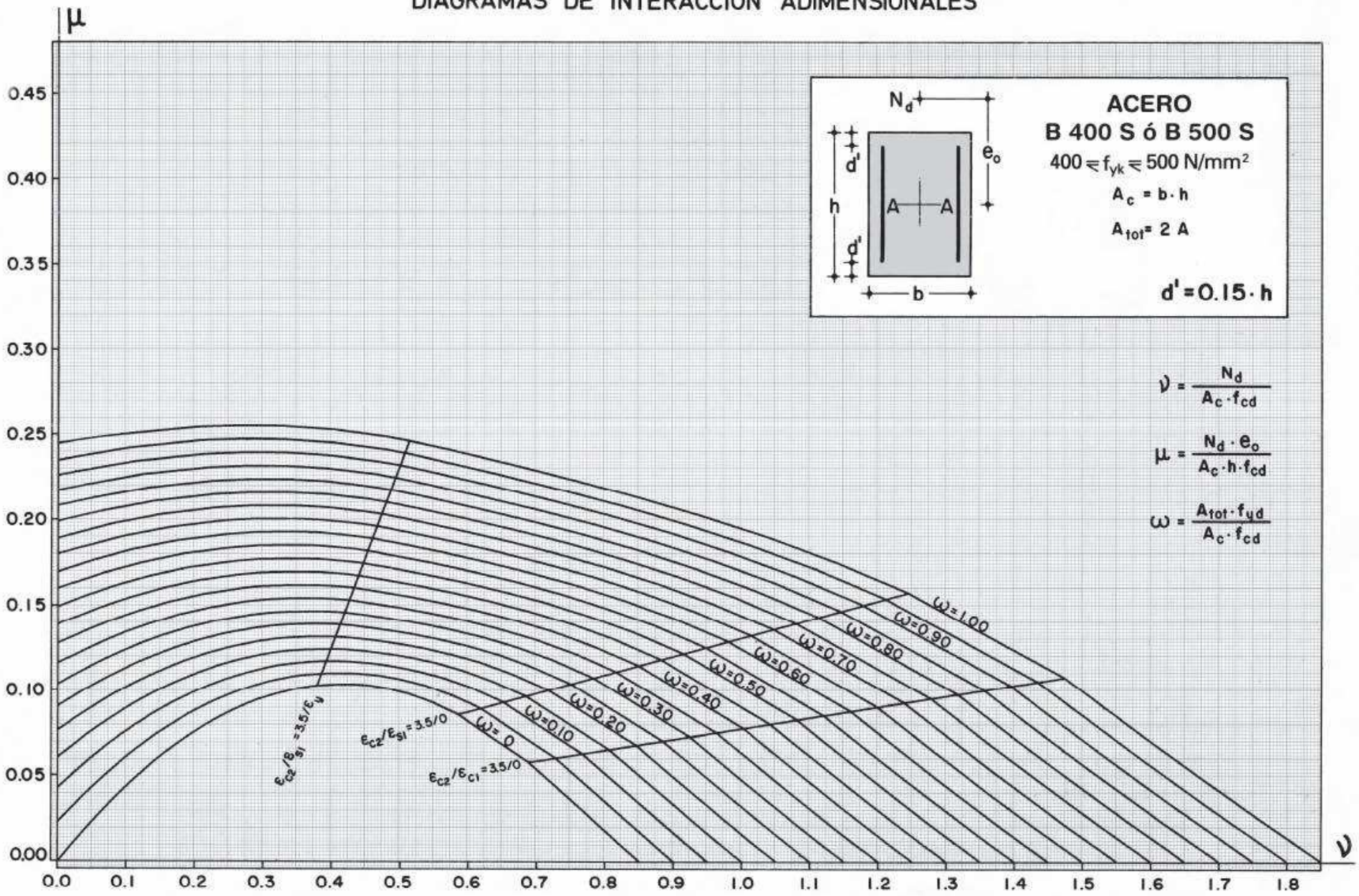
DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCIÓN ADIMENSIONALES

Secciones en cajón

Aceros de dureza natural

$400 \leq f_{yk} \leq 500$ N/mm^2

($4.000 \leq f_{yk} \leq 5.100$ kp/cm^2)

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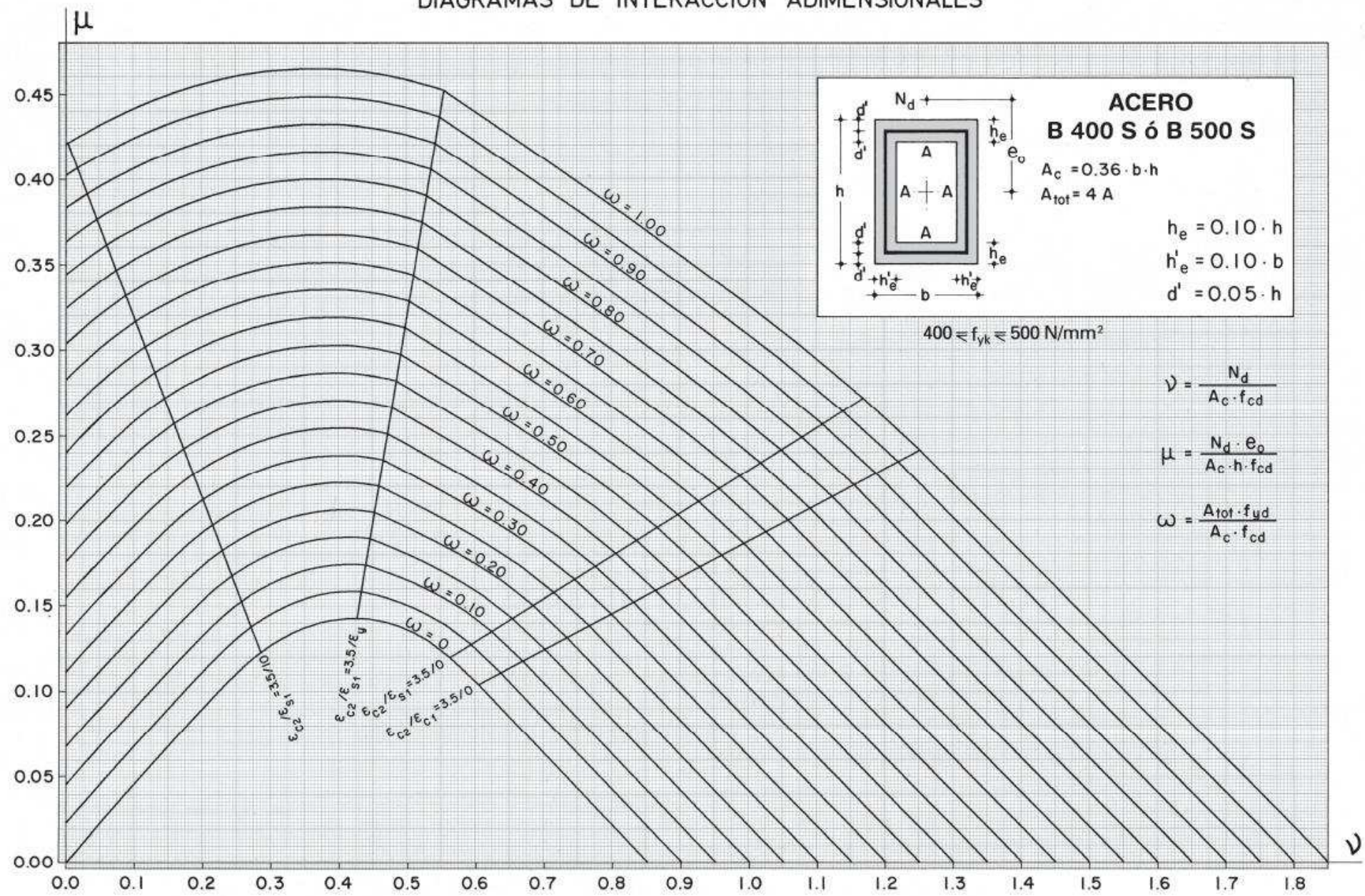
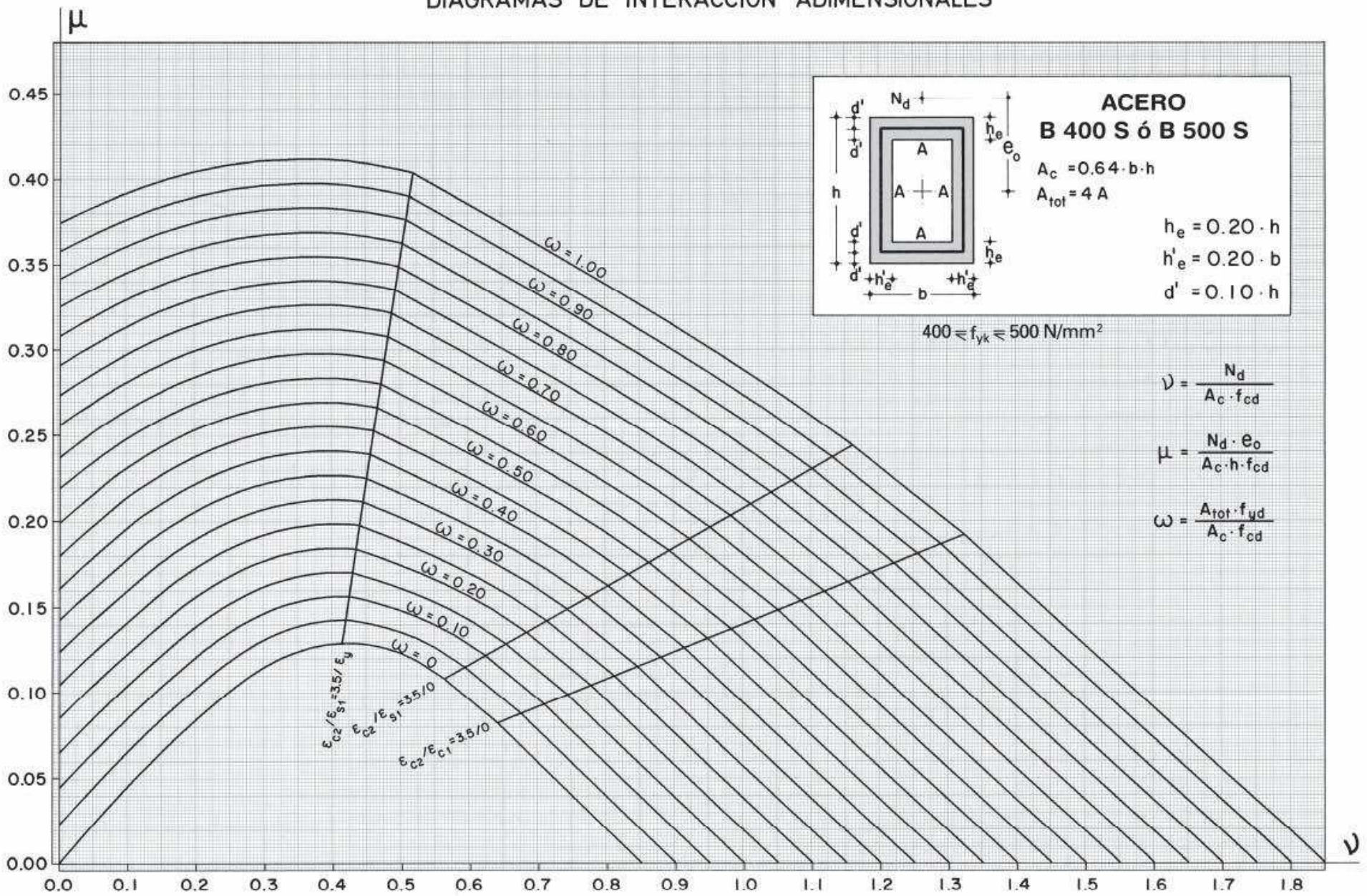
DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCION ADIMENSIONALES



