

COLLAR DE REFUERZO TUBERÍAS DE ACERO

COLLAR DE REFUERZO EN TUBERÍAS DE ACERO (AWWA M11): esta librería permite calcular el collar o cubierta de refuerzo para conexiones en tuberías de acero.

Plataforma: HP50g, versión ROM HP50-C / Revisión # 2.15

El comando RCT inicia la aplicación, se introducen los datos en las unidades especificadas:

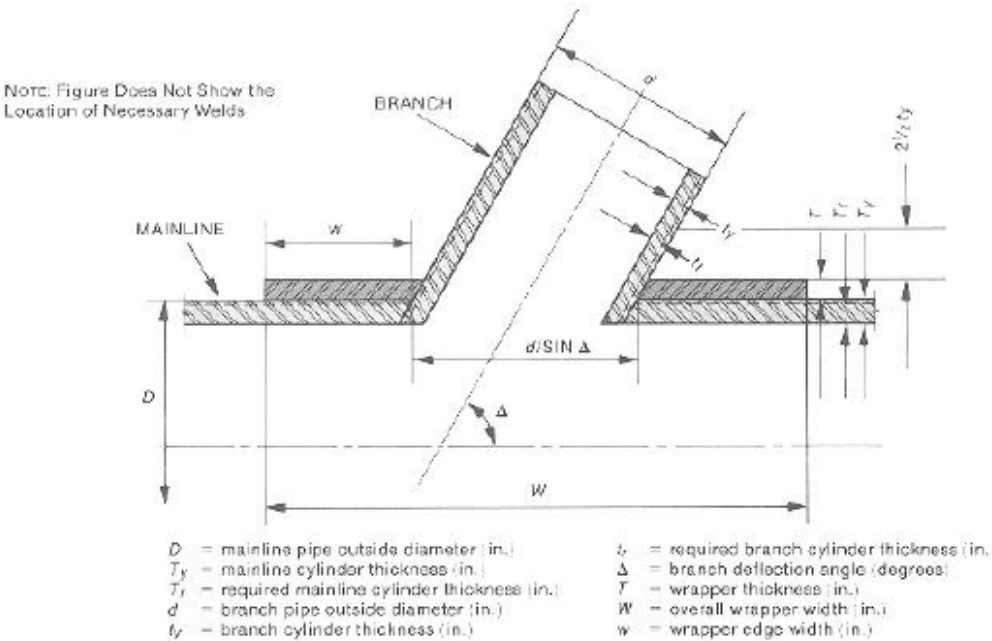
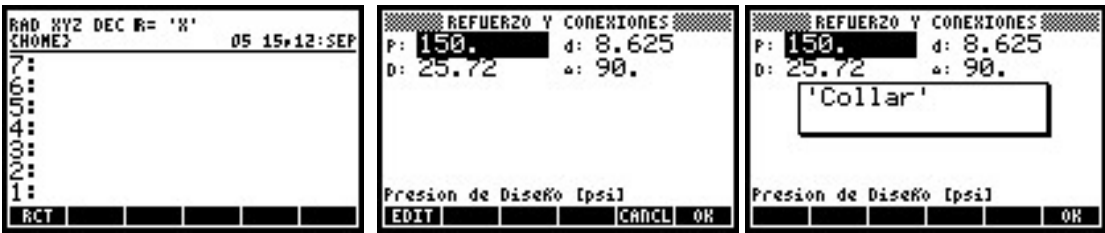


Figure 13-3 Reinforcement of Openings in Welded Steel Pipe

Table 13-2 Recommended Reinforcement Type*

| PDV | d/D | M Factor | Reinforcement Type |
|-----------|-------|-------------|--------------------|
| >6000 | all | — | Crotch Plate |
| 4000–6000 | >0.7 | 0.00025 PDV | Wrapper |
| <4000 | >0.7 | 1.0 | Wrapper |
| 4000–6000 | ≤0.7 | 0.00025 PDV | Collar |
| <4000 | ≤0.7 | 1.0 | Collar |

*These reinforcements are for resistance to internal pressure. They should be checked for ability to resist external loads.

Criteria-data example—24-in. × 8-in. tee

| | |
|---|----------------------------|
| Main-pipe size (nominal diameter) | 24 in. |
| Main-pipe cylinder OD | D 25 ¾ in. |
| Main-pipe cylinder thickness | T_y 0.135 in. (10 gauge) |
| Branch-outlet size (nominal diameter) | 8 in. |
| Branch-outlet cylinder OD | d 8 ⅝ in. |
| Branch-outlet thickness | t_y ¼ in. |
| Deflection angle | Δ 90° |
| Design pressure | P 150 psi |
| Reinforcement steel allowable stress (The allowable stress, based on a design stress resulting from working pressure, shall not exceed ½ the minimum yield of the steel used for the pipe cylinder or in the reinforcement, whichever is less.) | f_s 16 500 psi |

Ilustración 2: Datos de ejemplo

Esposores & Esfuerzo

Ty: .135
ty: .25
fs: 16500.

Esposor Principal [in]
EDIT CANCEL OK

Ajustar Esposor ?

T: 6.25395256916E-2

0.135

EDIT CANCEL OK

Ajustar Esposor ?

T: .135

Cambiar a esposor nominal [in]
EDIT CANCEL OK

RESULTADOS

T: Wr: 14.375_in
Wr: 2.875_in
Wmin: 2.875_in
Wprueba: 1.9977904040
T: .135_in
w: 4.3125_in
AW: .53940340909_in^2
Ad: .410422954546_in^2

Canb CANCEL OK

RAD XYZ DEC R= 'X' PRG
CHOME 05 20:12:SEP

(:Wr: '14.375_in'
:wr: '2.875_in'
:wmin: '2.875_in'
:wprueba: '
1.99779040404_in' :T:
' .135_in' :w: '4.3125
_in' :Aw: '
+SHIP+SHIP+ +DEL DEL+ DEL L INS

Ilustración 3: ajuste de espesor y resultados

REFUERZO Y CONEXIONES

P: 250 d: 30

D: Placa
Bifurcacion
(Aleta) / Ver
AWWA M11

Presion de Diseño [psi]
OK

Ilustración 4: para aletas consultar AWWA M11