MATERIALS VALIDATION FOR WELDING

SUBJECT EQUIPMENT:

Component ID: SI-873B **Quality Group/Q-level:** A

Equipment Type: Piston Check Valve **ISI Class:** 2

Manufacturer/Model #: Edward Valve D36174(F316)FJT4 (2")

Component Material Spec: SA-182 F316

Document how information above was validated: Validated via equipment database for Equipment tag SI-873B. New CAT ID 9220128142 shows SA-182 GR F316 material. Additionally, numerous valve drawings show SA-182 F316 body material. EDB was also used to validate piping information, materials, and wall thickness for pipe SI-64.

ATTACHED PIPING:

Upstream Piping Line Number: 2-SI-64

- **Pipe class (according to CPL-HBR2-M-047):** 2501R
- **Material Specification/wall thickness:** A376 TP316/SCH. 160

Downstream Piping Line Number: 2-SI-64

- **Pipe class (according to CPL-HBR2-M-047):** 2501R
- **Material Specification/wall thickness:** A376 TP316/SCH. 160

Reference Drawings: 5379-01082-SH00004 (P&ID), HBR2-10618 SH00112 (ISI Isometric), HBR2-12273 SH00001(valve drawing for new CAT ID 9220128142)

COMMENTS: Existing ISI weld numbers are to be ring cut and re-established with new valve installation. Consider allowance of at least one upstream and one downstream weld beyond the valve body welds to be cut out and re-welded for ease of fit-up and installation. ***IMPORTANT NOTE*** according to CAT ID description tab, this valve is supplied with a 6" nipple welded to the inlet side of the valve for heat dissipation. Per drawing HBR2-12273-SH00001 this nipple is 2" SCH-160 SA376 T316. Due to valve beind supplied with a pipe nipple on inlet side, weld docs should include the installation of a 2" NPS SS Socket Weld coupling.

CONCLUSION:

Upstream Welds: W47 = 2" Pipe (SCH-160 SA376 TP316; vendor supplied pipe nipple) to 2" SW coupling (SA182 F316, 6000lb)

W46 = 2" Pipe existing (SCH-160 SA376 TP316) to 2" SW coupling (SA182 F316, 6000lb)

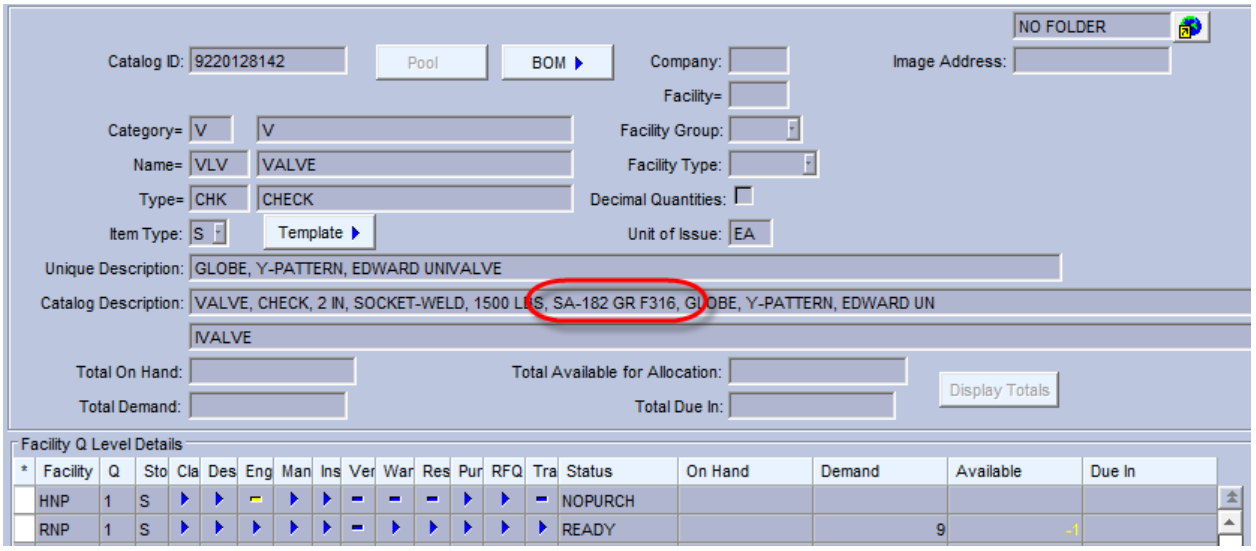
Downstream Welds: W27= 2" SW Valve (1500# SA-182 F316) to 2" Pipe existing (SCH-160 SA376 TP316)