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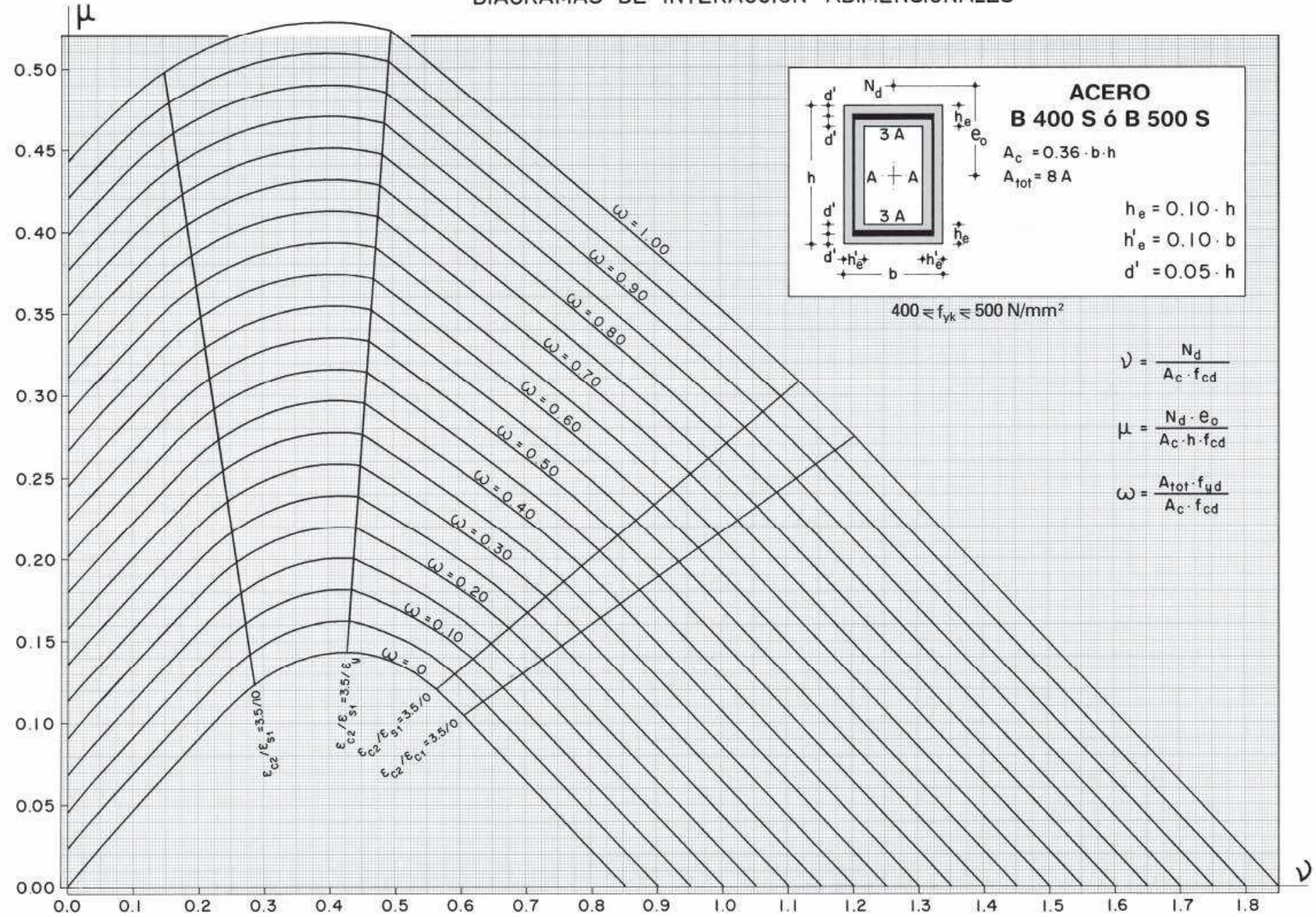
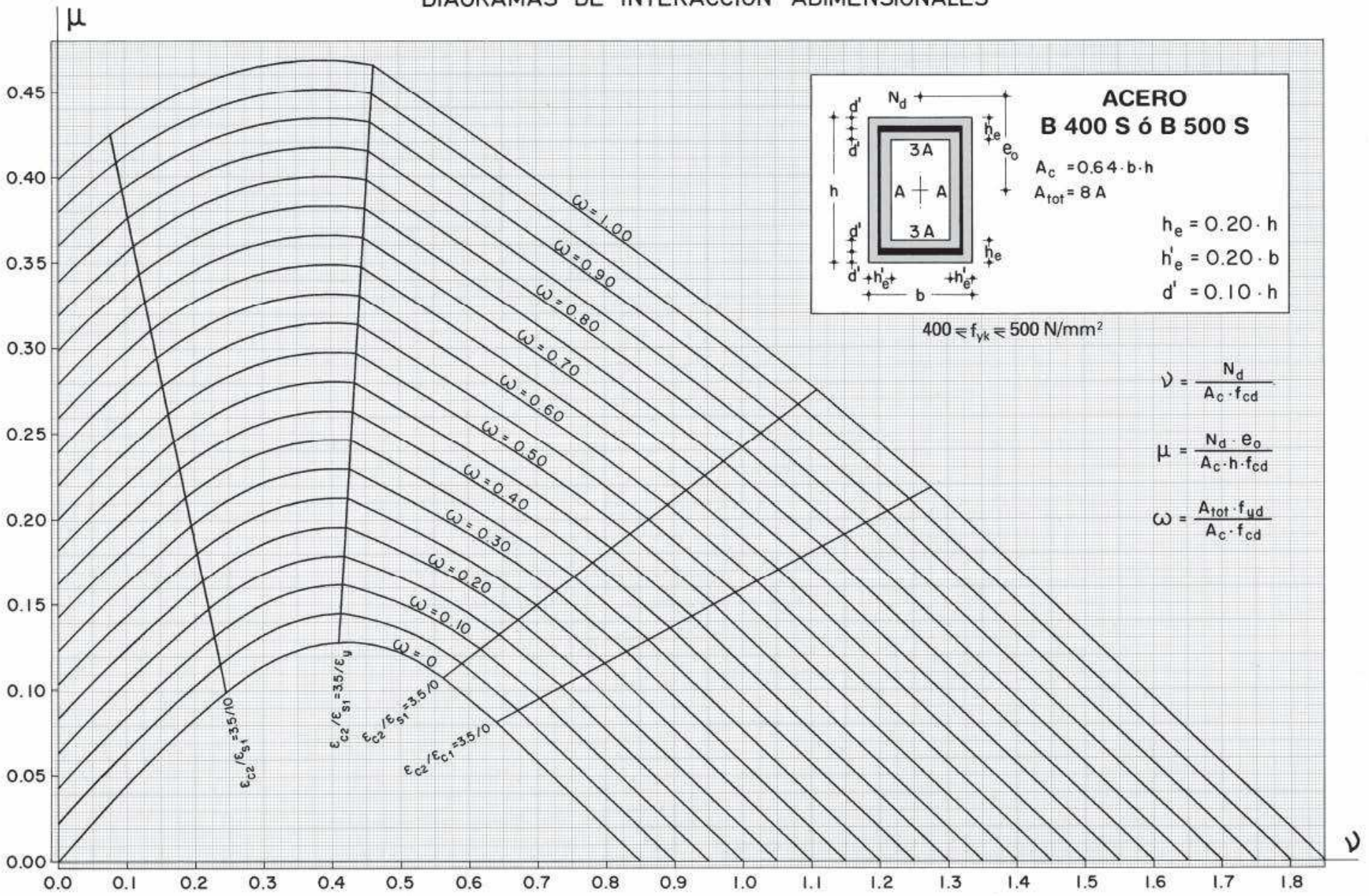
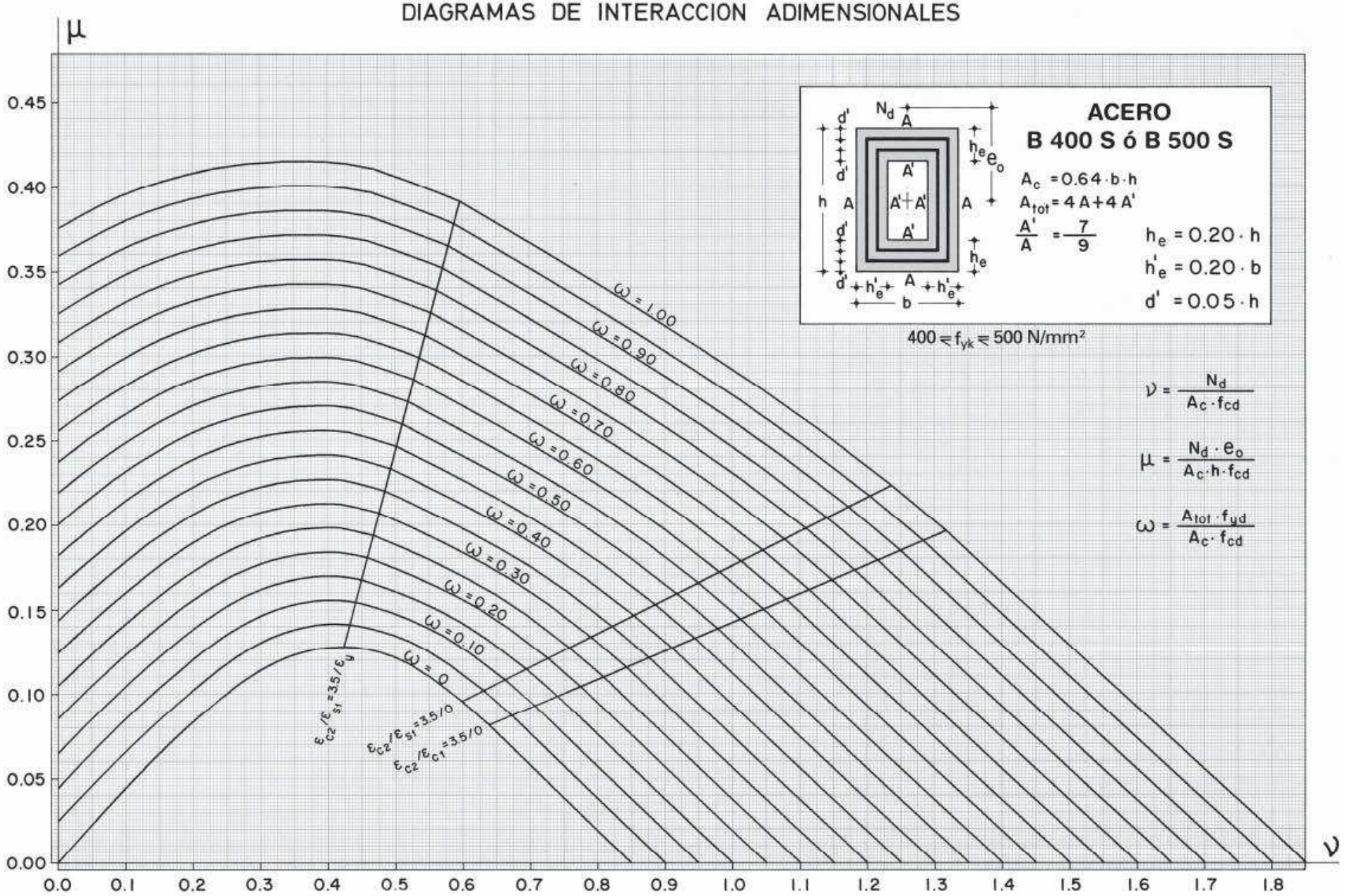


