



# Certified Material Test Report

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07015

Date: 12/08/16

**Sold To:**

Job Number: 21950  
Heat #: 510997

Swepeco Part Number: 04060S0250CS0316LA554NP

Description: 4" x 6" x .250" w TP316/L A554/A500

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A554-16 with dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.)

#1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

IN ADDITION TO SWEPCO STANDARD MARKING: MARK EACH PIECE WITH: LB SHA

MARKING OF EACH PC TO BE DONE WITH A LOW CORROSION HALOGEN FREE PAINT MARKER/APPLICATOR FROM DOCUMENT 2298, INK BROCHURE SWEPCO RESPONSES TO DOCUMENT 2298, 16 TOTAL PARAGRAPHS, APPLY. No additional requirements or tests requested or supplied.

\*\*\*\*\*

Supplying: 12 pcs x 27' 0", 8 pcs x 28' 0" and 2 pcs x 20' 0". Length tolerance: +

**Raw Material Values**

C	0.024	Ta	
Mn	1.540	N	0.027
P	0.028	V	
S	0.001	Cu	0.370
Si	0.320	Ce	
Cr	16.630	B	
Ni	10.030	Al	
Mo	2.020	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	46120	PSI	
Tensile	89485	PSI	
Elongation	53		
Hardness	HRB 80		
Grain Size			

**Product Analysis (Base/Weld)**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Weld Wire**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Product Results**

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

**Remarks:**

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 50049 3.1B, EN10204 3.1 & ISO10474 3.1B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC  
Frank Santolla  
Q.C. Coordinator



# Certified Material Test Report

**Swepeco Tube LLC**

One Clifton Boulevard  
Clifton, NJ 07015

Date: 06/29/17

Swepeco Part Number: 04080S0260CS0316LA564NP  
Description: 4" x 8" x .260"w TP316/L A564/A500

Sold

Job Number: 21957A  
Heat #: 510999

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A564-16 with dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.) Country of melt and manufacture: USA. #1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

IN ADDITION TO SWEPCO STANDARD MARKING:

MARK 6 OF THE 30' LENGTHS: ST MET, MARK 2 OF THE 30' LENGTHS: LE SHORT MIN, MARK 1 OF THE 30' LENGTHS: LE INT DEAN, MARK 3 OF THE 26' LENGTHS: ET MET, MARK 6 OF THE 26' LENGTHS: LE LONG GAL, MARK 1 OF THE 26' LENGTHS: LE INT GAL, MARK 27' LENGTH: LE SHORT MET, MARK 4 OF THE 25' LENGTHS: LE LONG MET, MARK 4 OF THE 25' LENGTHS: LE LONG MIN, MARK 4 OF THE 25' LENGTHS: LE LONG DEAN, MARK 2 OF THE 20' LENGTHS: ET-R GAL, MARK 2 OF THE 20' LENGTHS: ET-R MIN, MARK 2 OF THE 20' LENGTHS: ET-R DEAN, MARK 13' LENGTH: LE SHORT GAL, MARK 17' LENGTH: LE SHORT DEAN

**Raw Material Values**

C	0.023	Ta	
Mn	1.510	N	0.030
P	0.029	V	
S	0.001	Cu	0.380
Si	0.550	Ce	
Cr	16.650	B	
Ni	10.000	Al	
Mo	2.020	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	43365	PSI	
Tensile	88905	PSI	
Elongation	56		
Hardness	HRB 80		
Grain Size			

**Product Analysis (Base/Weld)**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Weld Wire**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Product Results**

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

**Remarks:**

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 50049 3.1.B, EN10204 3.1 & ISO10474 3.1.B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator



# Certified Material Test Report

PO S154-2298

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07015

Date: 03/20/18

Swepeco Part Number: 04080S0500CS0316LA554NP

Description: 4" x 8" x .500"w TP316/L A554

**Sold To:**

Job Number: 23172A  
Heat #: 710926

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A554-16 with dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.)

#1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

Must be domestic. Buy American Act applies.

MELTED AND MANUFACTURED IN USA.

IN ADDITION TO SWEPCO STANDARD MARKING: EACH LENGTH, PACKING SLIP AND MTR MUST INCLUDE PIECE COUNT AND THE FOLLOWING MARKING:

16 PCS TO BE MARKED: "8/GAL PT, ST"

MARKING OF EACH PC TO BE DONE WITH A LOW CORROSION HALOGEN FREE PAINT MARKER/APPLICATOR FROM DOCUMENT 2298, INK BROCHURE

No additional requirements or tests requested or supplied.