Prepared by Qualified Weld Planner: Canon McCray Date: 4/06/2014

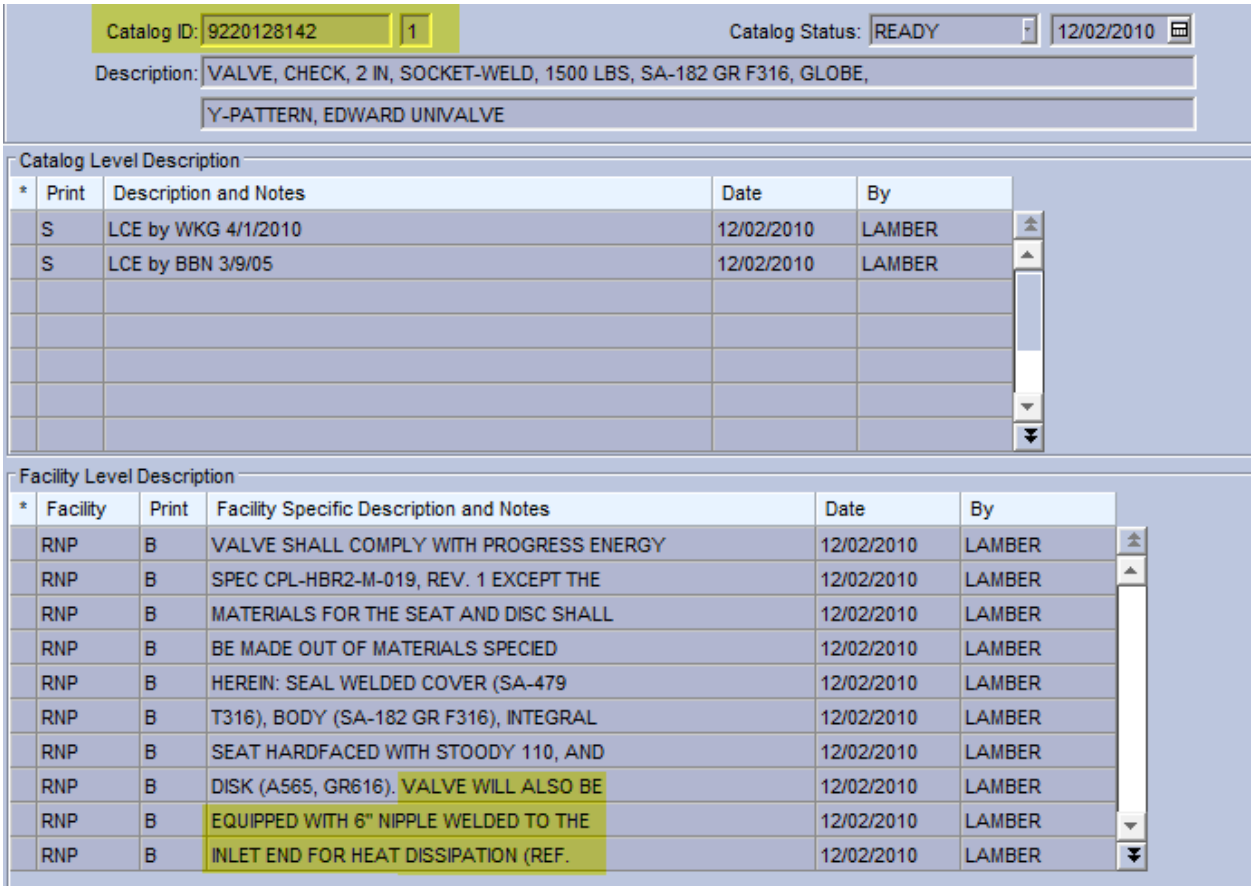
MATERIALS VALIDATION FOR WELDING

SCREENSHOTS/PHOTOS:

PassPort NEW CAT ID per EDB:



PassPort NEW CAT ID Description Tab per EDB:



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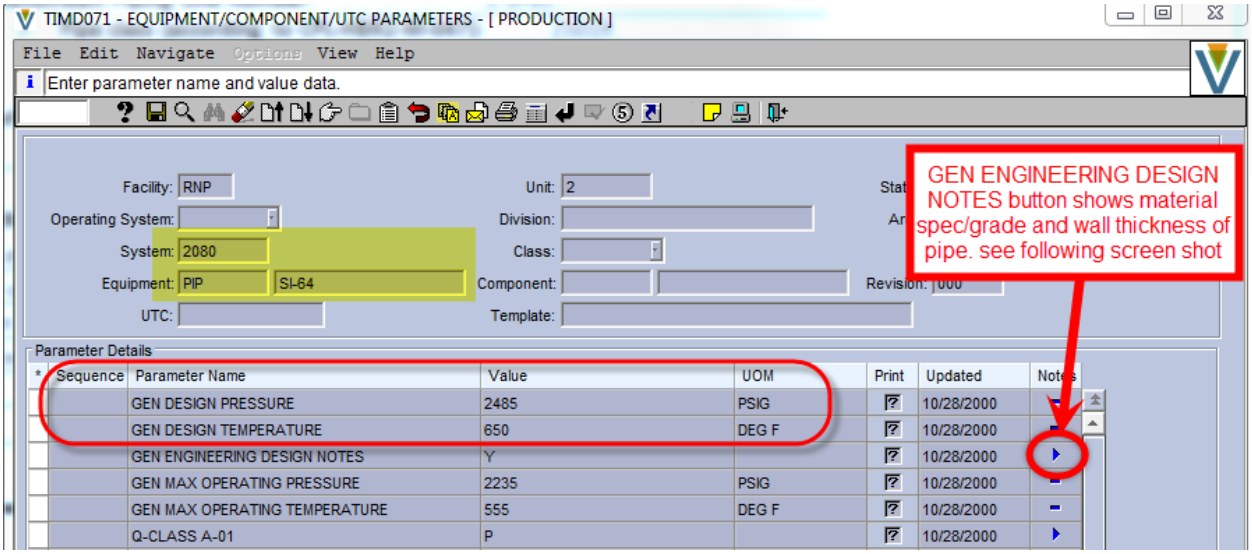
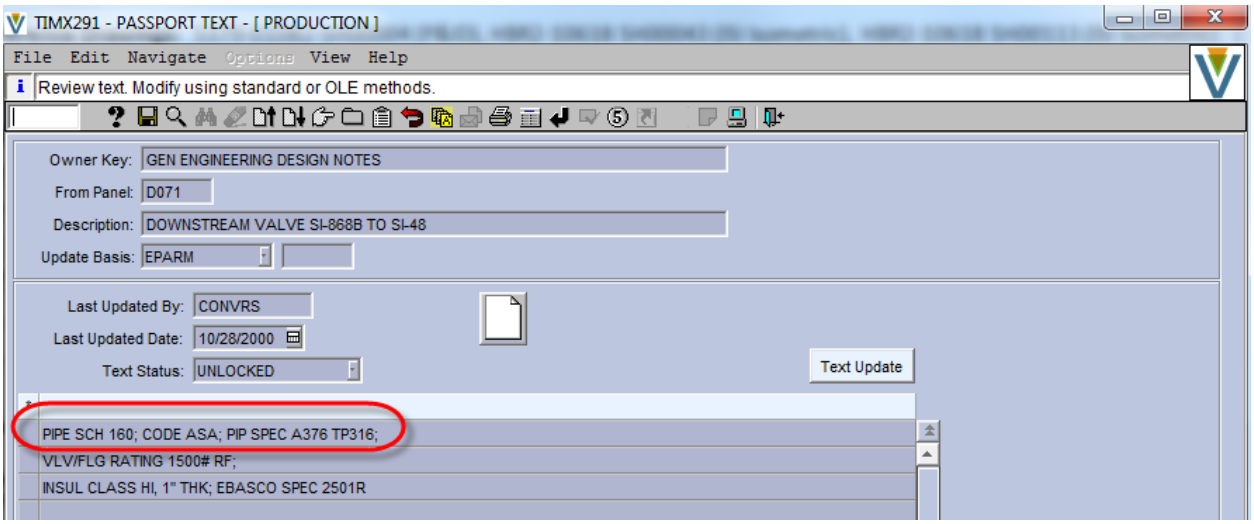
MATERIALS VALIDATION FOR WELDING