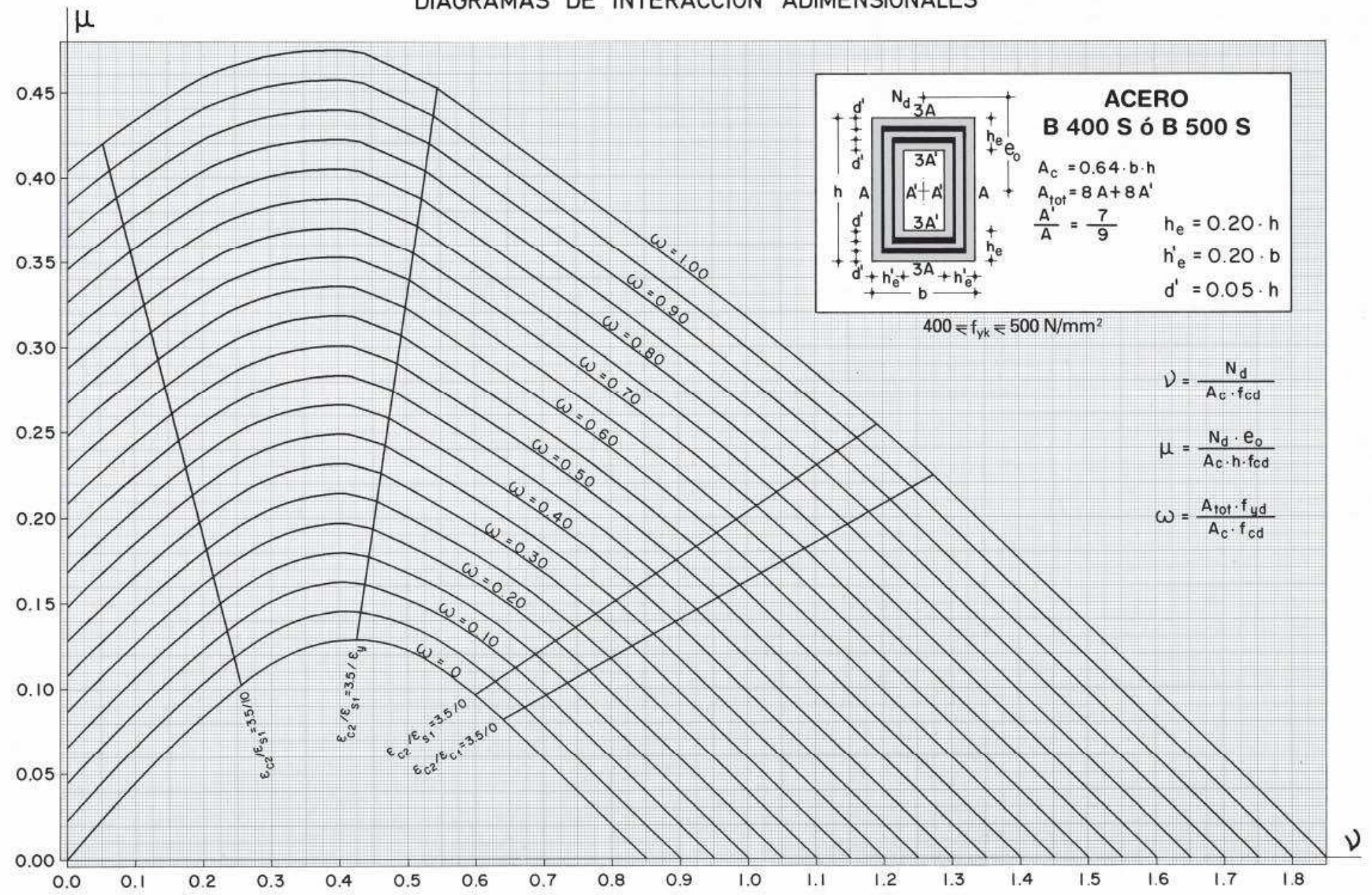
DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCIÓN ADIMENSIONALES

Secciones circulares y anulares

Aceros de dureza natural

$400 \leq f_{yk} \leq 500$ N/mm^2

($4.000 \leq f_{yk} \leq 5.100$ kp/cm^2)

