

Quality Documentation Package

Customer: NATIONAL OILWELL VARCO - DUBAI
Customer Purchase Order Number: JAPT7605
NOV GP Sales Order Number: 10000776
NOV GP Order Line Number: 5.1

4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING
WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH
TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND
XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000
HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P
COATING

Grant Prideco
ABU DHABI, UAE

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Pipe Body Specification		
Pipe Body OD	in	4.0
Pipe Body Wall Thickness - Nominal Weight		0.380 in - 15.7 lb/ft
Pipe Body Grade		CYX-105™
Drill Pipe Length		Range 2
- Max	ft	32.0
- Min	ft	31.0
Type of Upset		IU
Max Upset OD	in	4.188
Tong Length includes hardbanding if applicable		

Pipe Body Performance			
		Nominal	API Premium 80% Inspection Class
Burst Pressure *	psi	17,460	16,000
Collapse Pressure *	psi	18,050	15,190
Slip Crushing Capacity *	lbs	341,200	270,200
- Assumed Slip Length	in		16.5
- Assumed Transverse Load Factor (K)			4.2
Adjusted Weight **	lbs/ft		18.18
Fluid Displacement **	US gal/ft		0.28
	Bbls/ft		0.0066
Fluid Capacity **	US gal/ft		0.4
	Bbls/ft		0.0094
* With no axial load or bending in string		** At Nominal Wall Thickness	
Note: Oil field barrel equivalent to 42 US gal		Note: Nominal burst calculated at 87.5% RBW per API	

The Technical information contained herein, including the product performance sheet and other attached documents, is for reference only and should not be considered as a recommendation. The user is fully responsible for the accuracy and suitability of use of the technical information. NOV Grant Prideco cannot assume responsibility for the results obtained through the use of this material. No expressed or implied warranty is intended. Drill pipe assembly properties are calculated based on uniform OD and wall thickness. No safety factor is applied. The information provided for various inspection classes and for various wear conditions (remaining body wall) is for information only and does not represent or imply acceptable operating limits. It is the responsibility of the customer and the end user to determine the appropriate performance ratings, acceptable use of the product, maintain safe operating practices, and to apply a prudent safety factor suitable for the application. For API connections that have different pin and box IDs, tool joint ID refers to the pin ID. Per Chapter B, Section 4 VII of the drilling manual, it is recommended that drilling torque should not exceed 80% of MUT.

Tool Joint Specification		
Connection Type and Size		XT™38
Benchmark		H-Series™
SmoothEdge™ Height per side	in	0.09375
Tool Joint SMYS	psi	120,000
Connection OD	in	4.75
Connection ID	in	2.438
Pin Tong Length	in	10.0
Box Tong Length	in	15.0
Thread Compound Friction Factor		1.0

Tool Joint Performance		
Max Make Up Torque (Recommended)	ft-lbs	20,500
Min Make Up Torque	ft-lbs	17,100
Min TJ OD (API Premium)	in	4.478
Min TJ OD for Counterbore	in	4.478
Drift Size	in	2.313
The Maximum make-up torque should be applied when possible. To Maximize connection operational tensile, a MUT (T4) = 17,100 should be applied.		

