Table 1 HR-500 Trench Cover Hoist Rings**			
Working Load Limit (lbs.)*	Dimensions (in.)		Weight Each (lbs.)
	Coil Thread Size A	Effective Thread Projection Length B	
5,000	1” - 3.5	1.000	8.0
10,000	1-1/4” - 3.5	1.000	16.0
15,000	1-1/2” - 3.5	1.000	28.0

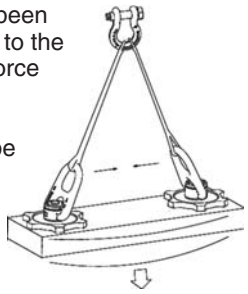
* Ultimate load is 5 times the working load limit. Individually proof tested to 2-1/2 times the working load limit.
** Designed to be used with ferrous workpiece only.

Trench Cover Nut Welding Guidelines

1. Select the correct size trench cover hoist ring to be used. Be sure to calculate the maximum load that will be applied to the trench cover hoist ring. The nut thickness should be equal to the workpiece thickness.
2. Cut a hole in the workpiece per Table 2 below.
3. Insert the trench cover nut into the hole. The trench cover nut should have 1/16” clearance around its outer edge. The surface of the trench cover nut must be parallel and even with the surface of the work-piece (See Figure 5). A welding fixture is available from Crosby for this.
4. Welding is to be performed by a qualified welder using a qualified procedure in accordance with American Welding Society and/or American Society of Mechanical Engineers requirements.

Table 2 HR-500 Weld-In Nuts				
Working Load Limit (lbs.)	Dimensions (in.)			
	Coil Thread Size (in.)	Nut Diameter K	Trench Cover Hole Diameter L	Nut Thickness = Work-piece Thickness M
5,000	1” - 3.5	3	3-1/8	3/4
5,000	1” - 3.5	3	3-1/8	7/8
5,000	1” - 3.5	3	3-1/8	1
10,000	1-1/4” - 3.5	3	3-1/8	3/4
10,000	1-1/4” - 3.5	3	3-1/8	7/8
10,000	1-1/4” - 3.5	3	3-1/8	1
10,000	1-1/4” - 3.5	3	3-1/8	1-1/4
10,000	1-1/4” - 3.5	3	3-1/8	1-1/2
15,000	1-1/2” - 3.5	3-1/2	3-5/8	1
15,000	1-1/2” - 3.5	3-1/2	3-5/8	1-1/4
15,000	1-1/2” - 3.5	3-1/2	3-5/8	1-1/2

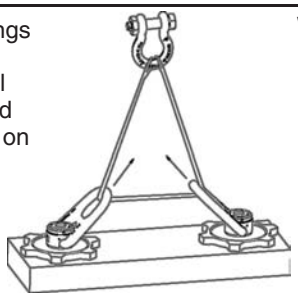
After slings have been properly attached to the hoist ring, apply force slowly.
Watch the load (workpiece) and be prepared to stop applying force if the load starts buckling.



Buckling may occur if the load (workpiece) is not stiff enough to resist the compressive forces which result from the angular loading

Do not reeve slings from one bail to another. This will alter the load and angle of loading on the hoist ring

WRONG



5. When welding to low or medium carbon cover steel, the following suggestions should be included in the qualified procedure.
   A. Before welding, all weld surfaces must be clean and free from rust, grease, paint, slag and any other contaminates.
   B. Weld material is to have a minimum tensile strength of 70,000 PSI (such as AWS A5. 1E-7018). Observe the electrode manufacturer’s recommendations.
   C. Completely fill internal bevel created between trench cover nut and the workpiece.
   D. Do not rapidly cool the weld.
   E. The surface of the weld must be ground sufficiently so that the trench cover hoist ring will fit flush against the workpiece.
   F. Using the same procedure, weld the opposite side.
   G. A thorough inspection of the weld should be performed. No cracks, pitting, inclusions, notches or undercuts are allowed. If doubt exists, use a suitable NDE method, such as magnetic particle or liquid penetrant to verify.
   H. If repair is required, grind out the defect and re-weld using the original qualified procedure.

NOTE: For welding to other grades of steel, a qualified weld procedure must be developed.

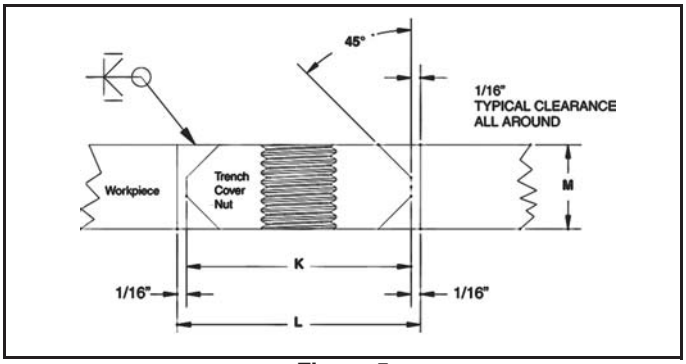


Figure 5