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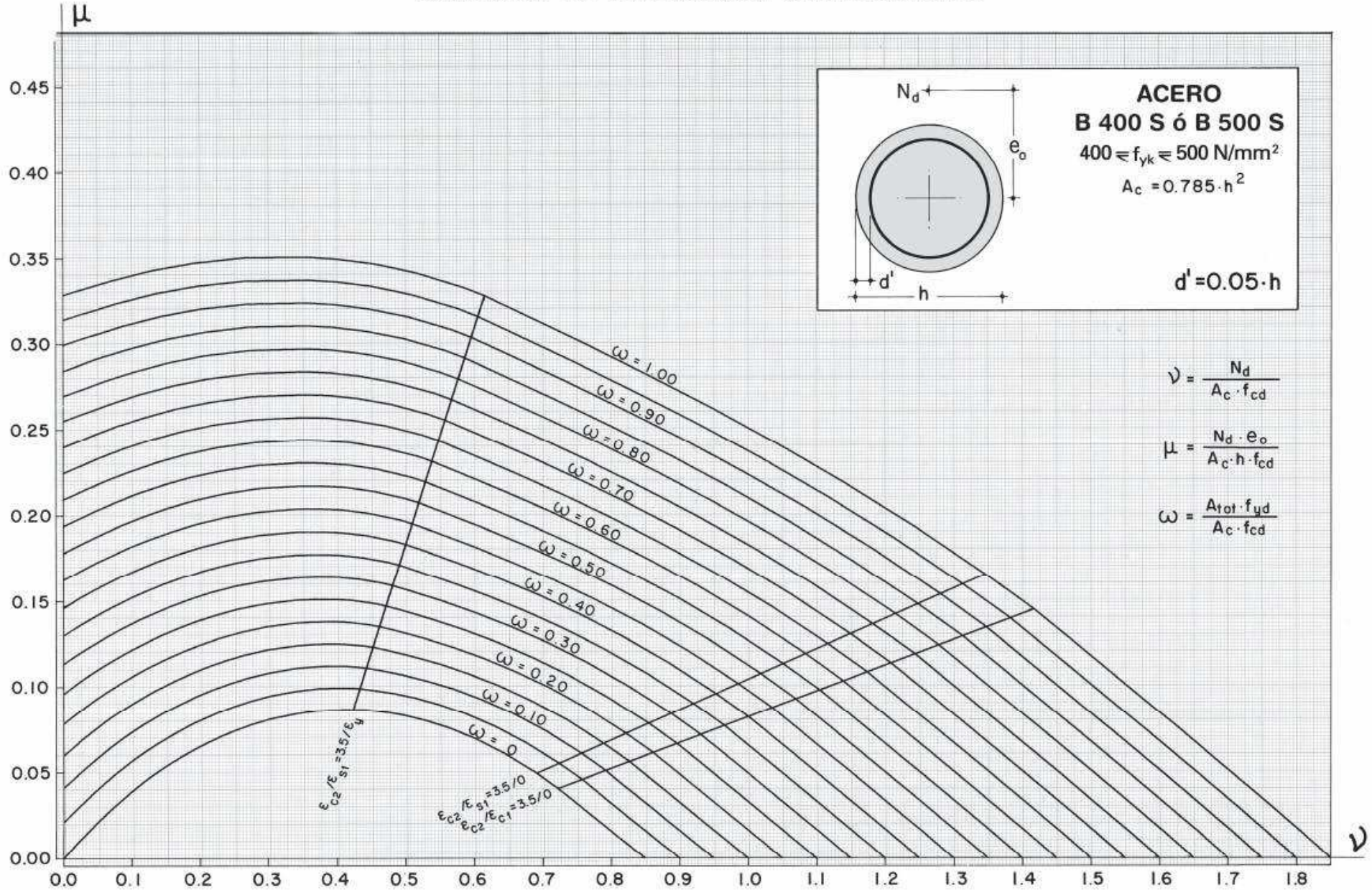
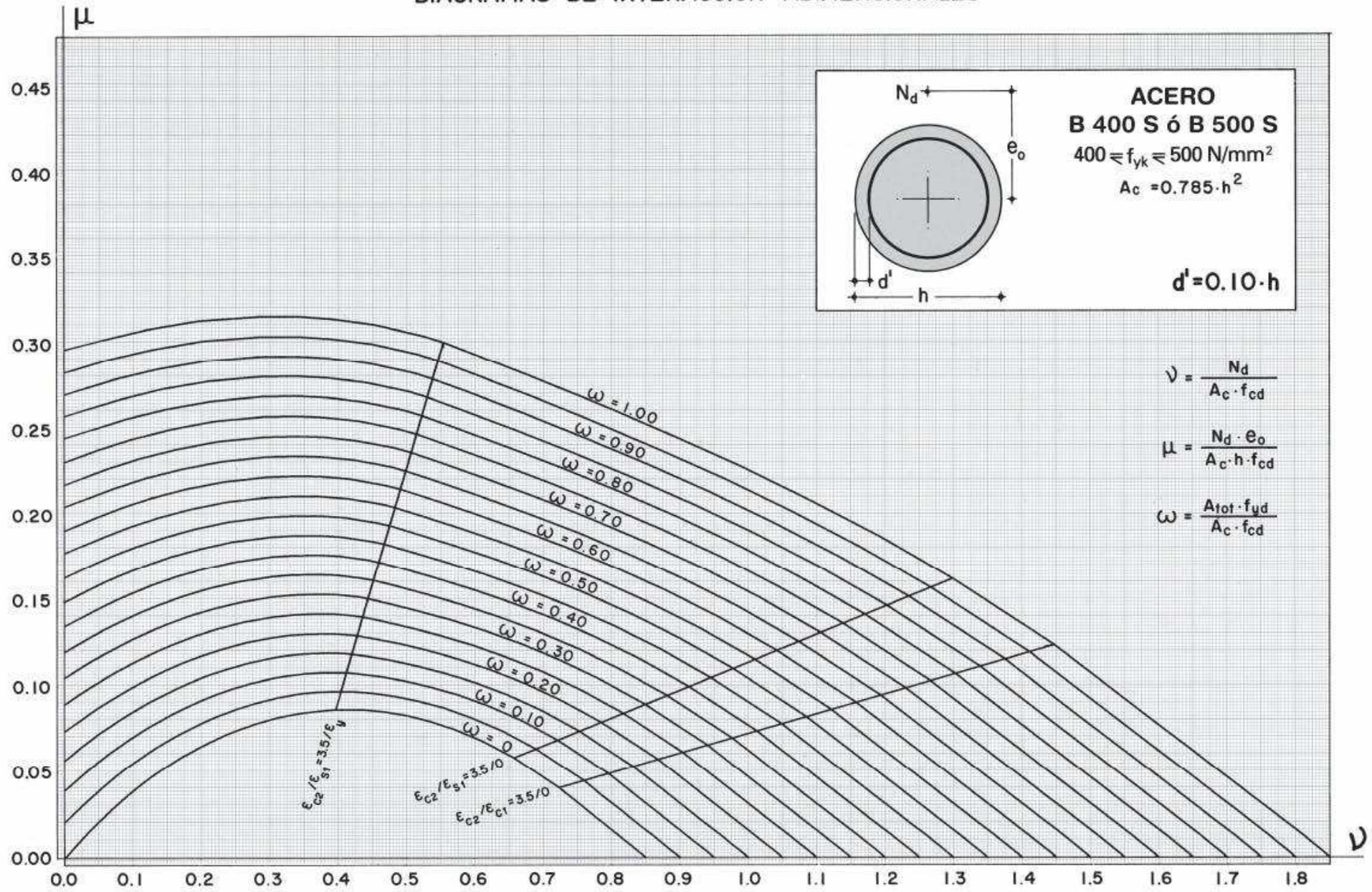
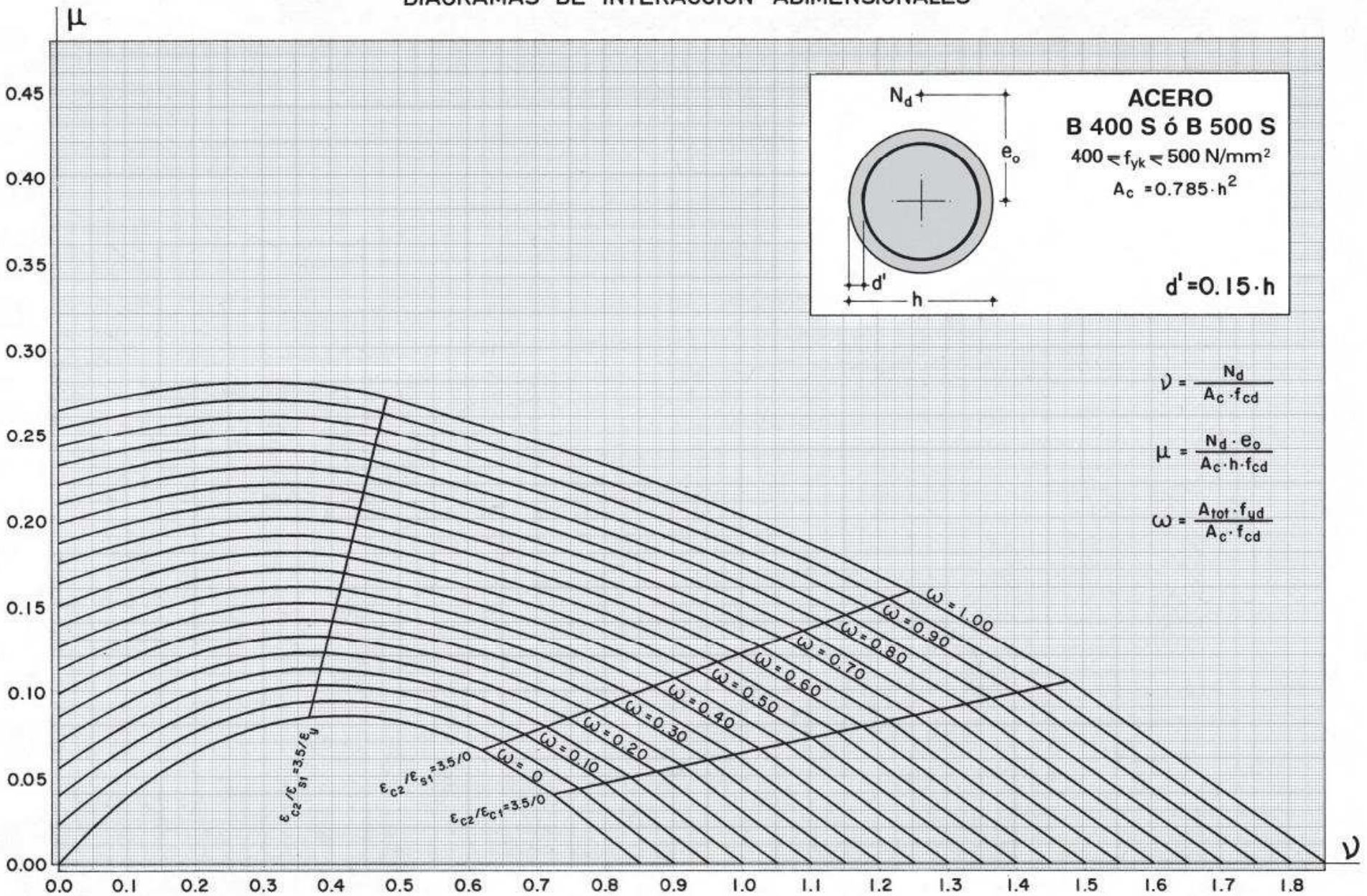
DIAGRAMAS DE INTERACCION ADIMENSIONALES



