FiberSystems
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3 Types of FRP Composite Field Joints

There are three broad classes or types of bell and spigot structural adhesive field joints that are used with FRP composite pipe. Those types of joints are:

(A)   A "taper-taper" joint - where the end of the pipe is tapered (shaved) in the field, and the fitting or flange bell or socket has a matching taper.

(B)   A "straight-taper" joint - where the end of the pipe is prepared with a straight shave, and the fitting or flange bell or socket has a taper, with an integral pipe stop.

(C)   A "straight-straight" joint - where the end of the pipe is prepared with a straight shave or sanding, and the fitting or flange bell or socket has a straight configuration, with an integral pipe stop.

(See the attached drawing of the three types of structural adhesive joints as a reference.)

As a custom manufacturer we make fittings and flanges with all three of these types of joints.

The taper-taper joint is perhaps the most difficult to make in the field - because of the lack of a defined engagement length. This is also the one that is most likely to leak when not properly made.

When the customer asks for our recommendation, we typically will provide joints having straight pipe ends and tapered bell end fitting or flange. This joint provides the joint "locking" of the taper, and also provides a known laying or make-up length. The pipe butts up to the fitting pipe stop of the fitting and flange.

It is our experience that the straight-taper joint is the most full proof joint to make in the field.
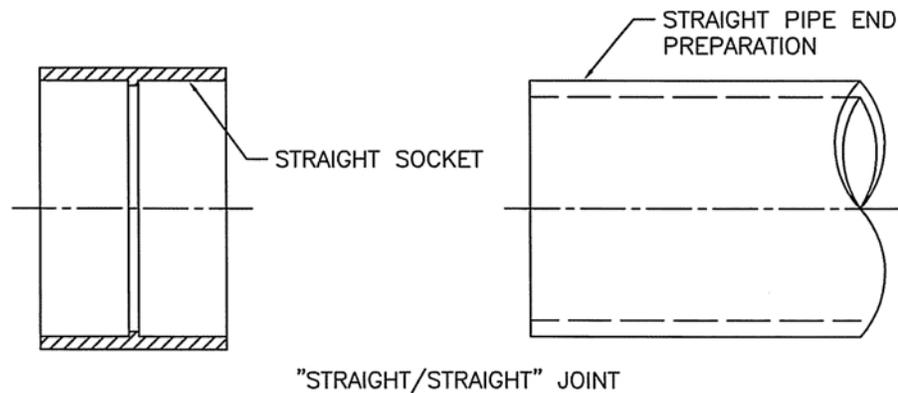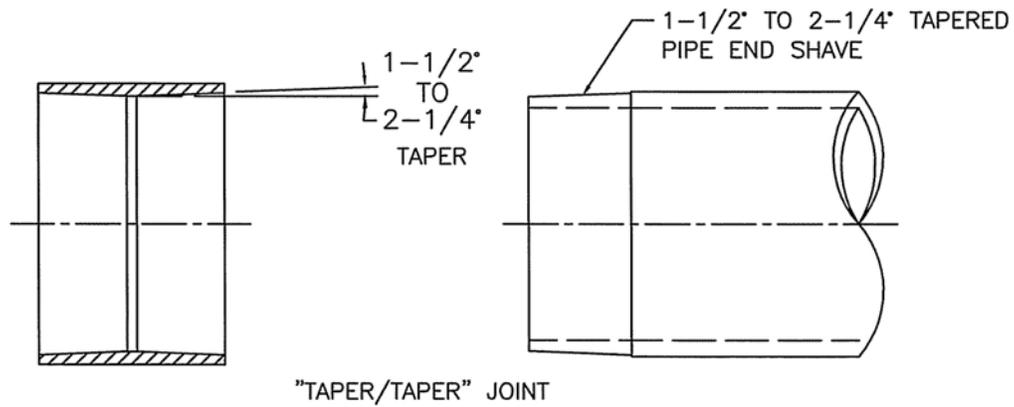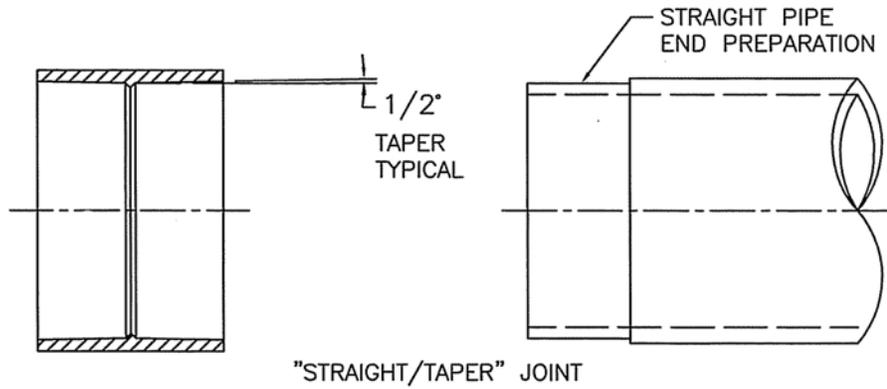
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Technical Bulletin

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Composite Field Joints

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STRAIGHT PIPE
END PREPARATION

1/2°
TAPER
TYPICAL

"STRAIGHT/TAPER" JOINT

1-1/2° TO 2-1/4° TAPERED
PIPE END SHAVE

1-1/2°
TO
2-1/4°
TAPER

"TAPER/TAPER" JOINT

STRAIGHT PIPE END
PREPARATION

STRAIGHT SOCKET

"STRAIGHT/STRAIGHT" JOINT

FiberSystems, Inc.

521 KISER STREET
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FAX# (937) 222-9020

TITLE :	TYPES OF JOINTS AVAILABLE			
FOR :	–			
DR. DKH CK. SJR	SCALE N/A	P.O.# –		QTY. ( )
DATE 3-12-07	JOB # –	DWG. NO. –		REV. 0