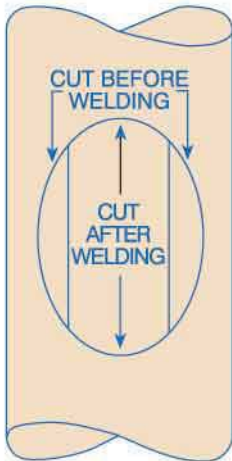
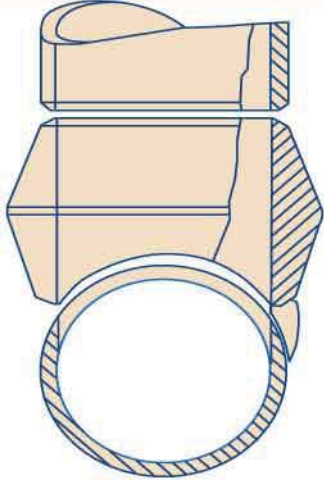


INSTALLATION PROCEDURE



PERTINENT POINTS ON SIZE ON SIZE WELDOLET[®] FITTING INSTALLATION

In contrast to the reducing sizes, the size on size Weldolet and the first reducing size are designed with an elliptical hole (as shown on pages 9 and 11). This has been done to provide the necessary full size opening without requiring a 50% portion of the header pipe to be removed (it is actually closer to 40%). This reduced hole cut combines with the proper welding procedure to minimize the possibility of header distortion.

Multiple outlet headers requiring all full size openings are subject to distortion because of the large number of holes that have to be cut in close proximity to one another. To eliminate the possibility of distortion occurring when using Weldolets in this type of installation we recommend that a strap be left in the center of the hole, by cutting out two half moon sections (as shown in sketch). This strap acts as a support until after the Weldolet has been installed and is then cut out.

Since alloys are more difficult to weld than carbon steel, many companies have set up specified welding procedures. For those who do not have access to such specifications we offer the following suggestions:

CHROME MOLY WELDOLET INSTALLATION

If the hole is to be flame cut rather than machine cut it is very important that all slag and rough edges be ground to a bright metal finish.

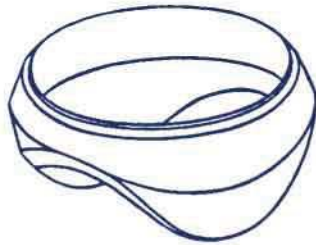
When preheating the materials to be welded, it is advisable to preheat to a temperature of 100° F more than shown in the code tables. This is done to eliminate the possibility of the material cooling to a temperature below the minimum shown on the table. Temperature crayons or electrical temperature controls are generally utilized to determine when the proper heat has been reached. Isolate all welding from chills and drafts.

When welding has been completed it is advisable to follow stress-relieving procedures at once. If however, this is not feasible, the welded section should be post heated to a dull red. The whole area should then be wrapped with a heat blanket and allowed to cool before stress relieving. The stress-relieving temperature should then be determined by the type of alloy and the engineer's recommended specifications or procedure.

STAINLESS STEEL WELDOLET INSTALLATION

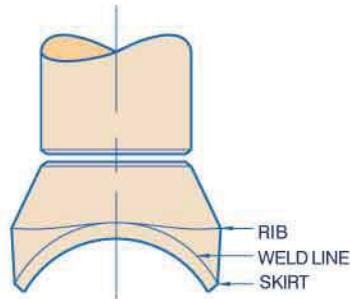
A hole saw or drill should be used to cut small size branch openings in stainless headers. Abrasive cutting wheels are generally used to make larger size holes. Arc cutting or the injection of iron powder into an acetylene flame are other methods used. If, however, any of these flame or arc methods are used, the hole should be cut under-size to allow for grinding out the heat-affected areas before welding. Either the Heliarc or metal-arc methods may be used for welding. The sequence of welding passes for both alloy and stainless is the same as outlined for carbon steel Weldolet fittings.

INSTALLATION PROCEDURE



READY TO WELD

Every fitting is shaped to fit the pipe and is self-aligning.



The outlet is machine-beveled for quick easy butt-welding of the branch pipe for shop or field fabrication.

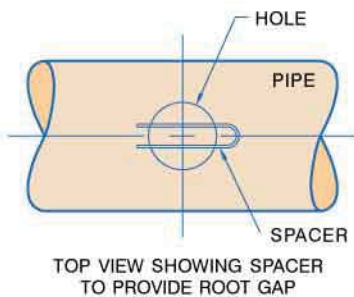


Layout

The template is the inside of the fitting.

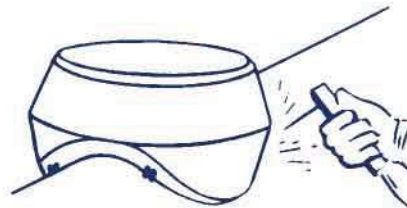
Cut Hole

The hole in the run pipe on reducing sizes can be cut out either before or after the fitting is welded on. The hole can be cut with a torch, a drill or a hole saw. Welding the fitting to the run pipe prior to cutting the hole helps prevent distortion of the run and can be done generally on outlet sizes over two inches.



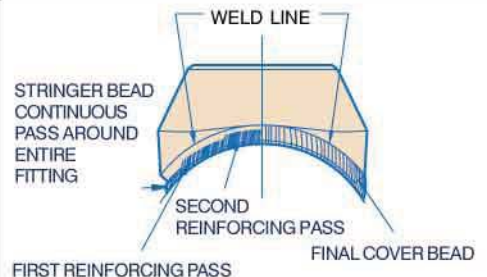
TOP VIEW SHOWING SPACER TO PROVIDE ROOT GAP

"Space" for Welding The Weldolet[®] is raised off the run pipe to establish proper weld gap by placing spacers, e.g. welding rods, under the fitting. This provides a uniform welding gap between the curvature of the run and base of fitting.



Tack Weld

The base joint is tack welded, preferably at four points, each half way between the crotch and skirt sections of the fitting. The spacers are then removed.

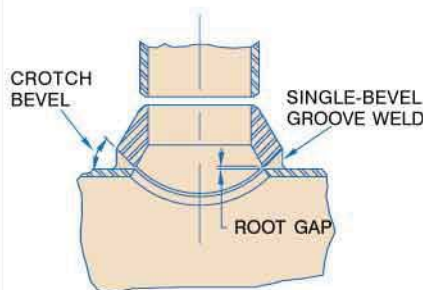


Stringer Bead

The stringer bead is applied completely around the base of the fitting. The established weld gap assures full penetration.

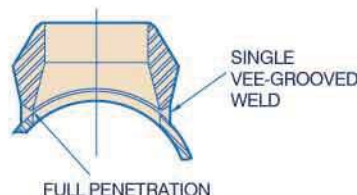
Reinforcing Beads

Reinforcing welds should be made at the crotch bevel areas of the fitting to provide maximum weld at the crotch tapering to minimum at the skirt. Particular care should be taken to weld only the bevel portion of the fitting. (See "weld lines" on above drawing.) This eliminates the unnecessary use of continuous passes and prevents the erroneous practice of welding up to the rib on the skirt portion of the fitting. A continuous cover bead should be added to fill the bevel and provide a smooth weld.



LONGITUDINAL SECTION

Fig. 1 Wide bases or footings at crotch section distribute internal and external stresses. Funnel shaped opening provides improved flow conditions.



TRANSVERSE SECTION

Fig. 2 Note the blending of the skirt section of the Weldolet to the run pipe to avoid abrupt change in intersection. Throat of weld at this point is designated by the welding bevel.

EXAMPLE OF WELD PASS SEQUENCE