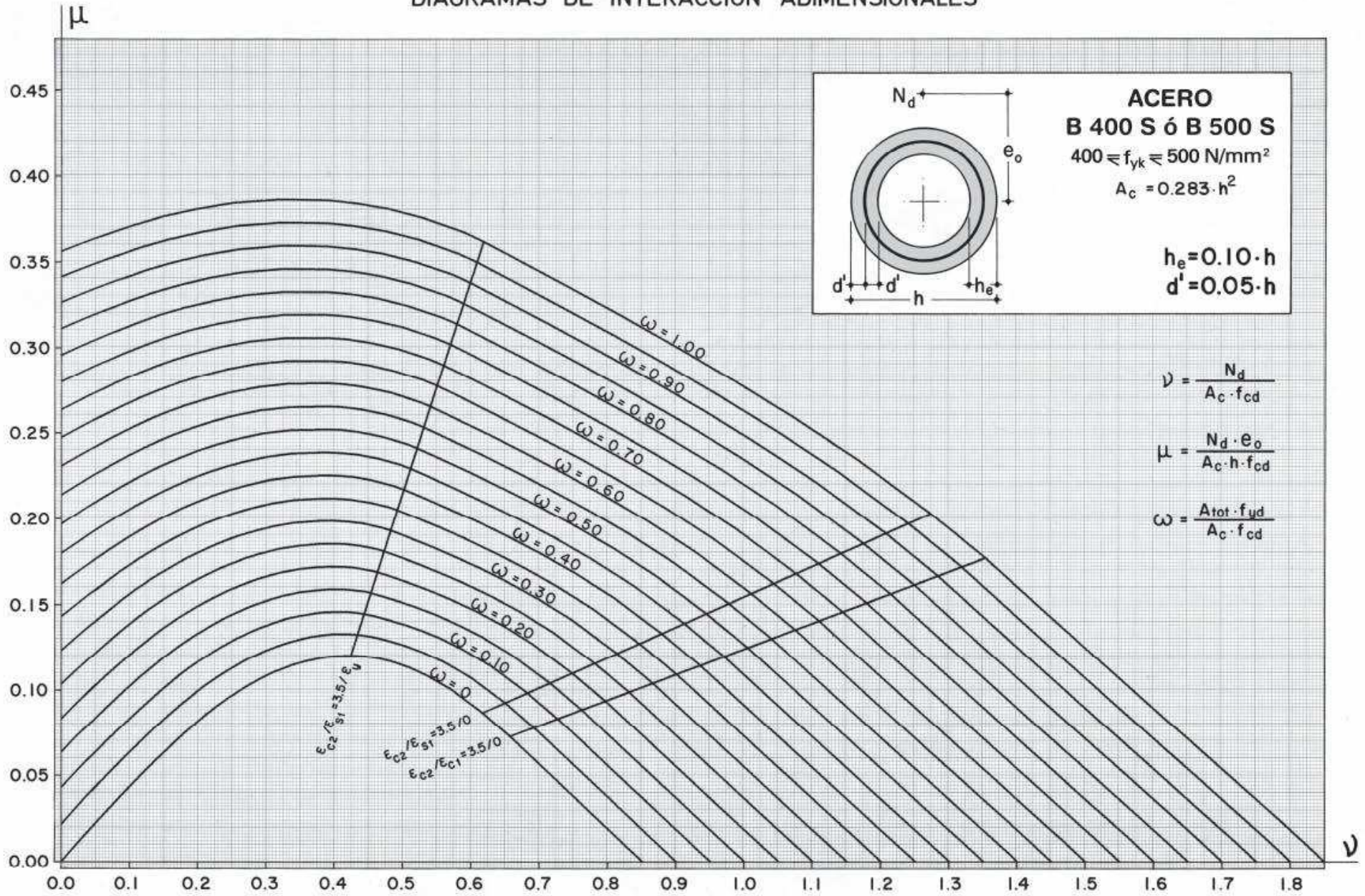
DIAGRAMAS DE INTERACCION ADIMENSIONALES



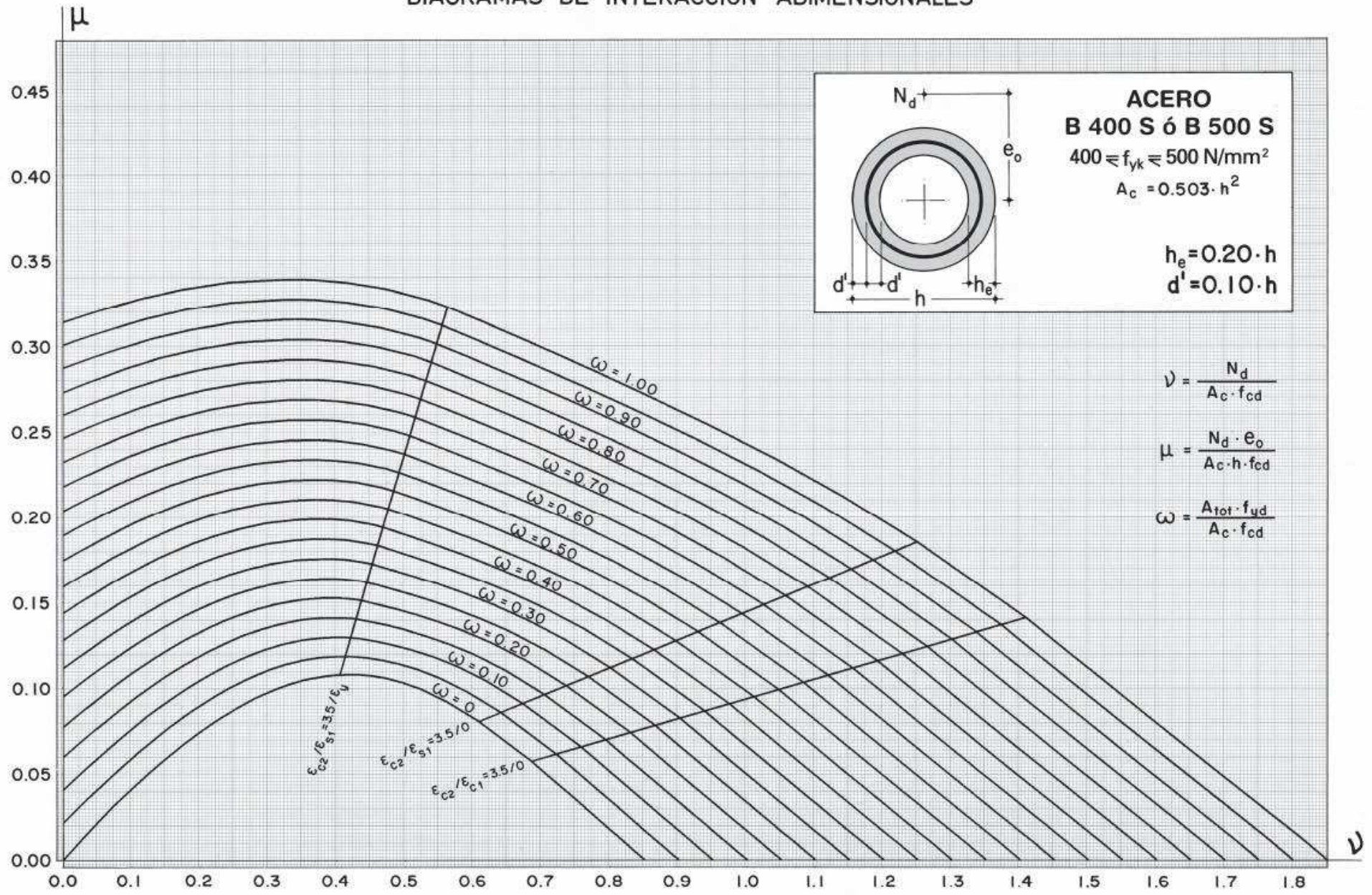
DIAGRAMAS DE INTERACCION ADIMENSIONALES



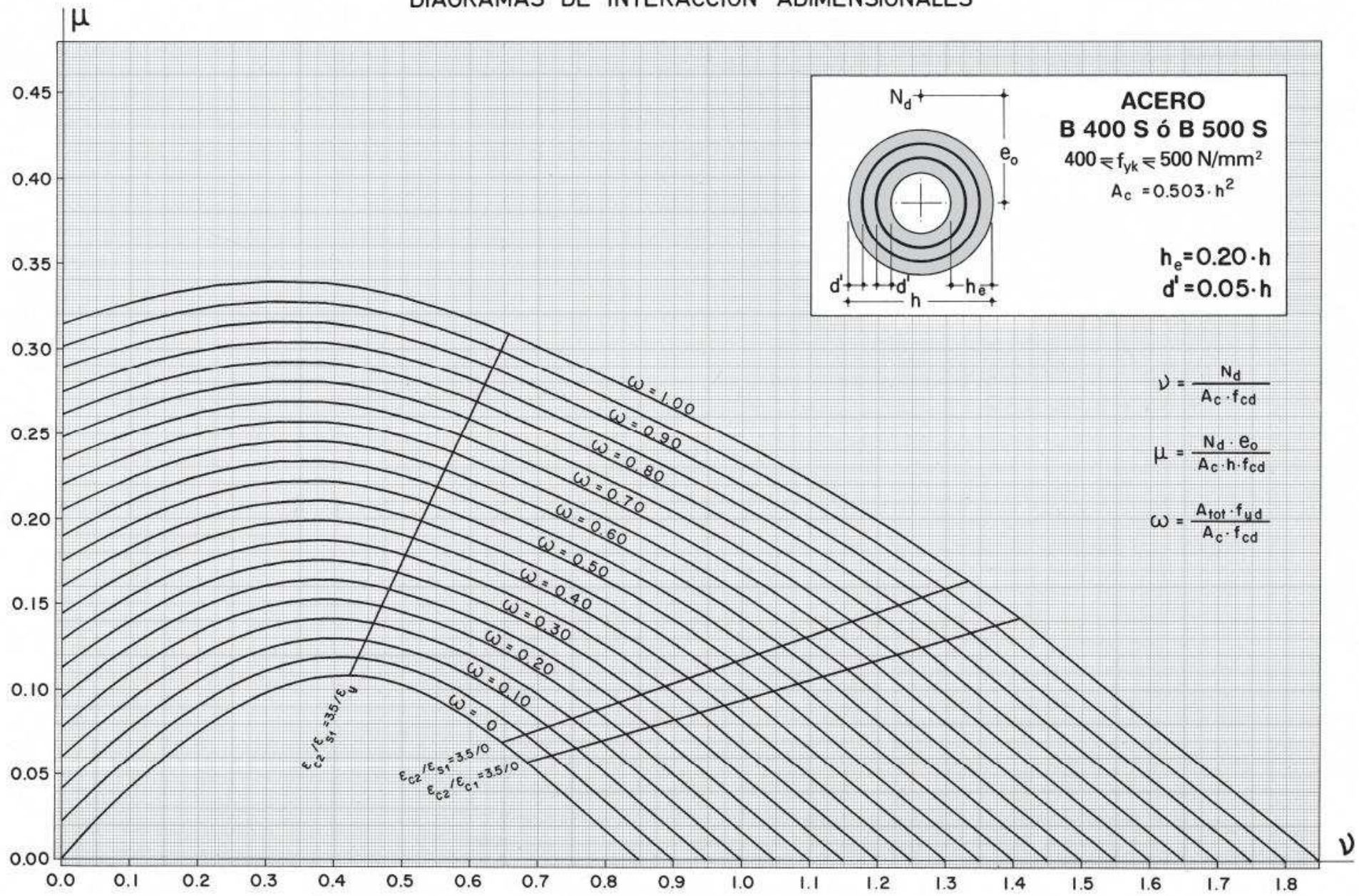
DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCION ADIMENSIONALES



DIAGRAMAS DE INTERACCION ADIMENSIONALES



ÁBACOS EN ROSETA PARA FLEXIÓN ESVIADA

Secciones rectangulares

Aceros de dureza natural

$400 \leq f_{yk} \leq 500$ N/mm^2

($4.000 \leq f_{yk} \leq 5.100$ kp/cm^2)

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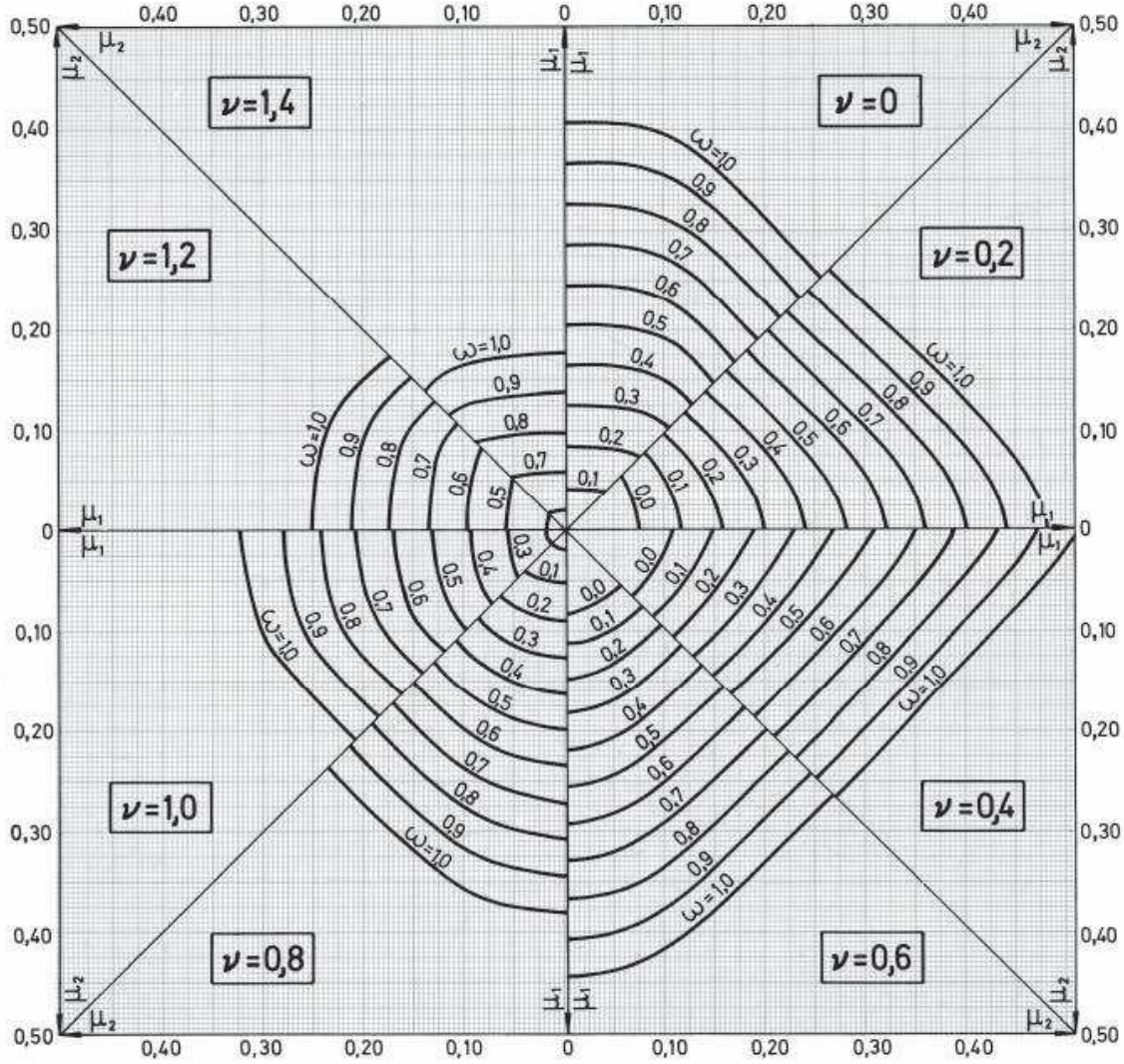
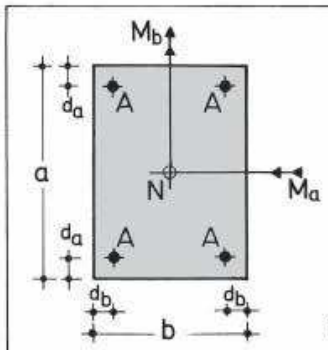
ABACO EN ROSETA PARA FLEXION ESVIADA





