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World Leaders in Equipment and Technology for Hydraulic Tube Expansion

HYDROPLUG EXPANSION DATA SHEET

DATE	CONTACT	PHONE
HYDRAULIC EXPANSION END USER		JOB #

SCOPE OF APPLICATION AND SPECIFICATIONS

NUMBER OF TUBES	NUMBER OF PLUGS REQUIRED	APPROXIMATE START DATE

TYPE OF UNIT:

O *Heat Exchanger* O *Boiler*

O *Condenser* O *Other (Describe):*

O *Feedwater Heater*

TUBES

MATERIAL	ACTUAL YIELD	ACTUAL TENSILE
O.D.	WALL THICKNESS/GAGE	WALL (CIRCLE ONE): *Avg. / Min. / Nominal*
ACTUAL TUBE I.D. MEASUREMENT		TYPE: *Seamless / Welded Drawn*
U-BEND OR STRAIGHT	OVERALL LENGTH OF TUBE	
SETTING OF TUBE TO TUBESHEET PRIMARY FACE: *Recessed / Flush / Protruding*		
ARE THE TUBES WELDED TO THE TUBESHEET: *Yes / No*		

TUBESHEET

TOTAL THICKNESS	MATERIAL	ACTUAL YIELD	ACTUAL TENSILE
CLAD: *Yes / No*	CLAD THICKNESS	CLAD MATERIAL	
SHELL ATTACHED: *Yes / No*	PARTITION PLATE: *Yes / No*		
IF "YES" TO EITHER OF THE ABOVE: DISTANCE FROM TUBESHEET FACE AND OUTSIDE OF SHELL/DIVIDER PLATE(S)/FLANGE/OBSTRUCTIONS			
IF "YES" TO EITHER OF THE ABOVE: SHORTEST DISTANCE BETWEEN HOLE CENTER LINE AND SHELL/PLATE			

HOLES

DIAMETER	CHAMFER: *Yes / No*	WHERE IS THE CHAMFER LOCATED: *Face / Back*
DEGREE OF CHAMFER		DEPTH OF THE CHAMFER

GROOVES

NUMBER	**Note:** as a minimum, placement of the 1st groove should begin 1/2" from the face of the tubesheet or in the center based on tubesheet thickness.
TEMA: *Yes / No*	IF "NO", PLEASE PROVIDE SPECIFICATIONS IN THE AREA PROVIDED ON PAGE 2.
CUSTOMER RECEPTIVE TO HYDRAULIC EXPANSION GROOVE: *Yes / No*	**Note:** hydraulic expansion groove is a single wide groove (centered in sheet if possible).

LIGAMENT

THICKNESS	PITCH	HOLE PATTERN

EXPANSION ZONE

START OF EXPANSION INSIDE TUBESHEET
STOP OF EXPANSION DISTANCE FROM REAR OF TUBESHEET
TOTAL EXPANSION ZONE

TUBE-TO-TUBESHEET WELD

ARE TUBES WELDED: *Yes / No*	IF "YES": *Seal Welded / Strength Welded*
WHAT IS THE MAXIMUM COUNTER SINK O.D. FOR WELD	

EXPANDING PRESSURE REQUIREMENTS

HYDROTEST PRESSURE

NOTE: WHEN WELDING, THE FOLLOWING EXPANSION PROCEDURE IS RECOMMENDED.

1. *TubePro; setting of tube*
2. *Weld*
3. *Hydraulic Expand*

Note: *<u>No</u> weld rollover is recommended when hydraulic expanding*

SPECIFICATIONS (IF APPLICABLE)

Please provide any available drawings, sketches, or blueprints, as well as performance requirements regarding working and test pressure of the vessel.

Drawings Supplied: ***Yes / No***

EXTERNAL EXTENSIONS

For expansion which require going around an interference such as a channel, shell, partition plate, or any other obstruction, creating a situation where expansion would take place at a distance from the tubesheet face.

DISTANCE FROM OUTSIDE FACE OF SHELL OR PLATE TO FACE OF TUBESHEET
IS THERE ACCESS FOR A STOP COLLAR TO BE LOCATED AT TUBESHEET FACE OR OUTSIDE OF SHELL: *Yes / No*

Signature: _____ *Date:* _____