

**Subject:** RE: AIS Waiver Request for Stainless Steel Super Duplex (UNS32750) Transition Piece for City of Hollywood Deep Injection Well Project WW0604A/DW06046

Greg,

The City of Hollywood is requesting an AIS waiver for the above referenced component. The request appears acceptable to this office. Please move forward with the City's request.

See attached specifications/information provided by the City of Hollywood for the transition piece for the two deep injection wells.

Per City of Hollywood,

Each injection well is to be completed with a 5-foot-long transition piece and a 2" threaded weld outlet made from 2507 Stainless Steel Super Duplex (UNS32750). The 2507 Stainless Steel Super Duplex provides the highest integrity for piping in a brackish or salt water environment due to its corrosion resistance. The piping specified in the waiver request has a life expectancy of 100 years in such a corrosive environment. In addition, the 2507 Stainless Steel Super Duplex piping meets the pressure requirements of the injection operation including surge pressures that may exceed 125 psi. No other piping of alternate material can meet those conditions. There are no manufacturers producing 2507 Stainless Steel Super Duplex pipes and fittings in the United States in sufficient and reasonably available quantities. We are unable to find a domestic source for 2507 Stainless Steel Super Duplex pipe and fittings. Two major US pipe mills who manufacture this product domestically (Bristol/Brismet & Primus) are both being informed by their suppliers that the raw material is not available melted in the USA as required by AIS standards.

The mill manufactured super duplex 2507 pipe was quoted to Hollywood @ [REDACTED] per ft, so that is [REDACTED] for 10 LF of pipe. 10 LF of pipe along with two threaded weld outlets would bring the total to roughly [REDACTED].

Thank you.

Greg

*Gregory C. Alfson, P.E.*

Project Manager  
State Revolving Fund Program  
Division of Water Restoration Assistance  
3900 Commonwealth Blvd, MS 3505  
Tallahassee, FL 32399-3000  
Office: (850) 245-2983





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\* CERTIFICATION \*  
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09/29/20

HEAT 865783

ORDER S2000299 /1

BL2000714

SHIP TO :  
TRAEGER BROTHERS  
CUSTOMER-PICK UP  
CUSTOMER-PICK UP,

----- YOUR ORDER & DATE -----  
P00088535-1 09/29/20 CUST# TRAMIA  
CUST TAG#

----- ITEM DESCRIPTION -----  
24" SCH80S 2507 10' A790/SA790 Country of Melt: UNITED KINGDOM  
Country of Mfg.: U.S.A.

----- SPECIFICATIONS -----  
ASTM A790-20/ASME SA790-19 WELDED  
Certificate in conformance with EN10204-95 3.1.B / EN10204-2004 3.1

----- MECHANICAL & OTHER TESTS -----  
Hydrotest, PSI (MPa) 1700 (11.72) Tensile Strength, KSI (MPa) 119.4 (823)  
Hardness Rockwell B Test 22 Yield Strength, KSI (MPa) 95.4 (658)  
Face OK Elongation % in 2 40  
ANSI/NACE MR0175/ISO 15156-15  
ANSI/NACE MR0103/ISO 17945-15  
ASTM A923-14 METHOD C @ 40°C FOR 24 HOURS, 0 MDD PASS.  
ASTM E-562-11 FERRITE POINT COUNT WELD 41% BASE 41% HAZ 43%, PASS.  
ASTM A923-14 Test Method A, PASS. DOW G8S-4001-51  
UNS S31803/S32205

----- CHEMICAL COMPOSITION -----  
Carbon (C) 0.014 Manganese (Mn) 0.850  
Phosphorus (P) 0.020 Sulfur (S) 0.001  
Silicon (Si) 0.410 Chromium (Cr) 25.530  
Nickel (Ni) 7.110 Moly (Mo) 3.940  
Nitrogen (N) 0.300 Copper (Cu) 0.110

-- Continued --

Quality Representative

*Martha James*

Martha James

TELEFAX

Primus Pipe and Tube, Inc.