ACERO B 400 S

$f_{yk} = 400\ N/mm^2$

$A_c = a \cdot b$

$A_{tot} = 4A$

$d_a = 0{,}10 \cdot a$ $\qquad$ $d_b = 0{,}10 \cdot b$

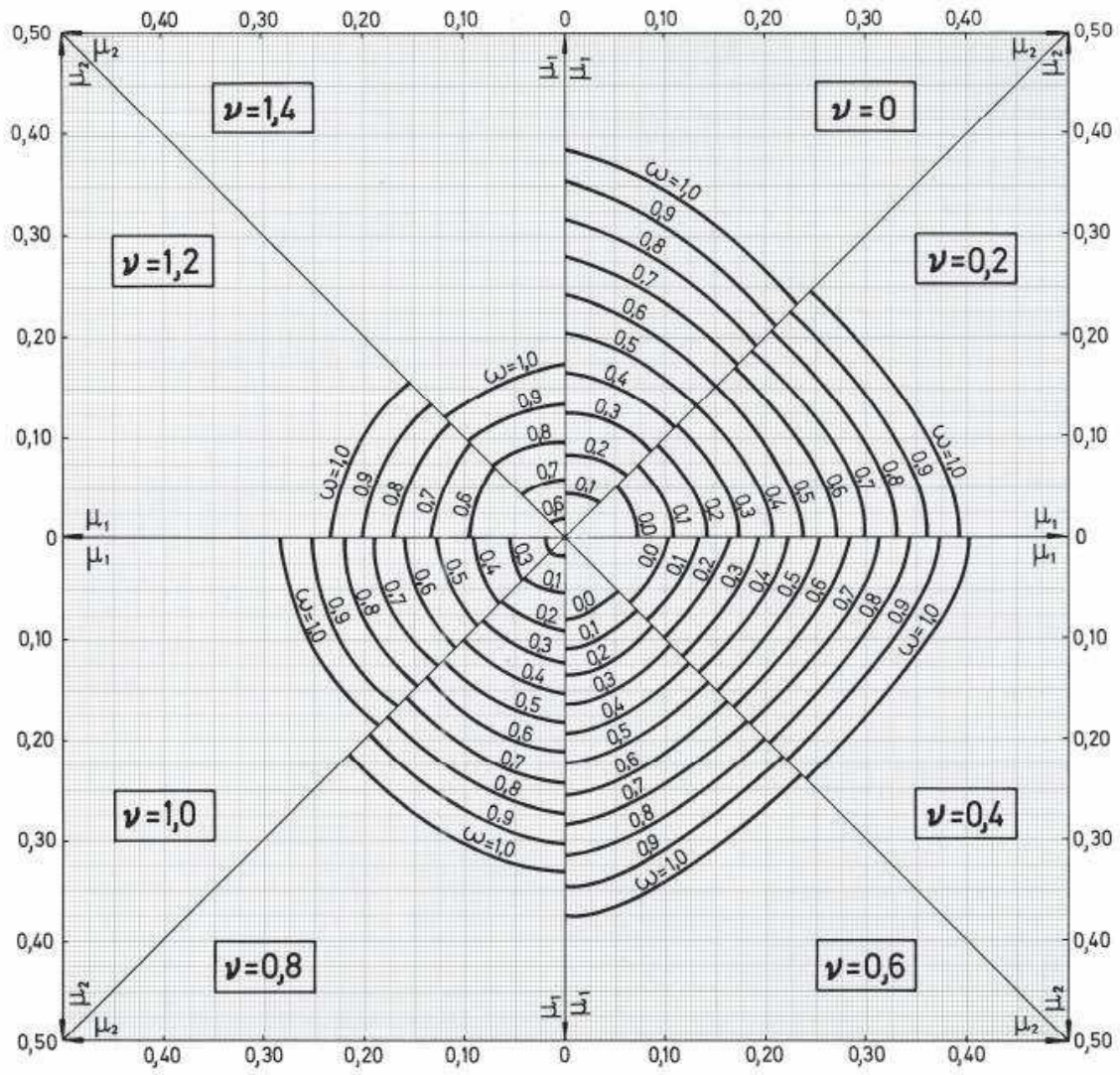
$$\mu_a = \frac{M_{ad}}{A_c \cdot a \cdot f_{cd}} \qquad \mu_b = \frac{M_{bd}}{A_c \cdot b \cdot f_{cd}}$$

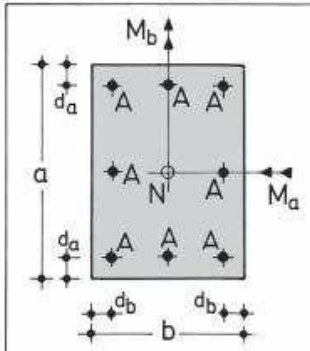
$$\nu = \frac{N_d}{A_c \cdot f_{cd}} \qquad \omega = \frac{A_{tot} \cdot f_{yd}}{A_c \cdot f_{cd}}$$

si $\mu_a > \mu_b$: $\quad \mu_1 = \mu_a$, $\mu_2 = \mu_b$

si $\mu_a < \mu_b$: $\quad \mu_1 = \mu_b$, $\mu_2 = \mu_a$

ABACO EN ROSETA PARA FLEXION ESVIADA





ACERO B 400 S

$f_{yk} = 400\ N/mm^2$

$A_c = a \cdot b$

$A_{tot} = 8A$

$d_a = 0{,}10 \cdot a$ $\quad d_b = 0{,}10 \cdot b$

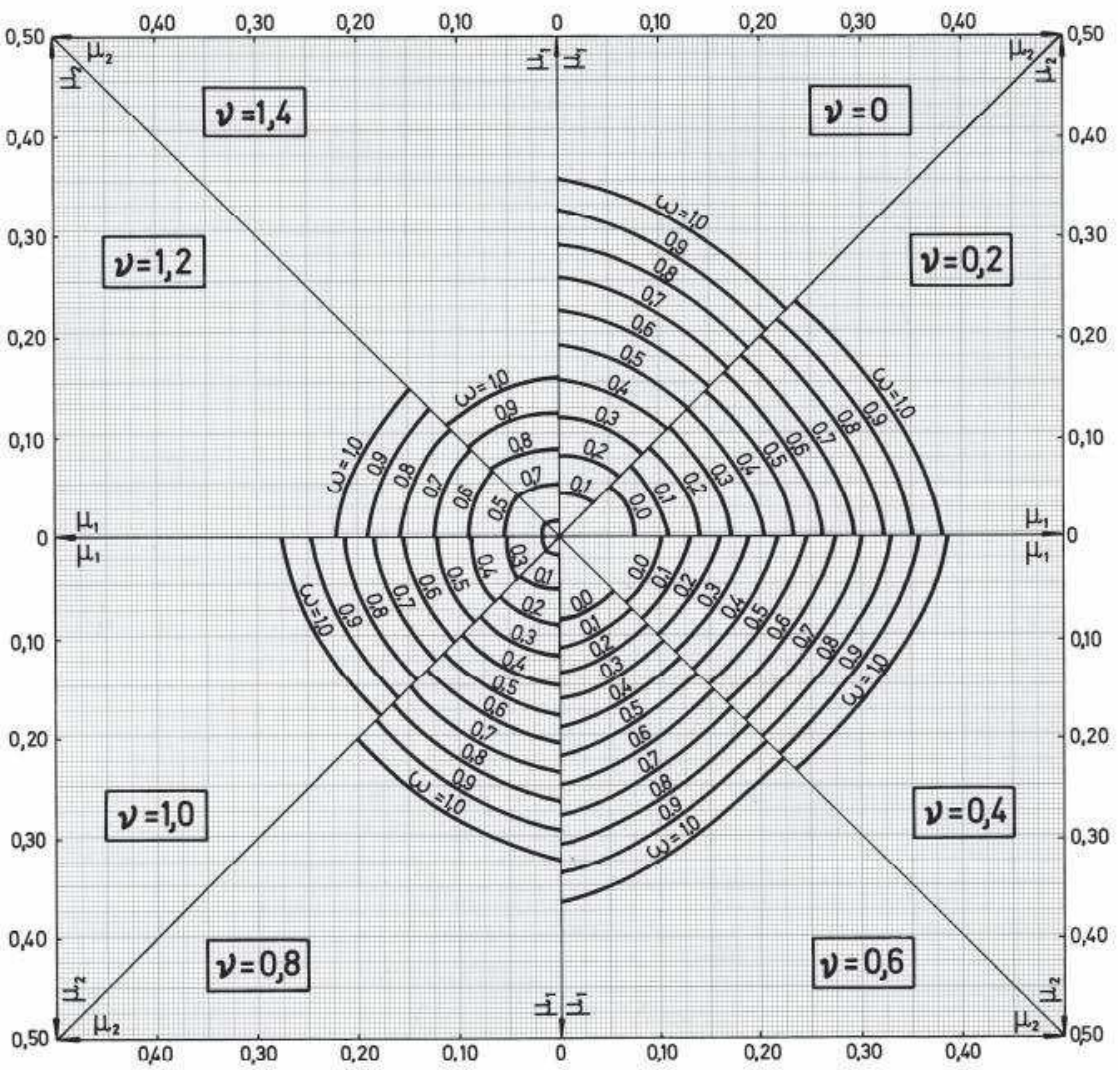
$$\mu_a = \frac{M_{ad}}{A_c \cdot a \cdot f_{cd}} \qquad \mu_b = \frac{M_{bd}}{A_c \cdot b \cdot f_{cd}}$$

