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**Nash, TX 75569-1220**  
**Toll Free 800-527-8482**  
**Outside U.S. 903-832-2581**  
**www.jcmindustries.com**

**INSTRUCTIONS FOR MAKING A TEMPLATE**

Instructions are for making a template of the outside surface of steel, cast iron, ductile iron, asbestos cement, reinforced concrete pipe or the steel cylinder of reinforced or prestressed concrete pressure pipe. These instructions are applicable to making a template on many other types of pipe and tanks.

The purpose of a template is to accurately reproduce the curvature of the pipe, tank or vessel in order to assure accurate fabrication of a Tapping Sleeve or weldment. Templates are required on all taps with an outlet size of 24" or larger, on all taps where the outlet is more than 60% of the pipe size (24" X 16"), on all pipe where out of roundness is suspected, and on all high pressure taps where the fit of the sleeve is critical to the high pressure performance.

**MATERIAL REQUIREMENTS**

- 2 pieces of 1/4" plywood (or other suitable material stiff enough to hold its shape and accept a lead pencil mark. Do not use cardboard or particle board.)
- 1 scribing tool that can be set with legs 1" apart
- 1 jigsaw or saw capable of cutting the template curve. A rasp would also be handy.

**PREPARING THE PIPE**

The area of the pipe where the template is to be made should be thoroughly cleaned before making the template.

Concrete Pressure Pipe: The steel cylinder of concrete pressure pipe shall be exposed for a width of 4" and for a length circumferentially long enough to accept the template without interference. (Sketch attached for dimensions.) The template can be obtained by positioning plywood between the uncut wires on lined cylinder pipe (i.e. SP-5). The sleeve body must be in place, grouted and torqued before cutting wires on lined cylinder pipe or embedded (i.e.SP-12) cylinder pipe. Consult pipe manufacturer in regards to the maximum line pressure prior to cutting wires.

Steel and Other Pipe: Location for taps into steel and other types of pipe must be free of plate overlaps, lockbars, rivets, excessive build ups, depressions or other contour irregularities which would prevent proper gasket seal. If the pipe is coated and wrapped, this needs to be removed to expose the pipe.

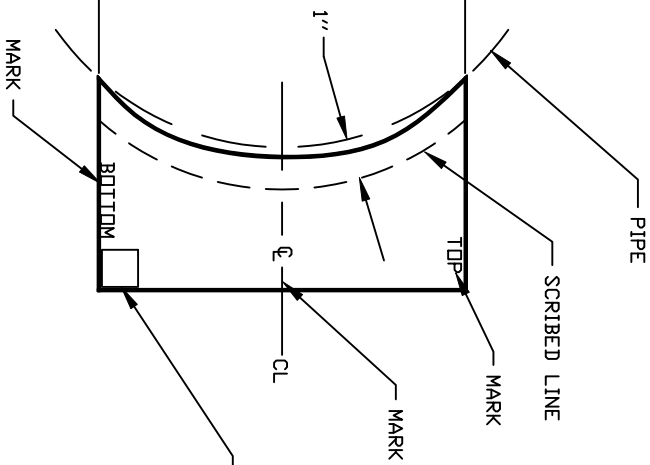
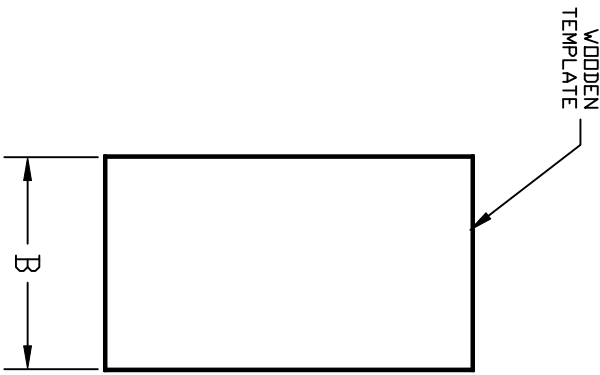
## MAKING THE TEMPLATE

1. Cut two rectangular pieces of plywood, size indicated on attached sketch. Mark these No.1 and No. 2.
2. Cut a radius out of the template No. 1 only. This radius should be approximately 1/2" less than the theoretical radius of the pipe or steel cylinder. (See sketch attached for position of radius in relation to the template.)
3. Place template No. 1 against the pipe. It should contact at only the top and bottom points. At no point should the curved edge of the template be more than 3/4" away from the steel cylinder or pipe. (See sketch)
4. Using the scribing tool with the legs set 1" apart; scribe a line on the template making sure the scribe is always at 90 degrees to the pipe's surface. This will give you a curve that is 1" greater in radius than the pipe.
5. Cut the template along the scribed line and mark this template in accordance with the attached sketch.
6. Lay template No. 1 on top of template No. 2 and line up the edges.
7. With the scribe still set at 1", place one leg of the scribe against the cut, curved surface of template No. 1 and scribe on template No. 2 a curved line which represents the actual radius of the pipe.
8. Cut along this curved line and mark this template in accordance with the attached sketch.
9. **CHECK THE FIT OF TEMPLATE NO. 2 AGAINST THE PIPE!** File the template so there is no gap greater than 1/16" between the pipe and template. Make note of any flat spots on the pipe. Send this information in with the template.
10. Send BOTH templates, properly protected to:

JCM Industries, Inc.  
200 Old Boston Road  
Nash, TX 75569  
ATTN: Engineering Dept.

TEMPLATE SIZE

TAP DIA.	A	B
14"	18"	10"
16"	20"	11"
18"	22"	12"
20"	24"	13"
24"	28"	15"
30"	35"	20"
36"	42"	24"
42" & GREATER	48"	28"



TEMPLATE MARKING

JCM Order No: \_\_\_\_\_  
 Customer's Name: \_\_\_\_\_  
 Customer's Order No: \_\_\_\_\_  
 Job Location: \_\_\_\_\_  
 Pipe Type And Size: \_\_\_\_\_  
 Outlet Size: \_\_\_\_\_  
 Thickness of Coating: \_\_\_\_\_  
 Type of Coating: \_\_\_\_\_

INSTRUCTIONS FOR MAKING TEMPLATES

<b>JCM INDUSTRIES, INC.</b> P.O. BOX 1220 MASH, TX 75569 www.jcmanufactures.com		OFFICE: (936) 832-2581 TOLL FREE: (800) 527-8482 FAX: (800) 874-9524		UNLESS OTHERWISE SPECIFIED DIMENSIONS TO BE FRACTIONS DECIMALS ANGLES ± 1/8" .063 2°	
DATE	BY	APVD.	DRAWN BY	CHECKED BY	APVD. BY
			CMN		
			DATE	NO. SHEETS	SCALE
			3/25/88	1 of 1	
REVISIONS					PART NO.
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