

## Griffin Pipe Products Company

### Procedure for Field Gauging and Re-rounding of Field Cut Pipe for Joint Assembly

Ductile iron pipe is required to be factory gauged on the spigot end of each pipe. However, it is sometimes necessary to field-cut pipe for proper assembly. Pipe to be field-cut must be field-gauged, at the location of the cut, in order to ensure proper dimensions for assembly. In addition, when larger diameter pipe (18" through 48" sizes) are cut in the field, the pipe may become out-of-round at the cut location. The pipe may require re-rounding to provide proper assembly of the joint. The following instructions illustrate how to field-gauge and re-round field-cut ductile iron pipe. The necessary tools are included in the **Griffin Pipe Gauging and Rounding Kit**. This kit can be re-used many times. Contact Griffin Pipe Products Company for replacement parts or complete kits.

#### **Step (1) – Mark cut location**

Using a tape measure, determine the location of the field cut by measuring from the spigot end of the pipe. Mark the pipe at the proposed cut location using a suitable marker. A marking crayon is included in the pipe rounding kit for this purpose.



#### **Step (2) – Measure pipe for proper diameter**

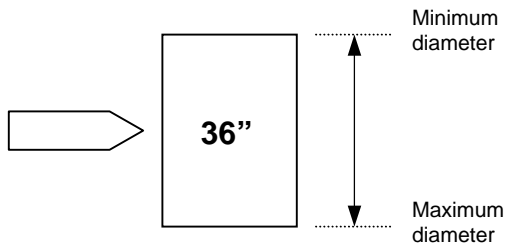
Remove any dirt, mud, or debris from the pipe at the cut location, prior to placement of the diameter tape. Remove the diameter tape from the kit and note the diameter markings on the tape. Make sure the markings are facing outward while placing the tape around the pipe at the desired cut location. The tape must be positioned tightly against the pipe and any slack must be removed. (Tape must be perpendicular to the long axis of the pipe)



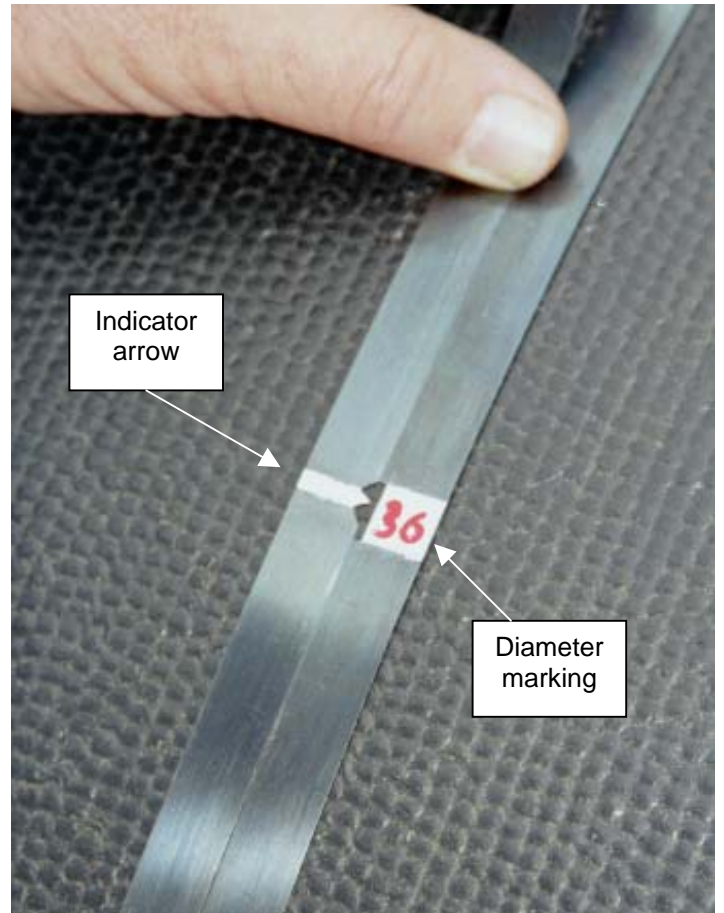
### Step (3) – Verify pipe diameter

With the diameter tape properly placed around the pipe, note the position of the indicator arrow in relation to the white diameter marking. If the indicator arrow aligns between the top and bottom edges of the diameter marking, then the pipe is of suitable diameter at the cut location.