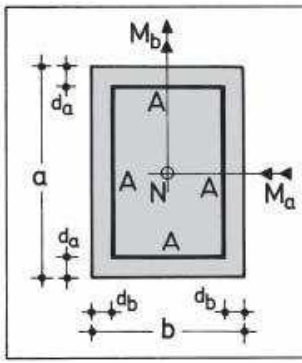
$$\nu = \frac{N_d}{A_c \cdot f_{cd}} \qquad \omega = \frac{A_{tot} \cdot f_{yd}}{A_c \cdot f_{cd}}$$

si $\mu_a > \mu_b$: $\mu_1 = \mu_a$, $\mu_2 = \mu_b$

si $\mu_a < \mu_b$: $\mu_1 = \mu_b$, $\mu_2 = \mu_a$

ABACO EN ROSETA PARA FLEXION ESVIADA





ACERO B 400 S

$f_{yk} = 400\ N/mm^2$

$A_c = a \cdot b$

$A_{tot} = 4A$

$d_a = 0{,}10 \cdot a$ $\quad d_b = 0{,}10 \cdot b$

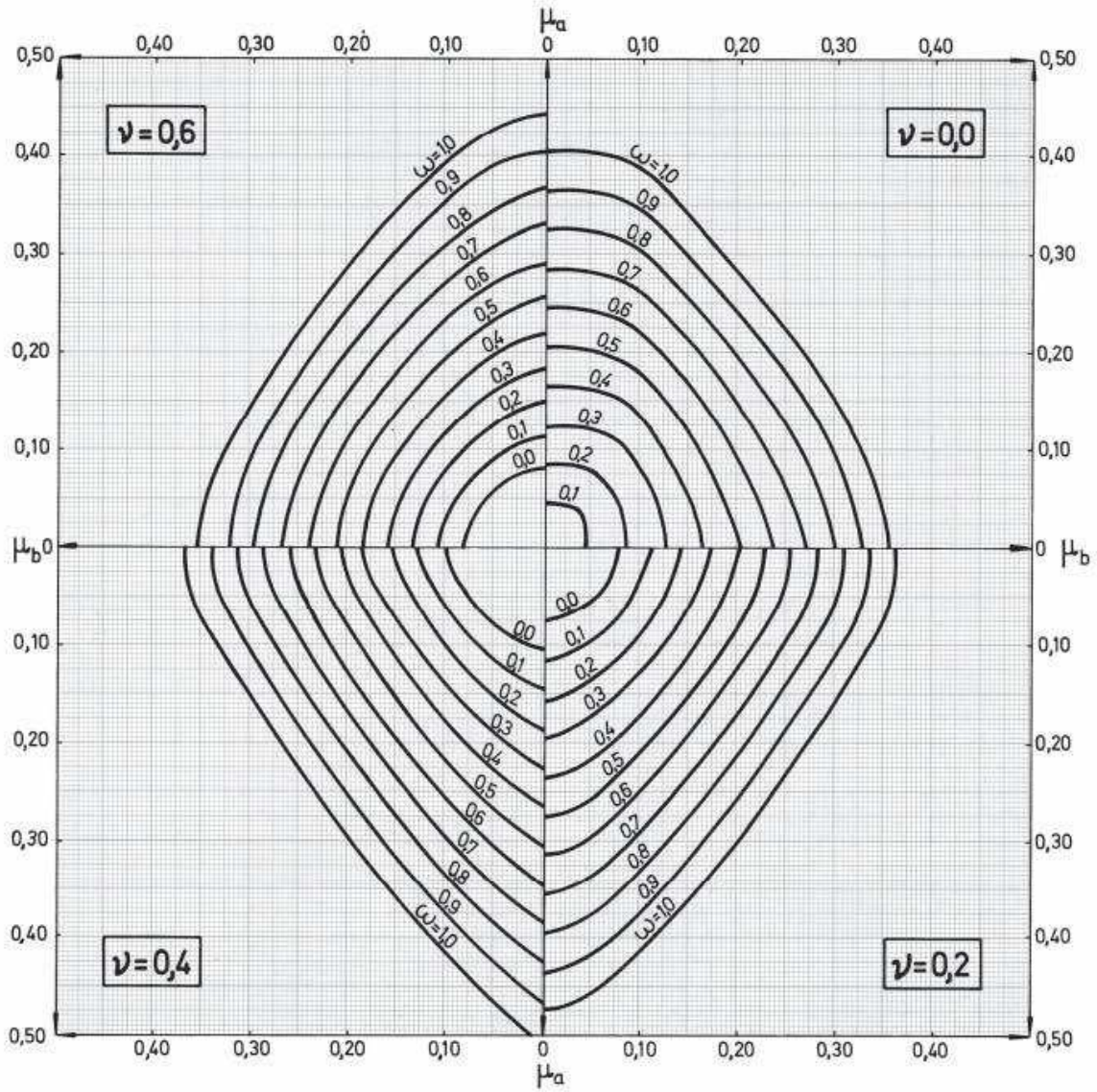
$$\mu_a = \frac{M_{ad}}{A_c \cdot a \cdot f_{cd}} \qquad \mu_b = \frac{M_{bd}}{A_c \cdot b \cdot f_{cd}}$$

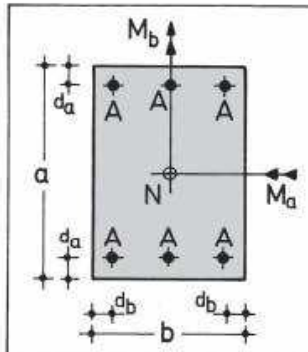
$$\nu = \frac{N_d}{A_c \cdot f_{cd}} \qquad \omega = \frac{A_{tot} \cdot f_{yd}}{A_c \cdot f_{cd}}$$

si $\mu_a > \mu_b$: $\mu_1 = \mu_a$, $\mu_2 = \mu_b$

si $\mu_a < \mu_b$: $\mu_1 = \mu_b$, $\mu_2 = \mu_a$

ABACO EN ROSETA PARA FLEXION ESVIADA





ACERO B 400 S

$f_{yk} = 400\ N/mm^2$

$A_c = a \cdot b$

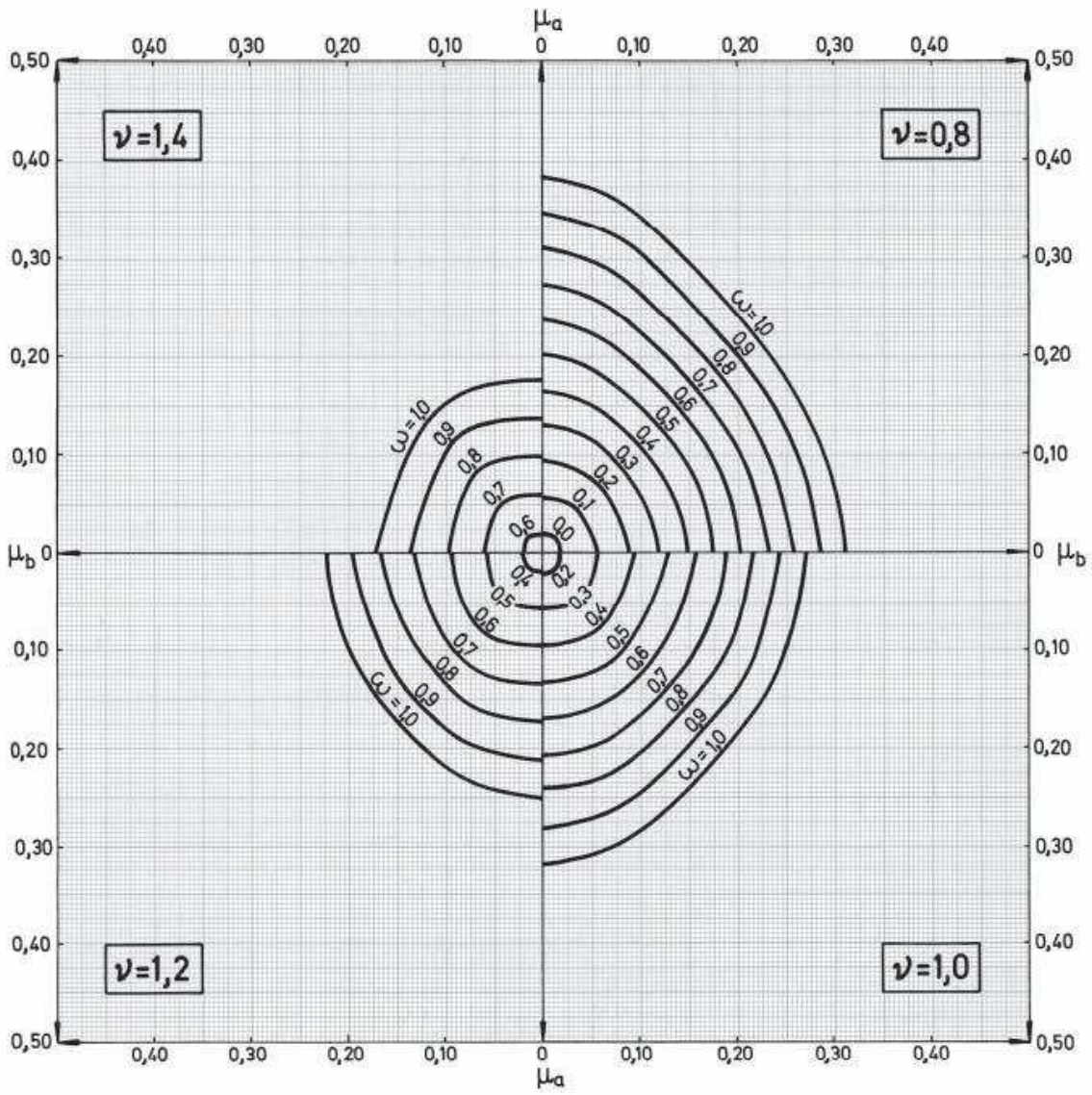
$A_{tot} = 6A$

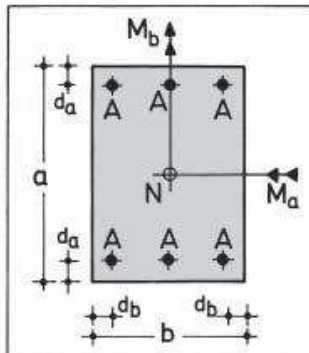
$d_a = 0{,}10 \cdot a$ $\quad d_b = 0{,}10 \cdot b$

$$\mu_a = \frac{M_{ad}}{A_c \cdot a \cdot f_{cd}} \qquad \mu_b = \frac{M_{bd}}{A_c \cdot b \cdot f_{cd}}$$

$$\nu = \frac{N_d}{A_c \cdot f_{cd}} \qquad \omega = \frac{A_{tot} \cdot f_{yd}}{A_c \cdot f_{cd}}$$