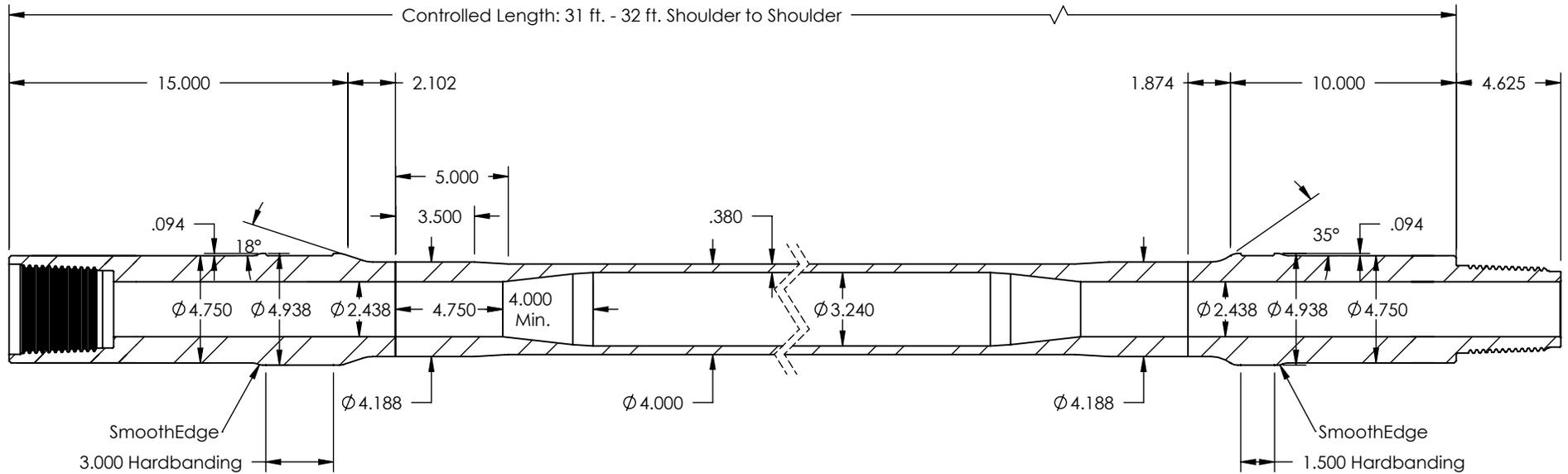
Advisories and Warnings	
Advisories:	
Warnings:	

Combined Loading for Drill Pipe			
Connection: XT™38 4.75" x 2.438" (120 KSI SMYS)			
Pipe: 4.0" OD 0.380" Wall Thickness CYX-105™ 80% Inspection Class			
At Max MUT (20500 ft-lbs)		At Min MUT (17100 ft-lbs)	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	355400	0	355400
1000	355200	800	355200
1900	354600	1500	354900
2900	353500	2300	354200
3800	352100	3100	353200
4800	350200	3800	352100
5800	347700	4600	350600
6700	345100	5400	348800
7700	341800	6100	346900
8600	338300	6900	344500
9600	334000	7700	341800
10600	329100	8400	339100
11500	324300	9200	335800
12500	318300	10000	332100
13400	312400	10700	328600
14400	305200	11500	324300
15400	297200	12300	319500
16300	289500	13000	315100
17300	280000	13800	309600
18200	270700	14600	303600

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Connection Wear Table		
Connection: XT™38 4.75" x 2.438" (120 KSI SMYS)		
Tool Joint OD (in)	Max MUT(ft-lbs)	Min MUT(ft-lbs)
4.75	20500	17100
4.725	20100	16700
4.701	19600	16400
4.676	19200	16000
4.651	18800	15600
4.626	18300	15300
4.602	17900	14900
4.577	17500	14600
4.552	17000	14200
4.527	16600	13900
4.503	16200	13500
4.478	15800	13200

Elevator Capacity		
Bore Diameter: 4.28175 Elevator SMYS: 110,000 psi 4.0in. 0.380 in. wall IU CYX-105™ XT™38		
Tool Joint OD (in)	Elevator Hoist Capacity(lbs) No Wear	Elevator Hoist Capacity(lbs) 1/32 In. Wear Factor
4.478	148700	139400
4.52	181300	172100
4.562	214300	205000
4.603	246800	237500
4.645	280400	271100
4.687	314300	305000
4.729	348500	339200
4.77	382200	372900
4.812	417000	407700
4.854	452100	442800
4.896	487500	478200
4.9375	522800	513500