PassPort EDB for PIP SI-64:



PassPort GEN ENGINEERING DESIGN NOTES (for SI-64; PIP):



Piping Specification 2501 (CPL-HBR2-M-047):

Piping Specification Class 2501

Design Temperature (°F)	<100	200	300	400	500	600	650	700
Design Pressure (Psig)	2905	2711	2618	2525	2479	2479	2479	2465

Pipe

10" through 16"	A376 TP316, Seamless, Sch. 140
4" through 8"	A376 TP316, Seamless, Sch. 120
½" through 3"	A376 TP316, Seamless, Sch. 160

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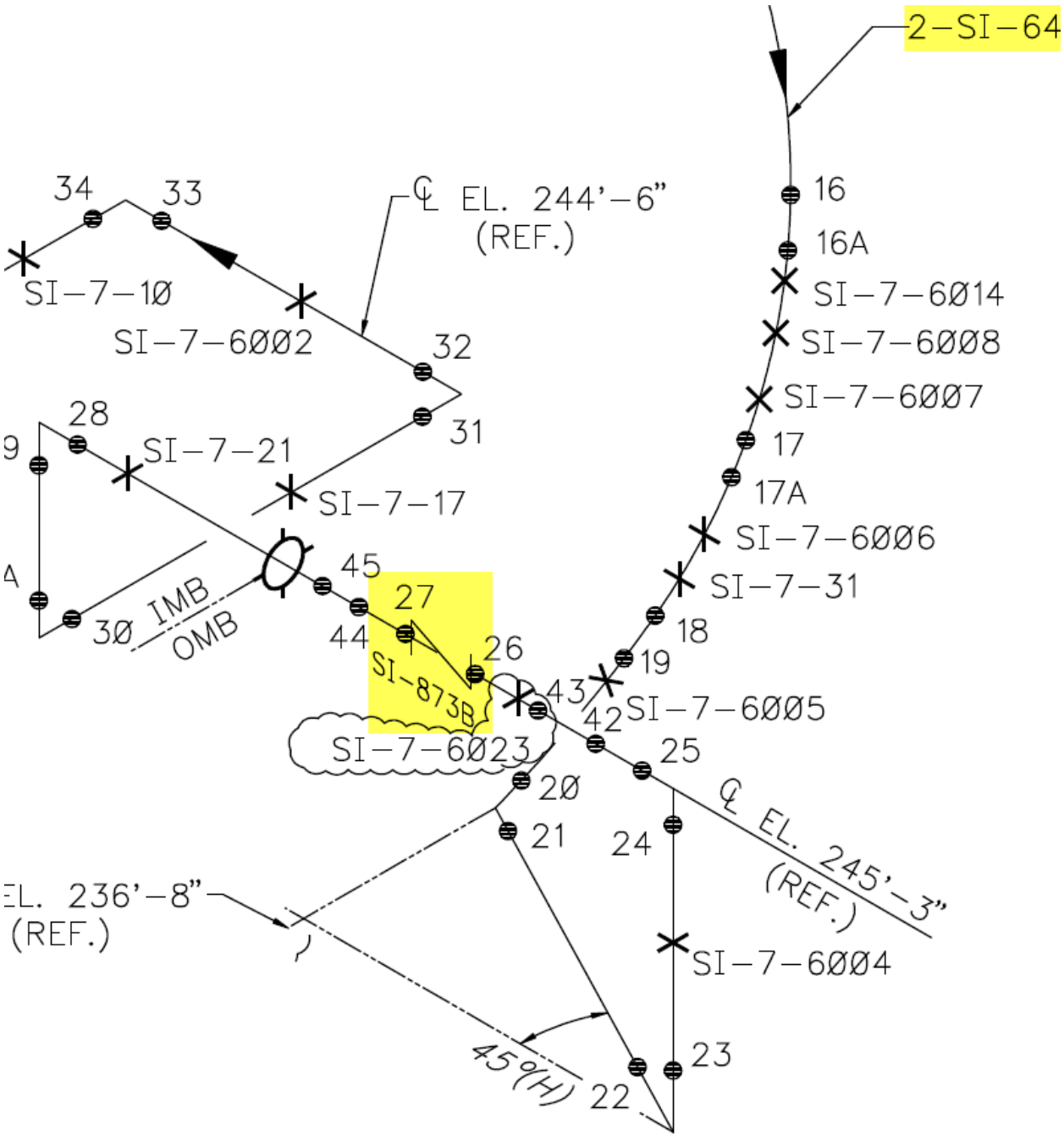
MATERIALS VALIDATION FOR WELDING