**Raw Material Values**

C	0.019	Ta	
Mn	1.540	N	0.050
P	0.032	V	
S	0.009	Cu	0.360
Si	0.350	Ce	
Cr	16.530	B	
Ni	10.040	Al	
Mo	2.030	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	40567	PSI	
Tensile	80813	PSI	
Elongation	54		
Hardness	HRB 80		
Grain Size			

**Product Analysis (Base/Weld)**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Weld Wire**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Product Results**

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

**Remarks:**

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 50049 3.1B, EN10204 3.1 & ISO10474 3.1B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED  
IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL  
COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator



PO S05-2298

# Certified Material Test Report

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07015

Date: 06/29/17

Swepeco Part Number: 04010S0250CS0316LA654NP

Description: 4" x 10" x .250" w TP316/L A654/A600

**Sold To:**

Job Number: 21952  
Heat #: 510997

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A654-16 with dimensional tolerances per ASTM A600-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.) Country of melt and manufacture: USA  
 MARK EACH 23' LENGTH: ET-R BROOK  
 MARK 2 OF THE 27' LENGTHS: LE SHORT BROOK  
 MARK 1 OF THE 27' LENGTHS: LE INT SMI N  
 MARK 5 OF THE 27' LENGTHS: LE LONG SMI N  
 MARK EACH 25' LENGTH: LE LONG BROOK  
 MARK 2 OF THE 26' LENGTHS: ET-R JUDI  
 MARK 4 OF THE 26' LENGTHS: LE LONG JUDI  
 MARK 2 OF THE 26' LENGTHS: ET-R SMI N  
 MARK 30' LENGTH: LE INT JUDI  
 MARK 15' LENGTH: LE SHORT JUDI  
 MARK 13' LENGTH: LE SHORT SMI N

**Raw Material Values**

C	0.024	Ta	
Mn	1.540	N	0.027
P	0.028	V	
S	0.001	Cu	0.370
Si	0.320	Ce	
Cr	16.630	B	
Ni	10.030	Al	
Mo	2.020	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	46120	PSI	
Tensile	89485	PSI	
Elongation	53		
Hardness	HRB 80		
Grain Size			

**Product Analysis (Base/Weld)**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Weld Wire**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Product Results**

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

**Remarks:**

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
 NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
 MILL CERTS TO DIN 50049 3.1.B, EN10204 3.1 & ISO10474 3.1.B  
 NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
 ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
 \* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator



# Certified Material Test Report

PO S04-2298

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07016

Date: 06/28/17

Swepeco Part Number: 04010S0500CS0316LA554NP

Description: 4" x 10" x .600" w TP316/L A554/A500

**Sold To:**

Swepeco a.f. welded structural tubing, TP316/L, as welded, bead not removed.  
Manufactured per ASTM A554-16 w/lt dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .600" walls and under, we aim for 2T maximum radius, but are allowed 3T max.) Country of melt GREAT BRITAIN, Country of manufacture: USA

Job Number: 21959  
Heat #: 862295

#1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

IN ADDITION TO SWEPCO STANDARD MARKING:

MARK EACH 23' LENGTH: ET-F BROOK

MARK 2 OF THE 26' LENGTHS: ET-F JUDI

MARK 2 OF THE 26' LENGTHS: ET-F SMI N

**Raw Material Values**

C	0.015	Ta	
Mn	1.810	N	0.040
P	0.030	V	
S	0.001	Cu	0.350
Si	0.340	Ce	
Cr	16.430	B	
Ni	10.090	Al	
Mo	2.060	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	40385	PSI	
Tensile	81220	PSI	
Elongation	54		
Hardness	HRB 80		
Grain Size			

**Product Analysis (Base/Weld)**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Weld Wire**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Product Results**

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

**Remarks:**

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0176 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL. CERTS TO DIN 50040 3.1.B, EN10204 3.1 & ISO10474 3.1.B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator



# Certified Material Test Report

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07015

Date: 07/24/17

Swepeco Part Number: 05060S0375CS0316LA554NP

Description: 5" x 6" x 3/8" Wall A500/A554 Type 316/L

**Sold To:**

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A554-16 with dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.) Country of melt and manufacture: USA #1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others. Must be domestic. Buy American Act applies.