Note: The top and bottom edges of the diameter marking correspond to the maximum and minimum allowable diameter tolerances as shown below.



If the indicator arrow aligns above or below the top or bottom edge of the diameter marking, the pipe is not of a suitable diameter at the desired cut location. A different pipe should be selected for the field cut.



#### Step (4) – Cutting the pipe

Using an abrasive cut-off saw or other approved method, cut the pipe at the desired location. Consult Griffin Pipe Products for other approved methods of cutting.



#### Step (5) – Gauge pipe for roundness

To determine the roundness of the pipe at the cut location, an MJ gland may be placed on the pipe (photo right). If the gland will not slide onto the pipe, then rounding will be necessary prior to assembly of the joint.

If a gland is not available, a tape measure may be used to measure the approximate maximum and minimum diameters as shown in the photos below. The diameter measurements must fall within the maximum and minimum allowable diameters as listed in the enclosed table on the following page. If they do not then rounding will be necessary prior to joint assembly.



**Note:** The table below shows the allowable min/max diameters as a decimal measurement and the nearest equivalent fractional measurement when using a tape measure.

### **Allowable Pipe Diameters for Field Cuts**

<b>Pipe Size</b>	<b>Minimum Pipe Diameter (in.)</b>		<b>Maximum Pipe Diameter (in.)</b>	
3"	3.90"	(3 29/32)	4.03"	(4 1/32)
4"	4.74"	(4 3/4)	4.86"	(4 7/8)
6"	6.84"	(6 27/32)	6.96"	(7 31/32)
8"	8.99"	(9)	9.11"	(9 1/8)
10"	11.04"	(11 1/32)	11.16"	(11 5/32)
12"	13.14"	(13 5/32)	13.26"	(13 1/4)
14"	15.22"	(15 7/32)	15.35"	(15 11/32)
16"	17.32"	(17 5/16)	17.45"	(17 15/32)
18"	19.42"	(19 13/32)	19.55"	(19 9/16)
20"	21.52"	(21 1/2)	21.65"	(21 21/32)
24"	25.72"	(25 3/4)	25.85"	(25 27/32)
30"	31.94"	(31 15/16)	32.08"	(32 3/32)
36"	38.24"	(38 1/4)	38.38"	(38 3/8)
42"	44.44"	(44 7/16)	44.58"	(44 19/32)
48"	50.74"	(50 3/4)	50.88"	(50 7/8)

#### **Step (6) – Grind bevel on cut edge**

The field-cut edge must be re-beveled using an abrasive disc grinder or file. A generous bevel should be prepared to prevent any damage to the gasket during assembly.



### Step (7) – Rounding field-cut pipe

If re-rounding of the field-cut pipe is required prior to assembly, the necessary tools are enclosed in the pipe rounding kit. The kit consists of a hydraulic jack and rounding chain assembly as shown at right. The chain has a hook on one end and a cup which is welded to the chain. The cup is placed over the jack as shown below.



Locate and mark the maximum diameter of the cut end of the pipe using a tape measure. Rotate the pipe so the maximum diameter is in the vertical position ( indicated by arrow in photo at right). Assemble the hydraulic jack and chain on the pipe by placing the cup on the jack and looping the chain around the pipe as shown. Make sure the jack and chain are located a sufficient distance from the spigot end so as not to interfere with the joint assembly (use the spigot assembly stripes on an uncut pipe for reference).

Apply a load with the jack until the maximum and minimum diameters are equal (measure with tape measure), or until a gland will slide onto the end. **Do not over-deflect the pipe.** Assemble the joint with the jack assembly in place. Tighten all bolts if an MJ joint. Remove the jack and chain after assembling the joint.



Note: Griffin Pipe Products Co. shall not be liable for injuries or damage caused through the improper use of this equipment.