vessel wall or within the pad may be credited with a stress value equal to that of the vessel wall or pad, respectively.

(b) The welds that attach elements of compensation, not an integral part of the vessel wall, shall have a strength, \( W \), equal to the load carried by those elements defined as follows:

\[
W = (A - A_t)S_v
\]

where \( A, A_t, \) and \( S_v \) are defined in Figure TD-610.3-2.

(c) When a reinforcing pad is required by the rules of TD-610.3, the welds attaching the nozzle to the pad and shell shall be checked independently to ensure that the loads carried by the individual elements can be transmitted by the attaching welds.

(d) Welds attaching elements of reinforcement need not satisfy the weld strength requirements of TD-640

NOTE: These values are obtained by combining the following factors: 87.5% for combined end and side loading, 80% for shear strength, and the applicable joint efficiency factors.

(h) Reinforcing plates and saddles of nozzles attached to the outside of a vessel shall be provided with at least one telltale hole (maximum size \( \frac{3}{4} \) in. pipe tap) that may be tapped for a preliminary compressed air and soapsuds test for tightness of welds that seal off the inside of the vessel. These telltale holes may be left open or may be plugged, the plugging material shall not be capable of sustaining pressure between the reinforcing plate on the vessel wall.

**TD-660 REINFORCEMENT OF MULTIPLE OPENINGS**

When any two openings are spaced at less than two times their average diameter, so that their limits of reinforcement overlap [see Figure TD-660, sketch (a)], the welds shall be reinforced in the plane connecting the centers, in accordance with the rules of TD-610, TD-640, and TD-650 with a combined reinforcement that has an area not less than the sum of the areas for each opening. No portion of the cross section considered as applying to more than one opening, is considered more than once in a combined area. The overlap area shall be proportioned between the two openings by the ratio of their diameters.

(2) If the area of reinforcement between the two openings is less than 50% of the total required for the two openings, the supplemental rules of TD-610.7(g) shall be used.

(c) Alternatively, any number of adjacent openings, in any arrangement, may be reinforced by using an assumed opening enclosing all such openings. The limits for reinforcement of the assumed opening shall be those given in TD-640(b)(1) and TD-640(c)(1). The nozzle walls of the actual openings shall not be considered to have reinforcing value. When the diameter of the assumed opening exceeds the limits in TD-600.2, the supplemental rules of TD-610.7 shall also be used.