Add new Figure UW-9-3 as shown below:

**Figure UW-9-3**

Add new paragraph UW-9(h) as follows:

(h) Offset Joints. Shell courses may be joined to one another or to a dished head by butt welds having one plate offset as shown in Figure UW-9-3. The weld bead may be deposited on the inside of the vessel only when the weld is accessible for inspection after the vessel is completed. The offset shall be smooth and symmetrical and shall not be machined or otherwise reduced in thickness through the conical portion of the offset. The thickness of the shaded area may be less than the required thickness of the offset component when acting solely as a backing strip for the weld joint. There shall be a uniform force fit with the mating section at the root of the weld.

(1) Definitions: \( t \) = nominal thickness of offset shell or head in Figure UW-9-3.

(2) Should the offset contain a longitudinal joint, the following shall apply:

(-a) The longitudinal weld within the area of the offset shall be ground substantially flush with the parent metal prior to the offsetting operation.

(-b) The longitudinal weld from the edge of the plate through the offset shall be examined by either the magnetic particle or liquid penetrant method after the offsetting operation. Cracks and cracklike defects are unacceptable and shall be repaired or removed.

(3) For joints connecting hemispherical heads to shells, the following shall apply:

(-a) \( t \) or \( t_1 = 3/8 \) in. (10 mm) maximum.

(-b) Maximum difference in thickness between \( t \) or \( t_1 = 3/32 \) in. (2.5 mm).

(-c) Use of this figure for joints connecting hemispherical heads to shells shall be noted in the “Remarks” section of the Manufacturer’s Data Report.

(4) For joints connecting other dished heads to shells, the distance between the **offset joint shell edge which is not offset** and the tangent of the head knuckle shall be not less than 3\( t \).
**Revise Table UW-12 as follows:**

**Table UW-12**

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Joint Description</th>
<th>Limitations</th>
<th>Joint Category</th>
<th>Degree of Radiographic Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Butt joints as attained by double-welding or by other means that will obtain the same quality of deposited weld metal on the inside and outside weld surfaces to agree with the requirements of UW-35. Welds using metal backing strips that remain in place are excluded.</td>
<td>None</td>
<td>A, B, C, and D</td>
<td>1.00</td>
</tr>
<tr>
<td>(2)</td>
<td>Single-welded butt joint with backing strip other than those included under (1)</td>
<td>None except as in (b) below</td>
<td>A, B, C, and D</td>
<td>0.90</td>
</tr>
<tr>
<td>(3)</td>
<td>Single-welded butt joint without use of backing strip</td>
<td>Circumferential butt joints only, not over 3/8 in. (16 mm) thick and not over 24 in. (600 mm) outside diameter</td>
<td>A, B, and C</td>
<td>NA</td>
</tr>
<tr>
<td>(4)</td>
<td>Double full penetration weld with backing strip</td>
<td>(ii) Butt weld with one plate edge offset</td>
<td>A</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Delete strikethrough and replace with the following text:**

- UW-9(h) and Figure UW-9-3

**Figure UW-13.1:**

- Delete and replace with:
  - (i) (deleted)
- Delete and replace with:
  - (4) (deleted)
  - (5) (deleted)

**NOTES:**

1. See UW-13(c)(2).
2. Butt weld and fillet weld, if used, shall be designed to take shear at 1 1/2 times the differential pressure than can exist.
3. t₁ and t₂ may be different.
4. See UW-13(b)(4) for limitation when weld head is deposited from inside.
5. For joints connecting hemispherical heads to shells, the following shall apply: (a) t or t₁ = 3/8 in. (10 mm) maximum.
   (b) Maximum difference in thickness between t or t₁ = 7/8 in. (2.5 mm).
   (c) Use of this figure for joints connecting hemispherical heads to shells shall be noted in the "Remarks" part of the Data Report Form.
6. In all cases, the projected length of taper, f, shall be not less than 3y.
7. Length of required taper, f, may include the width of the weld. The shell plate centerline may be on either side of the head plate centerline.
8. In all cases, f shall be not less than 3y when t₄ exceeds t₁. Minimum length of skirt is 3t₄ but need not exceed 1 1/2 in. (38 mm) except when necessary to provide required length of taper. When t₄ is equal to or less than 1.25t₄, length of skirt shall be sufficient for any required taper.
UW-13(b)(4):

(4) Shells and heads may be attached to shells or heads using a butt weld with one plate offset as shown in Figure UW-13.1, sketch (i). The weld bead may be deposited on the inside of the vessel only when the weld is accessible for inspection after the vessel is completed. The offset shall be smooth and symmetrical and shall not be machined or otherwise reduced in thickness. There shall be a uniform force fit with the mating section at the root of the weld. Should the offset contain a longitudinal joint, the following shall apply:

- (a) The longitudinal weld within the area of the offset shall be ground substantially flush with the parent metal prior to the offsetting operation.
- (b) The longitudinal weld from the edge of the plate through the offset shall be examined by the magnetic particle method after the offsetting operation. Cracks and cracklike defects are unacceptable and shall be repaired or removed.
- (c) As an acceptable alternative to magnetic particle examination or when magnetic particle methods are not feasible because of the nonferromagnetic character of the weld deposit, a liquid penetrant method shall be used. Cracks and cracklike defects are unacceptable and shall be repaired or removed.

Delete in its entirety and replace with:
(4) (deleted)

Delete strikethrough and replace with: UW-9-3

ULT-17(d):

(d) Butt welds with one plate edge offset [Figure UW-13.1, sketch (i)] are prohibited anywhere in the vessel.

Delete strikethrough and replace with: UW-9-3