Job Number: 22349 Heat #: 314C

MARK LENGTH: PT & ST STUB MET, STK 1 PC

### Raw Material Values

C	0.017	Ta
Mn	1.300	N
P	0.025	V
S	0.001	Cu
Si	0.303	Ce
Cr	16.790	B
Ni	10.070	Al
Mo	2.030	Cb
Ti		Cb+Ta
Co		Fe
		W
Yield	54820	PSI
Tensile	91400	PSI
Elongation	48.76	
Hardness	HRB 87	
Grain Size		

### Product Analysis (Base/Weld)

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

### Weld Wire

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

### Product Results

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

**Remarks:**

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 50049 3.1.B, EN10204 3.1 & ISO10474 3.1.B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator



# Certified Material Test Report

PO S12-2298

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07015

Date: 06/29/17

Swepeco Part Number: 09060S0500CS0316LA554NP

Description: 9" x 6" x .500" w TP316/L A554/A500

**Sold To:**

Job Number: 21974

Heat #: 862426

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A554-16 with dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.) Country of melt GREAT BRITAIN, Country of manufacture: USA

#1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

**IN ADDITION TO SWEPCO STANDARD MARKING:**

MARK EACH 23' 4" LENGTH: MARK# PL

MARK EACH 22' 4" LENGTH: MARK# PL & LE

MARK EACH 27' 4" LENGTH: MARK# ET

**Raw Material Values**

C	0.021	Ta	
Mn	1.620	N	0.040
P	0.033	V	
S	0.002	Cu	0.420
Si	0.430	Ce	
Cr	16.500	B	
Ni	10.080	Al	
Mo	2.030	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	37355	PSI	
Tensile	76360	PSI	
Elongation	54		
Hardness	HRB 74		
Grain Size			

**Product Analysis (Base/Weld)**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Weld Wire**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Product Results**

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

**Remarks:**

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 50049 3.1.B, EN10204 3.1 & ISO10474 3.1.B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator



# Certified Material Test Report

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07015

Date: 04/19/18

**Swepeco Part Number: 06010S0250CS0316LA554NP**

**Description: 6" x 10" x .250"w TP316/L**

**Sold To:**

**Job Number: 23342**  
**Heat #: 643H**

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A554-16 with dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.)

Supplying: 4 PCS x 21' 0" CUT Length tolerance: + 1/2", - 0".

#1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

Must be domestic. Buy American Act applies. MELTED AND MANUFACTURED IN USA.

IN ADDITION TO SWEPCO STANDARD MARKING: EACH LENGTH, PACKING SLIP AND MTR MUST INCLUDE PIECE COUNT AND THE FOLLOWING MARKING:

ALL 4 PCS TO BE MARKED: "SMIS MG"

MARKING OF EACH PC TO BE DONE WITH A LOW CORROSION HALOGEN FREE PAINT MARKER/APPLICATOR FROM DOCUMENT 2298, INK BROCHURE

No additional requirements or tests requested or supplied.

**Raw Material Values**

C	0.028	Ta	
Mn	1.150	N	0.042
P	0.029	V	
S	0.001	Cu	0.423
Si	0.235	Ce	
Cr	16.800	B	
Ni	10.030	Al	
Mo	2.062	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	48920	PSI	
Tensile	88480	PSI	
Elongation	48.93		
Hardness	RB 84.5		
Grain Size			

**Product Analysis (Base/Weld)**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Weld Wire**

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

**Product Results**

Yield	PSI	Face Bend	Xrav
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hvdro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

**Remarks:**

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 50049 3.1.B, EN10204 3.1 & ISO10474 3.1.B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED  
IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL  
COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator





PO S84-2298

# Certified Material Test Report

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07015

Date: 12/08/17

Swepeco Part Number: 07070S0500CS0316LA554NP  
Description: 7" x 7" x .500"w TP316/L A554

### Sold To:

Job Number: 22840  
Heat #: 177H

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A554-16 with dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.)#1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

Must be domestic. Buy American Act applies. MTR TO STATE: MELTED AND MANUFACTURED IN USA.

IN ADDITION TO SWEPCO STANDARD MARKING: EACH LENGTH, PACKING SLIP AND MTR MUST INCLUDE PIECE COUNT AND THE FOLLOWING MARKING: "JUDI PT, STUB DOWN" PC # 1

### Raw Material Values

C	0.021	Ta	
Mn	1.208	N	0.056
P	0.030	V	
S	0.001	Cu	0.371
Si	0.326	Ce	
Cr	16.798	B	
Ni	10.005	Al	
Mo	2.160	Cb	
Ti		Cb+Ta	
Co	0.550	Fe	
		W	
Yield	41180	PSI	
Tensile	88510	PSI	
Elongation	5785		
Hardness	RB 82.5		
Grain Size			

MARKING OF EACH PC TO BE DONE WITH A LOW CORROSION HALOGEN FREE PAINT MARKER/APPLICATOR FROM DOCUMENT 2298, INK BROCHURE

### Product Analysis (Base/Weld)

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

### Weld Wire

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

### Product Results

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

### Remarks:

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 50049 3.1B, EN10204 3.1 & ISO10474 3.1.B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED  
IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL  
COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator



# Certified Material Test Report

**Swepeco Tube LLC**

One Clifton Boulevard  
Clifton, NJ 07016

Date: 06/22/17

Swepeco Part Number: 08012S0250GS0316LA654NP  
Description: 8" x 12" x .280"w TP316/L A654/A600

**Sold To:**

Job Number: 21964B  
Heat #: 610357

Swepeco e.f. welded structural tubing, TP316/L, as welded, bead not removed.  
Manufactured per ASTM A554-16 with dimensional tolerances per ASTM A600-13.  
All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.) Country of melt and manufacture: USA

#1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

IN ADDITION TO SWEPCO STANDARD MARKING:

MARK EACH 27' LENGTH: MG GAL

MARK EACH 28' LENGTH: MG DEAN

Raw Material Values

C	0.023	Ta	
Mn	1.100	N	0.040
P	0.027	V	
S	0.002	Cu	0.330
Si	0.440	Ce	
Cr	16.700	B	
Ni	10.000	Al	
Mo	2.010	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	46700	PSI	
Tensile	90065	PSI	
Elongation	54		
Hardness	HRB 81		
Grain Size			

Product Analysis (Base/Weld)

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

Weld Wire

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

Product Results

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

Remarks:

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 50049 3.1.B, EN10204 3.1 & ISO10474 3.1.B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED  
IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL  
COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator



# Certified Material Test Report

## Swepeco Tube LLC

One Clifton Boulevard  
Clifton, NJ 07015

Date: 06/28/17

Swepeco Part Number: 08012S0312CS0316LA554NP

Description: 8" x 12" x .312" TP316/L A554/A500

**Sold To:**

Swepeco a.f. welded structural tubing, TP316/L, as welded, bead not removed. Manufactured per ASTM A554-16 with dimensional tolerances per ASTM A500-13. All four corners to be of the same radius for each size tube. (The requirement is for the radius of the outside corner to be a maximum of 3 times the nominal wall thickness. On .500" walls and under, we aim for 2T maximum radius, but are allowed 3T max.) Country of melt and manufacture: USA

Job Number: 21955  
Heat #: 609943

#1 mill finish. Swepeco does not guarantee this product to be capable of being polished to any finish by others.

IN ADDITION TO SWEPCO STANDARD MARKING:  
MARK 5 OF THE 30' LENGTHS: MG BROOK  
MARK 5 OF THE 30' LENGTHS: MG SHA  
MARK EACH 27' LENGTH: MG SMI-N

Raw Material Values

C	0.024	Ta	
Mn	1.460	N	0.031
P	0.031	V	
S	0.001	Cu	0.370
Si	0.440	Ce	
Cr	16.710	B	
Ni	10.010	Al	
Mo	2.020	Cb	
Ti		Cb+Ta	
Co		Fe	
		W	
Yield	53082	PSI	
Tensile	89775	PSI	
Elongation	55		
Hardness	HRB 80		
Grain Size			

Product Analysis (Base/Weld)

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

Weld Wire

C	Ta
Mn	N
P	V
S	Cu
Si	Ce
Cr	B
Ni	Al
Mo	Cb
Ti	Cb+Ta
Co	Fe
	W

Product Results

Yield	PSI	Face Bend	Xray
Tensile	PSI	Root Bend	LP
Elongation		Side Bend	UT
Hardness		Reverse Bend	Ferrite
Grain Size		Flattening	Impact
Hydro	PSI OK	R. Flattening	PMI
		Flange	Corrosion
			Other

Heat Treat Temp. (F):

Heat Treat Time (Minutes.):

Quench:

Remarks:

CERTIFIED TO MEET THE REQUIREMENTS OF NACE MR0175 AND MR0103.  
NO WELD REPAIRS HAVE BEEN PERFORMED ON BASE METAL.  
MILL CERTS TO DIN 60049 3.1.B, EN10204 3.1 & ISO10474 3.1.B  
NO MATERIALS OR PROCESSES USING ELEMENT MERCURY OR ITS COMPOUNDS HAVE BEEN USED IN THE PROCESSING OF ITEMS SUPPLIED ON THIS ORDER.  
ALL PRODUCTS MANUFACTURED IN U.S.A. WE CERTIFY THAT THE ABOVE MATERIAL IS IN FULL COMPLIANCE TO THE ABOVE LISTED SPECIFICATIONS.  
\* CERTIFIED TO WITHSTAND

Swepeco Tube LLC

Frank Santolla

Q.C. Coordinator