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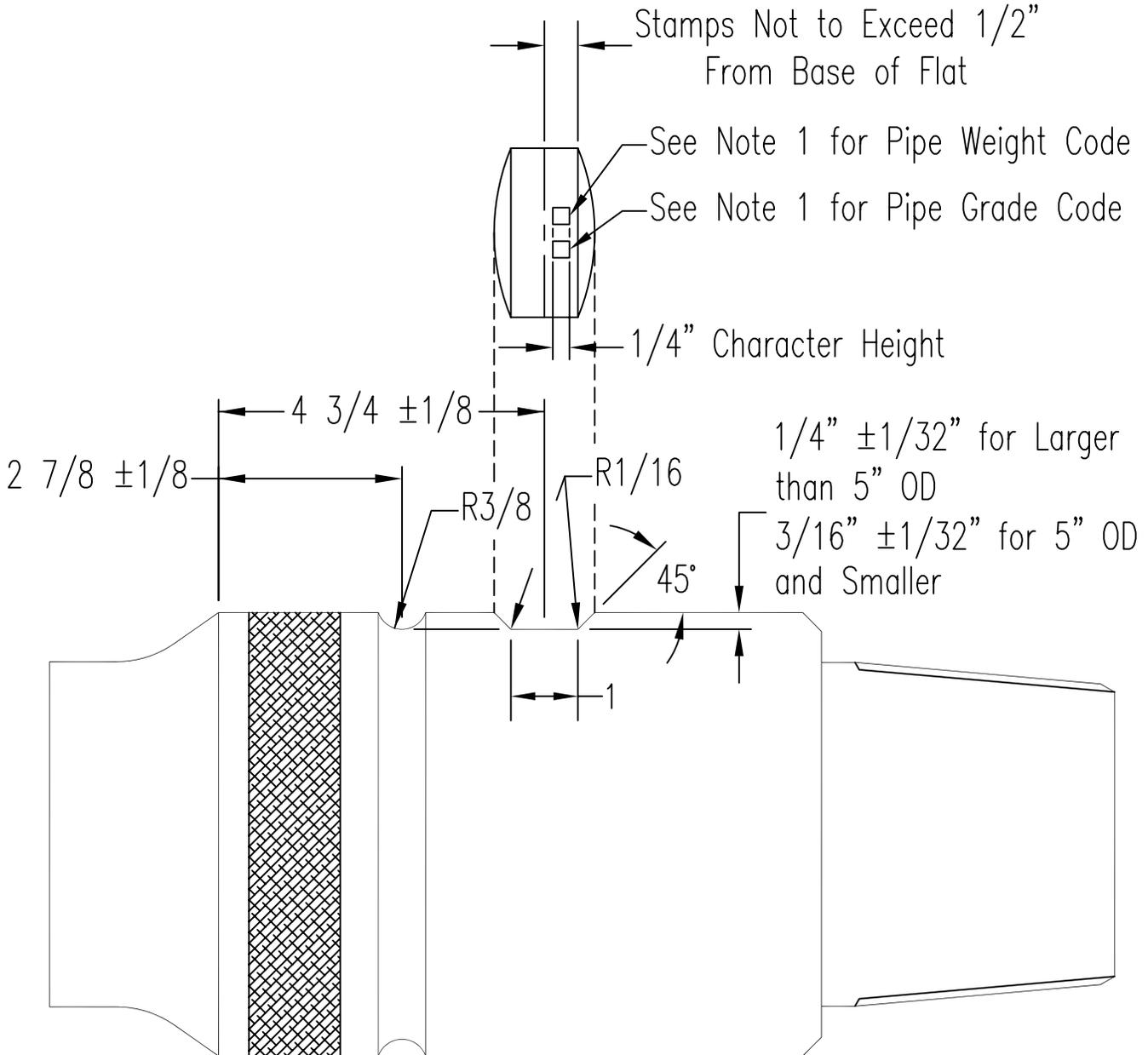
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL

TITLE: Drill Pipe Line Drawing
 4in. 0.380 in - 15.7 lb/ft
 IU - 4.188 Max OD
 Range 2, CYX-105™
 XT™ 38, 4.75in. OD
 2.438in. Pin ID x 10in. Pin Tong
 2.438in. Box ID x 15in. Box Tong
 SMOOTH EDGE™ 3/32in. Raised to tool joint OD.
 TCS-8000 hardbanding applied Flush to SE Surface.