ADDRESS  
241 W Clarke Street  
Wildwood, Florida 34785-9601

TELEFAX  
(352) 748-1313

Administration: (352) 748-2751  
Purchasing: (352) 748-6576  
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Quality Assurance: (352) 748-0533

9/11/20



TEXAS PMW, LLC  
345 NORTH WYLSIDE DRIVE HOUSTON, TX 77020  
(713) 679-7900 - FAX (713) 679-7920



PENNSYLVANIA MACHINE WORKS, LLC  
201 BETHEL AVENUE ASTON, PA 19014  
(610) 497-3300 - FAX (610) 497-3325



US DROP FORGE CO.  
P.O. BOX 131 - ROUTE 551  
1386 AUBURN ROAD WOOLWICH TOWNSHIP, N.J. 08095  
(856) 467-0500 - FAX (856) 467-4598

# C E R T I F I E D M A T E R I A L T E S T R E P O R T

HEAT CODE: 2A6L MATERIAL: F53 SIZE: 3.150  
ASTM SPEC: A182 SPEC. YEAR: 10  
HEAT TREATMENT: SOLUTION ANNEALED  
UNS NUMBER: S32750 SPEC. REV:

C	MN	P	S	SI	NI	CR	MO	CU	N
.013	.800	.017	<.001	.270	6.900	24.980	4.040	.074	.280

YS (PSI)	TS (PSI)	%EL 4D % 4D	%RA %	HARDNESS (HB)	CHARP1 FT/LB	CHARP2 FT/LB	CHARP3 FT/LB	CHARP AV FT/LB
84000	119000	42.000	73.000	226	213.000	215.000	215.000	214.333

PMI	TEST@TMP (F)	FERRITE	CORRO
OK	-51	49.4	OK

WE HEREBY CERTIFY THAT THE REPORTED FIGURES ARE CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION.

*James B. Friant*  
(ES-ELECTRONIC SIGNATURE)  
JAMES B. FRIANT  
QUALITY MANAGER

MANUFACTURERS OF QUALITY **Penn FORGED** PIPE FITTINGS  
• SERVICE • PARTNERSHIP  
www.pennusa.com

- COAT EXPOSED OUTER WELL CASING TO 1 FOOT BELOW EXISTING GRADE SURFACE AS FOLLOWS:
  - SURFACE PREP: SSPC-SP6
  - PRIMER: SERIES 135 CHEMILD (4-6 MILS DFT)
  - INTERMEDIATE COAT: SERIES L69 HI-BUILD EPOXY LINE II (4-6 MILS DFT)
  - TOP COAT: SERIES 73 ENDURA-SHIELD (3-5 MILS DFT)
  - ALL PAINTS ARE TNEMEC OR EQUAL.
2. ALL ABOVE GROUND FITTINGS SHALL BE TYPE 316L SS SCHED 40 FLANGED.
3. CONTRACTOR SHALL COORDINATE THREADED CONNECTION BETWEEN 24" FRP TUBING AND 24" SUPER DUPLEX S.S. PIPE AND ALL WELDING OF SUPER DUPLEX S.S. WITH THE MANUFACTURER.
4. CONTRACTOR TO PROVIDE SUBMITTAL FOR SUPER DUPLEX DETAILING THREADING AND WELDING OF THE TRANSITION PIECE.
5. LARGER DIAMETER STEEL CASINGS (74", 66", AND 56") NOT SHOWN FOR CLARITY. SEE SHEET C-003.
6. CONTRACTOR TO SET DEEP INJECTION WELL CASINGS TO AN ELEVATION OF 3.70' NAVD88.
7. ALL CEMENTED STEEL CASINGS (56, 66, AND 74 INCHES IN DIAMETER) NOT SHOWN FOR CLARITY.
8. SEE SPECIFICATION SECTION 15132 FOR BALL VALVES



1. ALL PIPING AND FITTINGS ABOVE THE ISOLATION GASKET TO BE 316L SS.
2. ALL THREAD-O-LET FITTINGS BE AS MANUFACTURED BY BONNEY FORGE OR APPROVED EQUAL.
3. LARGER DIAMETER STEEL CASINGS (44" AND 34") NOT SHOWN FOR CLARITY.
4. CONTRACTOR TO SET MONITORING WELL CASINGS TO AN ELEVATION OF 3.80' NAVD88.
5. ORIENTATION/PLACEMENT OF VALVES AND CONNECTING PIPING SHALL BE COORDINATED WITH ENGINEER.