ABACO EN ROSETA PARA FLEXION ESVIADA





ACERO B 400 S

$f_{yk} = 400\ N/mm^2$

$A_c = a \cdot b$

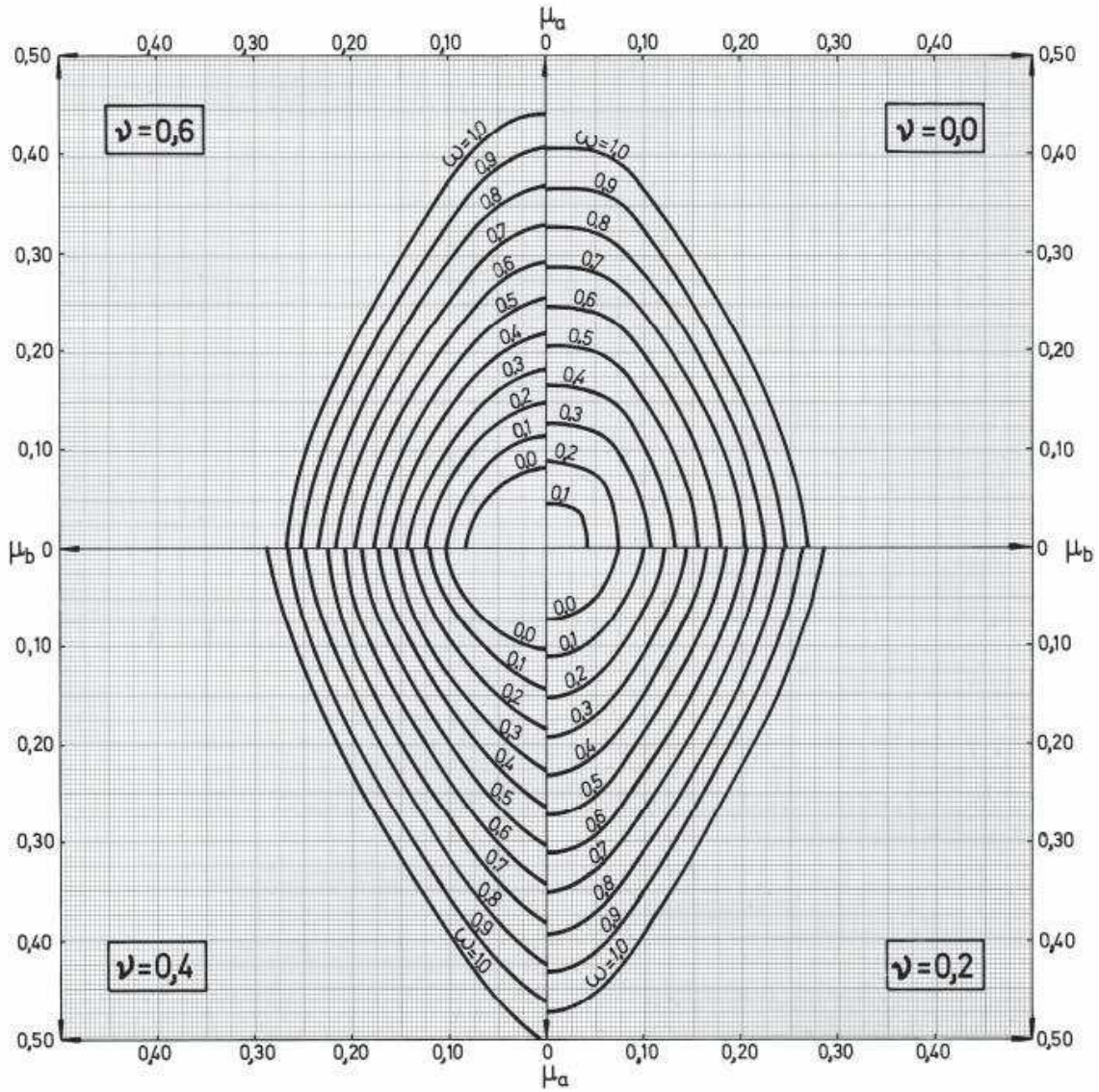
$A_{tot} = 6A$

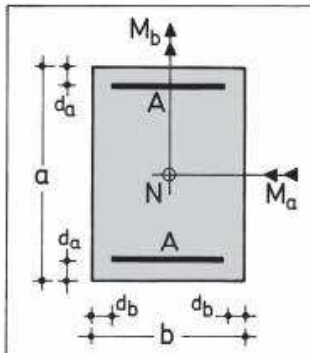
$d_a = 0{,}10 \cdot a$ $\quad d_b = 0{,}10 \cdot b$

$$\mu_a = \frac{M_{ad}}{A_c \cdot a \cdot f_{cd}} \qquad \mu_b = \frac{M_{bd}}{A_c \cdot b \cdot f_{cd}}$$

$$\nu = \frac{N_d}{A_c \cdot f_{cd}} \qquad \omega = \frac{A_{tot} \cdot f_{yd}}{A_c \cdot f_{cd}}$$

ABACO EN ROSETA PARA FLEXION ESVIADA





ACERO B 400 S

$f_{yk} = 400\ N/mm^2$

$A_c = a \cdot b$

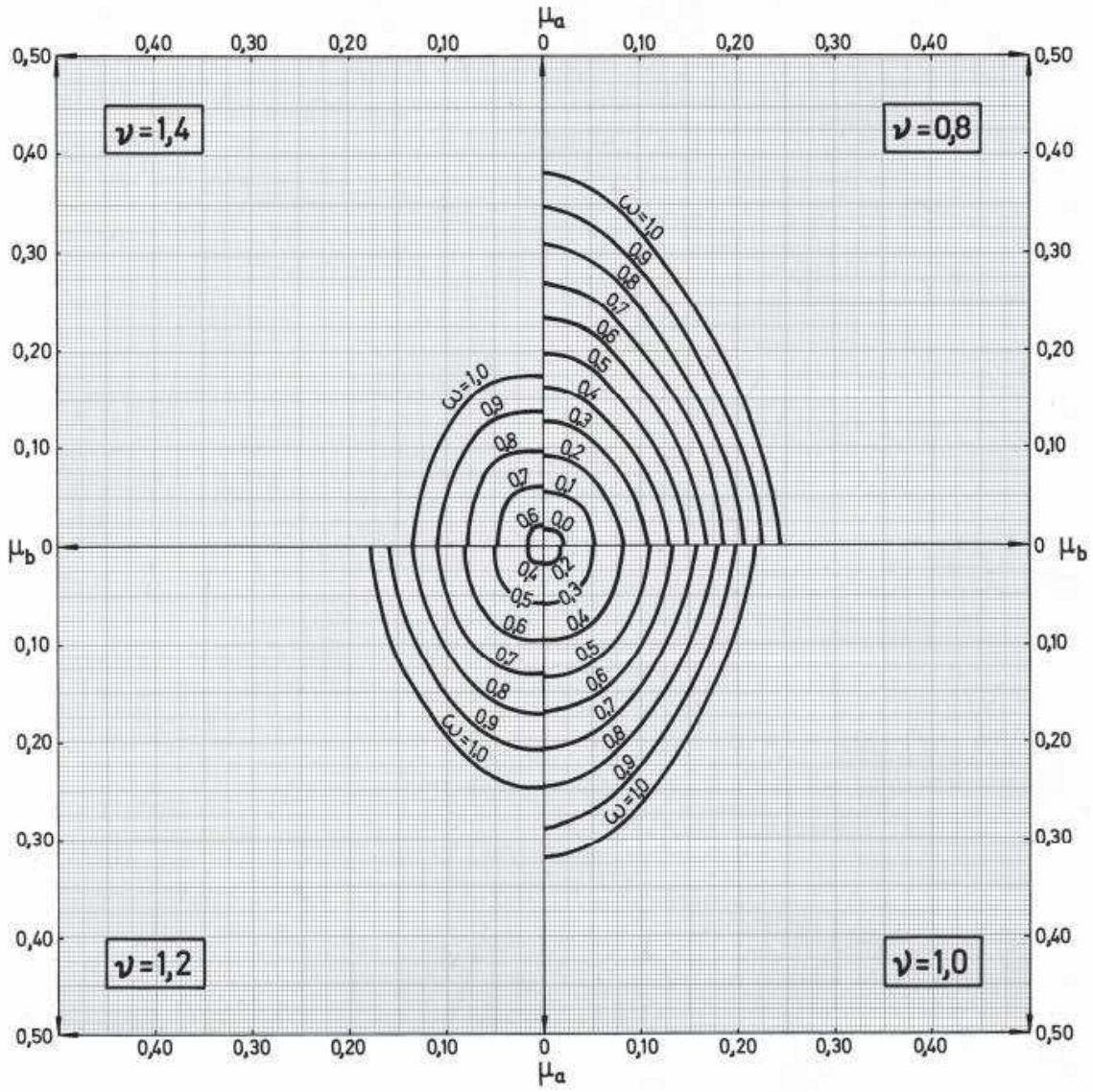
$A_{tot} = 2A$

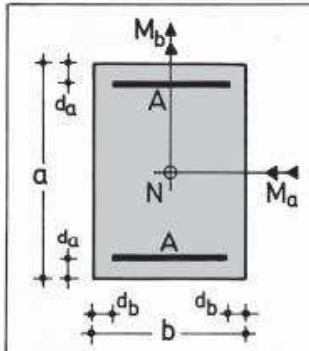
$d_a = 0{,}10 \cdot a$ $\quad d_b = 0{,}10 \cdot b$

$$\mu_a = \frac{M_{ad}}{A_c \cdot a \cdot f_{cd}} \qquad \mu_b = \frac{M_{bd}}{A_c \cdot b \cdot f_{cd}}$$

$$\nu = \frac{N_d}{A_c \cdot f_{cd}} \qquad \omega = \frac{A_{tot} \cdot f_{yd}}{A_c \cdot f_{cd}}$$

ABACO EN ROSETA PARA FLEXION ESVIADA





ACERO B 400 S

$f_{yk} = 400\ N/mm^2$

$A_c = a \cdot b$

$A_{tot} = 2A$

$d_a = 0{,}10 \cdot a$ $\quad d_b = 0{,}10 \cdot b$

$$\mu_a = \frac{M_{ad}}{A_c \cdot a \cdot f_{cd}} \qquad \mu_b = \frac{M_{bd}}{A_c \cdot b \cdot f_{cd}}$$

$$\nu = \frac{N_d}{A_c \cdot f_{cd}} \qquad \omega = \frac{A_{tot} \cdot f_{yd}}{A_c \cdot f_{cd}}$$