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DRAWN BY Travis Allen	
DRAWING STATE Uncontrolled	DATE 10/30/2015
REFERENCED QUOTE 2015-4515	SCALE A NONE

DWG NO. 2015-4515-2 4:25 PM	SHEET 1 of 1	REV 1
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NOTE:

1. Reference Grant Prideco S.O.P. EN-OP-06.

APPR. BY	DATE	CHK'D BY	DATE	REV.	ECN#	DATE
DRM	8/6/2001	DWM	8/6/2001	05	51710	8/1/2001
				04	51420	11/21/2000
				03	50678	12/17/1998
				02	7019	3/13/1996
				01	5654	5/24/1994

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TOLERANCES UNLESS OTHERWISE SPECIFIED

.X ± .1
.XX ± .03
.XXX ± .010
∠ ± 1/2°
FRACTIONAL ± 1/64"
BREAK ALL SHARP EDGES
MACHINED SURFACE FINISH = .500/ MAX.

DRAWN BY	DATE
JFP	5/24/94
Original S/O	SCALE
	NONE

H-SERIESTM		
ISO 10407 Identification Groove & Flat Heavy Weight / High Strength Hardfaced Pin		
DWG. NO.	SHEET	REV.
1B820	1 of 1	05

Certificate of Conformance

In Accordance with API Specification 5DP, Latest Edition
NOV Grant Prideco Spec for Grade CYX-105

Customer Purchase Order Number:

This hereby certifies that NOV Grant Prideco has met or exceeded the manufacturing and quality requirements of the above referenced specification(s) in manufacturing the following below described material for: NATIONAL OILWELL VARCO - DUBAI

NOV GP Sales Order Number: 10000776

4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING

Grant Prideco



Certificate of Compliance

In Accordance with API Specification 5DP, Latest Edition
NOV Grant Prideco Spec for Grade CYX-105

Customer Purchase Order Number: JAPT7605

This hereby certifies that NOV Grant Prideco has met or exceeded the manufacturing and quality requirements of the above referenced specification(s) in manufacturing the following below described material for: NATIONAL OILWELL VARCO - DUBAI

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Caterin Vicente

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Grant Prideco



Certificate of Cold Rolled Threads

This hereby certifies that the Cold Rolled Threads Operation has been performed on the following:

XT38 PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS

XT38 BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS

in strict compliance with the Applicable Grant Prideco Standard Operating Procedure DS-OP-14 Rev.7, dated 8-24-12 for the Cold Rolled Threads Operation, Latest Revision. The issuance of this certificate indicates that the Cold Rolled Threads Operation was completed.

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING

Grant Prideco

NOV Wellbore
Technologies

Certificate of Hardband

This hereby certifies that TCS-8000 has been applied on the following:

**XT38 PIN 4.75" OD X 2.438" ID 10" TONG SPACE
WITH TCS-8000 HARDBANDING & WITH SE 3/32 &
WITH H-Series BENCHMARKS**

**XT38 BOX 4.75" OD X 2.438" ID 15" TONG SPACE
WITH TCS-8000 HARDBANDING & WITH SE 3/32 &
WITH H-Series BENCHMARKS**

in strict compliance with the Applicable Grant Prideco Standard Operating Procedure DS-OP-13 Rev. 10, dated 8/14/15 for the Hardband Operation, Latest Revision. The issuance of this certificate indicates that the Hardband Operation was completed.

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

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NOV Wellbore
Technologies

Certificate of Make and Break

This hereby certifies that the Make and Break Operation has been performed on the following:

XT38 PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS

XT38 BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS

in strict compliance with the Applicable Grant Prideco Standard Operating Procedure No. DS-OP-31 Rev. 12, 12-15-15 for the Make and Break Operation, Latest Revision. The issuance of this certificate indicates that the Make and Break Operation was completed.

4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

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Grant Prideco



Tuboscope | NOV Wellbore Technologies

Certificate of Inspection

Customer : Grant Prideco P.O. # 2008757
 Shop Order : 10000776.5 W.O. # M7440191

DRILL PIPE TUBING

Pipe Size	Pipe Weight	Nominal Wall	Grade	Range	Upset Type
4"	15.70#	.380"	S-135	II	IU

INSPECTION TYPE PERFORMED

TRUSCOPE-AS WSEA WSEA OD / DSEA ID
 EMI UT ENDS RECORD HEAT CHG #'S
 WALL DATA WALL DATA w/ LOC

The above inspections were performed to meet or exceed the latest revisions of the following referenced specification, Tuboscope standard operating procedures, and any applicable customer specifications:

TUBOSCOPE SOP: I-001, I-002, I-401, I-610 Rev. 6 & API 5DP

Total Joints Inspected to Remaining Body Wall
 Prime Joints with White Band Blue Bands

Tuboscope Representative:

Date:

Veronica Medina

03/01/16

Certificate of Tool Joint Magnetic Particle Inspection

This hereby certifies that Tool Joint Magnetic Particle Inspection has been performed on the following:

XT38 PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS

XT38 BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS

In strict Compliance with the Applicable Grant Prideco Standard Operating Procedure for Wet Magnetic Particle Inspection QP25.10 Rev.11 Dated 4/22/13. The issuance of this certificate indicates that Magnetic Particle Inspection was completed.

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

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Grant Prideco

NOV Wellbore
Technologies

Certificate of Weld Area Ultrasonic Shear Wave and Magnetic Particle Inspection

This hereby certifies that Weld Area U/T and MPI Inspection has been performed on the following:

XT38 PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS

XT38 BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS

In strict Compliance with the Applicable Grant Prideco Standard Operating Procedure(s) for Weld Area U/T and MPI Inspection QP 28.1 Rev.15 Dated 12/9/14.

The issuance of this certificate indicates that the Weld Area U/T and MPI Inspection were completed.

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

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Grant Prideco





NOV Grant Prideco
 Engineering Technology Center
 10100 Houston Oaks Dr
 Houston, Texas 77064

P R O C E D U R E	Field Inspection		A P P R O V E D	PRODUCT ENGINEERING MANAGER	
	Field Inspection Procedure for Used XT and XT-M™ Connections			<i>David Chin</i>	
	NUMBER	REV.		CHECKED BY	
	1H965	09	<i>Ben Fisher</i>		
	DATED		APPROVED BY		
	January 13, 2014		<i>Marshall Taylor</i>		

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**FIELD INSPECTION PROCEDURE FOR USED EXTREME™ TORQUE
 CONNECTIONS (XT™ AND XT-M™)**

GENERAL

- 1.1 This document defines the field inspection procedure for the eXtreme™ Torque family of connections (XT™ and XT-M™).

SCOPE

- 1.2 The following procedure stipulates the equipment, inspection methods, and acceptance criteria for field inspection and repair of XT™ and XT-M™ connections. This inspection shall encompass both visual and dimensional methods. The field refacing method addressed in this procedure does not apply to the XT-M™ connection, which requires machine redressing in a qualified controlled “shop” environment.

REFERENCES

- 1.3 XT™ and XT-M™ Connection Field Inspection Dimension Drawing.

SECTION

- 1.4 Equipment: The equipment listed below shall be required to perform these inspections.
 - 1.4.1 Generic

Product: Field Inspection

Title: Field Inspection Procedure for Used XT and XT-M™ Connections

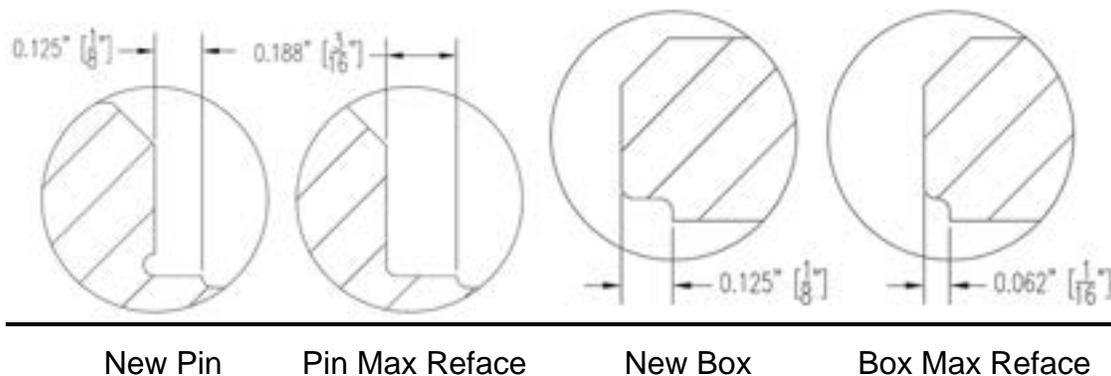
Procedure Number: 1H965 Rev 09, January 13, 2014