HBR2-10618-SH00112:



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MATERIALS VALIDATION FOR WELDING

NEW VALVE DRAWING HBR2-12273 SH00001 for CAT ID 9220128142:

MAXIMUM NON–SHOCK SERVICE PRESSURE RATING

°F	PSIG
100	3600
200	3095
300	2795
400	2570
500	2340
600	2255
650	2220
700	2160
750	2110
800	2075

LIST OF MATERIALS

WHERE ASTM OR ASME SPECS ARE INDICATED THE LATEST REVISION APPLIES.

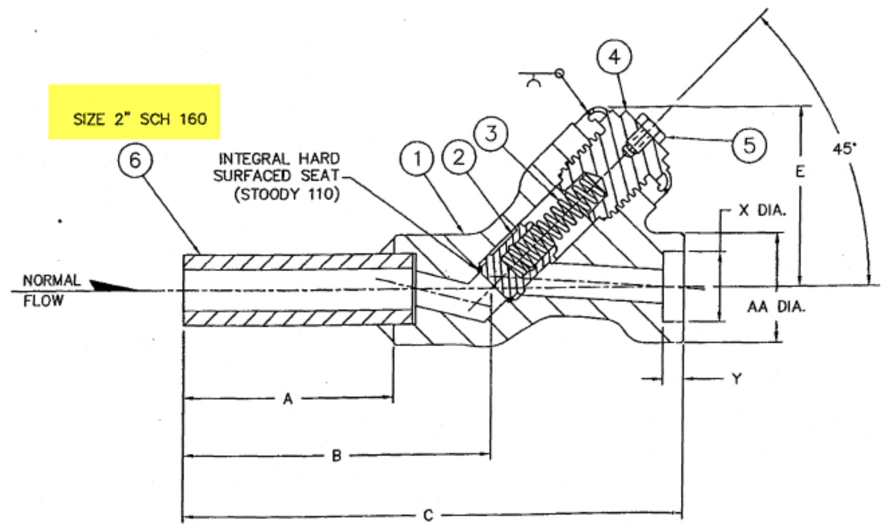
	NO.	NAME	QTY	MATERIAL	SPECIFICATION
●	1	BODY (PT)	1	STAINLESS STEEL	SA182 GR F316
●	2	DISK (PT)	1	STAINLESS STEEL	A565 GR 616
■	3	SPRING	1	STAINLESS STEEL	A313 T302
●	4	COVER (PT)	1	STAINLESS STEEL	SA479 T316
	5	SCREW	1	CARBON STEEL ZINC PLATED	COMMON STEEL
●	6	EXTENSION (PT)	1	STAINLESS STEEL	SA376 T316

NON–DESTRUCTIVE EVALUATION (N.D.E.)

PT– LIQUID PENETRANT TEST

● – INDICATES PRESSURE RETAINING PART

■ – INDICATES CRITICAL PART (10CFR21)



DIMENSIONS	ENGLISH (IN)	METRIC (MM)
VALVE SIZE	2	50
A	6.0	152
AA	3.64	92
B	8.16	207
C	14.24	361.7
E	5.8	147
X	2.406	61
Y	.62	16
Cv	68	68
WEIGHT, LBS/KGS	35	16

NOTE:

1) DIMENSIONS SHOWN ARE NOMINAL AND PROVIDED FOR GENERAL INFORMATION AND AS SUCH ARE WITHOUT TOLERANCE.
2) VALVE(S) MEET ALL APPLICABLE REQUIREMENTS OF A.S.M.E. B. & P.V. CODE, SECTION III, 1977 EDITION INCLUDING WINTER 1977 ADDENDA, CLASS 1, EXCEPT "N" STAMP IS NOT REQUIRED.
3) DIMENSIONS ARE IN INCHES AND IN MILLIMETERS.
4) SOCKET WELD ENDS CONFORM TO ANSI B16.11.
5) FOR TAG INFORMATION SEE SHEET 2 OF 2.

