

OIL TECH SERVICES, INC.

INSULATED TUBING SPECIFICATIONS

DATE 1/4/11

BY Michael Lombard

PRODUCT

Type Vacuum Insulated Tubing
 Size 3.5" x 4.5"
 Total Unit WT (Lbs/Ft) 20.9**
 Length Range II
 Connection RTS-8

OUTER TUBE

Grade L80*
 OD (in) 4.50
 ID (in) _____
 Wall Thickness (in) _____
 Weight (Lbs/Ft) 11.6**

INNER TUBE

Grade 13CR85*
 OD (in) 3.50
 ID (in) _____
 Wall Thickness (in) _____
 Drift Diameter (in) _____
 Weight (Lbs/Ft) 9.3*

COUPLING

Grade N/A
 OD (in) _____
 No. Recuts _____
 Anti Galling Preparation _____

CONNECTION INSULATOR

Type Required
 Sleeve L80
 Insulating Material Teflon

GETTER MATERIALS

Type Not Known***
 Design Life (yrs) _____

CONNECTION

Type RTS-8
 Critical Area (in²) _____
 Anti Galling Preparation _____
 Sealing Material _____

INSULATING PERFORMANCE

K-Factor (BTU/HR-°F-FT @ 600°F) _____
 Main Body (Average) See OTSI Test Data
 Connection _____
 Overall _____

COATINGS

Outer Tube	Type	_____
	Thickness (in)	_____
Inner Tube	Type	_____
	Thickness (in)	_____

* Data was provided by original manufacturer
 ** Data based on standards from original manufacturer

Note: The insulated sleeve for connections is not with the tubing. These sleeves can be manufactured by OTSI.

OIL TECH SERVICES, INC.

INSULATED TUBING SPECIFICATIONS

DATE 1/4/11

BY Michael Lombard

PRODUCT

Type Vacuum Insulated Tubing
 Size 4.5" x 5.5"
 Total Unit WT (Lbs/Ft) 29.75**
 Length Range II
 Connection RTS-8

OUTER TUBE

Grade L80*
 OD (in) 5.50
 ID (in)
 Wall Thickness (in)
 Weight (Lbs/Ft) 17.0*

INNER TUBE

Grade 13CR85*
 OD (in) 4.50
 ID (in)
 Wall Thickness (in)
 Drift Diameter (in)
 Weight (Lbs/Ft) 12.75**

COUPLING

Grade N/A
 OD (in)
 No. Recuts
 Anti Galling Preparation

CONNECTION INSULATOR

Type Required
 Sleeve L80
 Insulating Material Teflon

GETTER MATERIALS

Type Not Known***
 Design Life (yrs)

CONNECTION

Type RTS-8
 Critical Area (in²)
 Anti Galling Preparation
 Sealing Material

INSULATING PERFORMANCE

K-Factor (BTU/HR-°F-FT @ 600°F)
 Main Body (Average) See OTSI Test Data
 Connection
 Overall

COATINGS

Outer Tube	Type	<u> </u>
	Thickness (in)	<u> </u>
Inner Tube	Type	<u> </u>
	Thickness (in)	<u> </u>

* Data was provided by original manufacturer
 ** Data based on standards from original manufacturer

Note: The insulated sleeve for connections is not with the tubing. These sleeves can be manufactured by OTSI.



BRYAN LABORATORY, INC.

METALLURGICAL CONSULTATION - INSPECTION - TESTING
 ANALYTICAL SERVICES - FAILURE ANALYSIS
 8919 ALMEDA ROAD (77021)
 P. O. BOX 300368
 HOUSTON, TX 77230-0368
 TELEPHONE 713/747-7470 800/922-7470 FAX 713/747-7477

REPORT

Lab. No. B1L1-0073

January 28, 2011

ON: Steel Pipe

IDENTITY: Three samples identified as API 5CT, Grade L80,
 3-1/2", 9.30 lb/ft, 13 Cr (our A), 4-1/2", 12.75 lb/ft,
 13 Cr (our B) and 4-1/2", 12.75 lb/ft, (our C)

TENSION TESTS

Specimens - Longitudinal, 3/4" (sample A) and 1" wide reduced sections
 (samples B and C)

<u>Sample</u>	<u>Yield Strength, psi*</u>	<u>Tensile Strength, psi</u>	<u>Elongation in 2 inches, %</u>
A -	93,600	119,200	22.8
B -	90,000	118,100	23.8
C -	89,000	105,500	26.8

*At 0.5% total extension

Respectfully submitted,
 BRYAN LABORATORY, INC.

NOTICE

The samples and/or specimens remaining from these tests or analyses will be discarded seven days after the date of this report, unless arrangements are made to the contrary.

**Conveying Techniques, Oil Tech Services, Lee Contracting
Work Instructions**

Pipe Tally Sheet

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This section applies to:	CTI	OTSI	LCI
		X	

PIPE TALLY SHEET



OIL TECH SERVICES, INC.