- 1.4.1.1 12" Steel Rule graduated in 1/64"
- 1.4.1.2 Outside and Inside Diameter Spring Calipers
- 1.4.1.3 Long Stroke Depth Micrometer
- 1.4.1.4 Setting Standards for Depth Micrometer
- 1.4.1.5 Lead Gage with appropriate contacts
- 1.4.2 Acquired through NOV Grant Prideco
 - 1.4.2.1 Thread Profile Gage
 - 1.4.2.2 Lead Gage Setting Standard
- 1.5 Preparation: All thread, make-up shoulder, and seal surfaces shall be cleaned sufficiently to allow for visual inspection. The starting threads of the pin and box connections should be cleaned using a "soft wheel" or other buffing method.
- 1.6 Visual inspection:
 - 1.6.1 Primary Make-up Shoulder (External Torque Shoulder): Refer to the "XT or XTM Connection Field Inspection Dimension" drawing for terminology and shoulder locations. The seal surface should be free of galls, nicks, washes, fins, or other conditions that exceed the limits of par. 1.6.1.1 and 1.6.1.2 (below).
 - 1.6.1.1 Damage that does not exceed 1/32" in depth and crosses less than 30% of the radial width of the seal is acceptable. If the damage exceeds these limits, refacing shall be used to repair the seal surface.
 - 1.6.1.2 The refacing repair should only remove enough material to repair the damage. A maximum of 1/32" of material may be removed during each refacing operation and a maximum of 1/16" may be removed from the connection before re-threading is required. After refacing repair, a minimum length of 1/16" (.062") shall remain on the box refacing benchmark, and 3/16" maximum (.188") shall remain on the pin refacing benchmark. See sketch.

Product: Field Inspection

Title: Field Inspection Procedure for Used XT and XT-M™ Connections

Procedure Number: 1H965 Rev 09, January 13, 2014



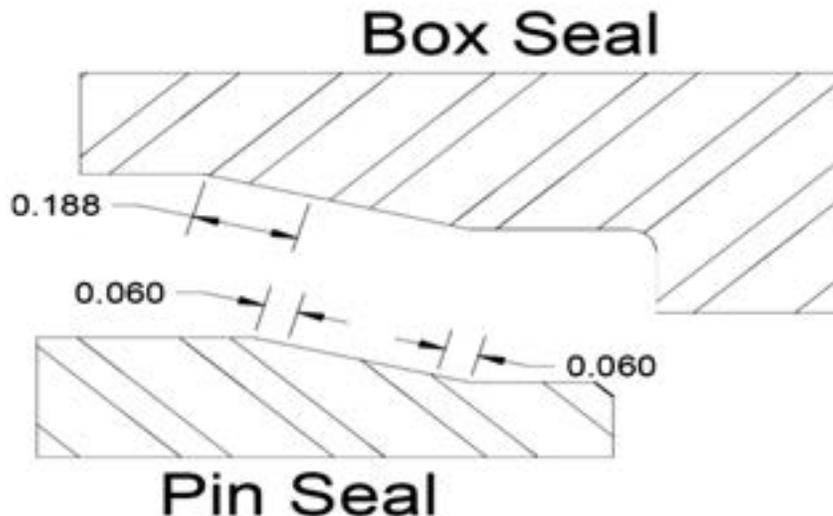
- 1.6.2 Secondary Make-up Shoulder (Mechanical Stop): The Secondary Shoulder is not a sealing surface. Damage to this surface is not critical unless the damage interferes with the make-up, driftability, or torque capacity of the connection. Dents, scratches, and cuts do not affect this surface unless these exceed 1" in width and cause the connection to be rejected due to shortening of the shoulder-to-shoulder length. Filing may be used to repair material protrusions, which extend from the face. *Connection length readings shall not be taken in damaged areas.*
- 1.6.3 15° Seal: The TF-M™ connection contains a 15° metal-to-metal sealing surface near the pin and box secondary shoulders. This is the primary sealing surface for the XT-M™ connection. This surface is allowed to contain round pit type defects in the contact area of the seal surface up to 1/32" in diameter and not exceeding 1/32" in depth. Multiple pits of this type are acceptable provided there is at least 1" circumferential separation between them. Circumferential lines or marks are acceptable in this surface provided they cannot be detected by rubbing a fingernail across the surface. The following "Pin Seal" and "Box Seal" diagram shows areas of the seal that may contain damage exceeding the previously stated criteria in this procedure. The area on the pin seal within 0.060" of the minor pin nose diameter is a non-contact surface and damage in this area does not affect sealing. The area on the pin seal within 0.060" of the major pin nose diameter may also contain damage or pitting (in addition to the area on the pin seal within 0.060" of the minor pin nose diameter), provided that the balance of the seal contact surface is without damage. The area on the box seal within 0.188" of the major box cylinder contains the non-contact portion of