CLASS 1500	FORGED STAINLESS STEEL 3600 CWP 2075 PSIG AT 800 °F

FLOWSERVE Flow Control Division — EDWARD VALVES RALEIGH, NC

EDWARD FORGED STEEL UNIVALVE GLOBE CHECK VALVE SOCKET WELD ENDS W/NIPPLE SIZE 2 FIG. D36174(F316)FJT4

SIZE B | DWG NO. 05–34042–01 | REV. A | SH NO 1 | SH 2

PROGRESS ENERGY CAROLINAS, INC
ROBINSON NUCLEAR PLANT

EC 61923

CP & L Dwg. No. HBR2-12273 SH1

CP & L P.O. No.

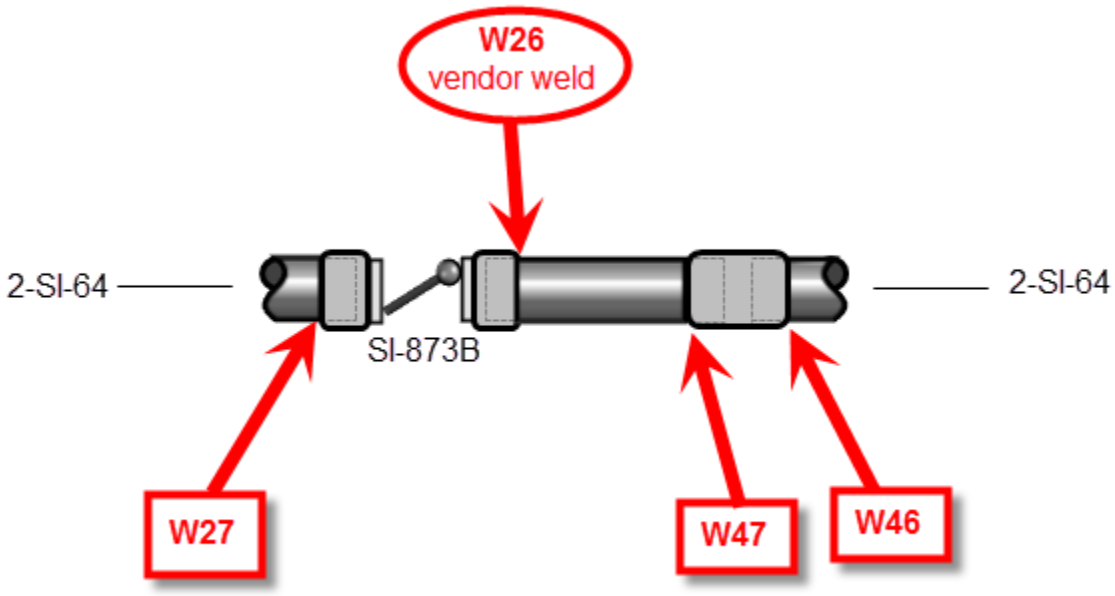
DWG. REV.	FIELD VERIFIED BY	DRAWN BY	CHK'D BY	APP'D BY	DATE
0	N/A	[illegible]	TP	DLO	3/15/06

REV	ADCN NO.	QAP REV	B/M DATE	DWN / DATE	CHK'D / DATE	APV'D / DATE
A	3347	Ø	03/15/05	TW 5/12/05	DS 5/12/05	DS 5/12/05
Ø	----	Ø	03/15/05	CHW 3/23/05	DS 4/11/05	ETO 4/11/05

Prepared by Qualified Weld Planner: Canon McCray Date: 4/06/2014

MATERIALS VALIDATION FOR WELDING

PROPOSED WELD MAP:



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