10818 SHELDON ROAD
PLANT: (281) 456-9023

HOUSTON, TEXAS 77044
OFFICE: (713) 789-5144

FROM Oil Tech Services, Inc.	SHIPPER NO. 3317
ADDRESS 10818 Sheldon Road, Houston, Texas, 77044	
	RACK NO. B4

SIZE	WEIGHT	GRADE	COUPLING
4 1/2 x 3 1/2	22#	L80/13ca	
RANGE	THREAD	MAKE	TYPE
2	CS		

1	31.6	31.6	31.6	31.7	31.7	31.7	31.7
2	31.7	31.7	31.7	31.7	31.6	31.7	31.7
3	31.7	31.7	31.7	31.6	31.7	31.7	31.7
4	31.7	31.7	31.7	31.7	31.7	31.6	31.6
5	31.7	31.7	31.7	31.7	31.6	31.7	31.8
6	31.7	31.7	31.7	31.6	31.7	31.6	31.7
7	31.6	31.7	31.7	31.7	31.7	31.6	
8	31.7	31.7	31.7	31.7	31.7	31.7	
9	31.7	31.7	31.8	31.7	31.6	31.7	
10	31.7	31.7	31.7	31.7	31.7	31.7	
11	31.8	31.8	31.7	31.7	31.7	31.7	
12	31.7	31.7	31.7	31.6	31.7	31.6	
13	31.7	31.7	31.7	31.7	31.7	31.6	
14	31.7	31.7	31.7	31.8	31.7	31.8	
15	31.6	31.7	31.7	31.6	31.7	31.7	
16	31.6	31.7	31.8	31.7	31.7	31.7	
17	31.6	31.6	31.6	31.7	31.8	31.8	
18	31.7	31.7	31.7	31.7	31.7	31.6	
19	31.7	31.7	31.6	31.7	31.7	31.7	
20	31.7	31.6	31.7	31.7	31.7	31.7	
TL	633.6	633.8	633.9	633.7	633.8	633.6	190.2

TALLIED BY MSL	TOTAL JOINTS 126	TOTAL FOOTAGE 3,992.6
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REMARKS	
TRUCK NO.	DRIVER

**Conveying Techniques, Oil Tech Services, Lee Contracting
Work Instructions**

Pipe Tally Sheet

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		X	

PIPE TALLY SHEET



OIL TECH SERVICES, INC.

10818 SHELDON ROAD
PLANT: (281) 456-9023

HOUSTON, TEXAS 77044
OFFICE: (713) 789-5144

FROM	Oil Tech Services, Inc.	SHIPPER NO.	3317
ADDRESS	10818 Sheldon Road, Houston, Texas, 77044		
		RACK NO.	A3

SIZE	5 1/2 x 4 1/2	WEIGHT	30#	GRADE	L80/13ca	COUPLING	
RANGE	2	THREAD	CS	MAKE		TYPE	

1	31.8	31.8	31.8	31.7			
2	31.8	31.8	31.8	31.8			
3	31.8	31.8	31.8	31.7			
4	31.8	31.9	31.8	31.7			
5	31.8	31.8	31.8	31.8			
6	31.8	31.8	31.7	31.8			
7	31.8	31.9	31.7	31.8			
8	31.8	31.9	31.6	31.8			
9	31.8	31.8	31.8	31.6			
10	31.8	31.8	31.8	31.8			
11	31.6	31.8	31.5	31.7			
12	31.7	31.8	31.6	31.8			
13	32.0	31.8	31.7	31.7			
14	32.0	31.6	31.7	31.7			
15	31.8	31.1	31.8				
16	31.6	31.8	31.8				
17	30.8	31.8	31.7				
18	31.9	31.8	31.7				
19	31.8	32.0	31.8				
20	31.8	31.8	31.7				
TL	635.0	635.6	634.6	444.4			

TALLIED BY	MSL	TOTAL JOINTS	74	TOTAL FOOTAGE	2,349.6
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REMARKS

TRUCK NO.	DRIVER
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**Conveying Techniques, Oil Tech Services, Lee Contracting
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Pipe Tally Sheet

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		X	

PIPE TALLY SHEET



OIL TECH SERVICES, INC.

10818 SHELDON ROAD
PLANT: (281) 456-9023

HOUSTON, TEXAS 77044
OFFICE: (713) 789-5144

FROM Oil Tech Services, Inc.	SHIPPER NO. 3317
ADDRESS 10818 Sheldon Road, Houston, Texas, 77044	
	RACK NO. B2

SIZE 5 1/2 x 4 1/2 (New Tubing)	WEIGHT 30#	GRADE L80/L80	COUPLING
RANGE 2	THREAD Hydril CS	MAKE	TYPE

1	31.3	31.7	31.7	31.7	31.6		
2	31.3	31.6	31.7	31.7	31.6		
3	31.3	31.7	31.7	31.7	31.6		
4	31.5	31.3	31.7	31.7	31.2		
5	31.3	31.1	31.2	31.7	31.7		
6	31.3	31.3	31.6	31.7			
7	31.4	31.6	31.6	31.7			
8	31.2	31.7	31.6	31.7			
9	31.5	31.1	31.3	31.6			
10	31.3	31.3	31.7	31.7			
11	31.2	31.2	31.7	31.7			
12	31.6	31.1	31.7	31.6			
13	31.3	31.2	31.7	31.7			
14	31.3	31.1	31.7	31.6			
15	31.2	31.2	29.2	31.7			
16	31.1	31.3	31.7	31.1			
17	31.1	31.3	31.7	31.3			
18	31.3	31.3	31.7	31.7			
19	31.7	31.3	31.6	31.7			
20	31.7	31.6	31.7	31.6			
TL	626.9	627.0	630.2	632.6	157.7		

TALLIED BY MSL	TOTAL JOINTS 85	TOTAL FOOTAGE 2,674.4
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REMARKS	
TRUCK NO.	DRIVER