Product: Field Inspection

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the box seal and that portion of the seal that corresponds to the first 0.060" of the pin seal. Damage or pitting is permitted in this area of the box seal provided that the balance of the seal contact surface is without damage.



1.6.4 Threads: The stab flank to crest radius of the starting 4 to 5 threads of the pin and box connections round off during break-in and normal operation. This condition is normal and does not affect the service of the connection. The remaining thread flank surfaces should be free of damage that exceeds 1/16" in depth or 1/8" in diameter. Thread roots should be free of damage that extends below the radius. Thread crest should be free of damage that would interfere with make-up. Material that protrudes beyond the thread profile should be removed using a round cornered triangle hand file or soft buffing wheel.

1.6.5 Profile: The thread profile shall be verified along the full length of complete threads in two locations at least 90° apart. The profile gage should mesh evenly in the threads and show normal contact. If the profile gage does not mesh in the threads, lead measurements shall be taken.

1.6.6 Coating: Threads and shoulders that are repaired by filing must be protected by phosphate coated or by using copper sulfate.

1.7 Dimensional Inspection:

1.7.1 Lead: The thread lead should be verified, if the profile gage indicates that thread stretch has occurred. The thread shall be

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measured over a 2" interval and shall not exceed 0.006". Connections failing this inspection should be inspected for cracks and, if none are found, re-threaded.

- 1.7.2 Box Outside Diameter: The outside diameter of the box shall be measured at a distance of 2" +/-1/4" from the primary make-up shoulder. Measurements shall be taken around the circumference to determine the minimum diameter. This dimension shall be compared to the minimum diameter for the connection being inspected to determine acceptance or rejection.
- 1.7.3 Box Counterbore Diameter: The inside diameter of the box counterbore shall be verified. This dimension is not used to determine acceptance or rejection, but is needed to test for box swell and to verify the connection length.
- 1.7.4 Box Counterbore Wall Thickness: The wall thickness between the "Box Outside Diameter" and "Box Counterbore Diameter" shall be measured to insure that it exceeds the minimum dimension for the connection being inspected.
- 1.7.5 Box Connection Length: The distance between the primary and secondary make-up shoulders shall be verified in two locations 180° apart. This distance shall be compared to the requirement for the connection being inspected to determine acceptance or rejection.
 - 1.7.5.1 Repair by Refacing - General Repair nonconformance of connection length may be accomplished as noted below.
 - 1.7.5.1.1 Machine refacing in a lathe is the preferred method, although the portable field refacing units have proven to produce acceptable results.
 - 1.7.5.1.2 If the portable field refacing unit method is used, the variability of face flatness and squareness is introduced and should be monitored. When this method is used, length measurements should be taken in more than the two locations (as specified above). It is suggested that a minimum of four measurements should be taken. Should any measurement be found to be outside the drawing limits, the connection will be deemed as rejected.

Product: Field Inspection

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- 1.7.5.2 If the connection length exceeds the specified dimension, repair may be made by refacing the primary make-up shoulder.
 - 1.7.5.3 If the connection length is less than the specified dimension, refacing the secondary make-up shoulder may be adequate to repair this condition.
 - 1.7.5.4 Refacing limits are the same as for repair of damaged shoulders.
- 1.7.6 Pin Nose Diameter: The outside diameter of the pin nose shall be verified. This dimension is not used to determine acceptance or rejection, but is needed to test for pin nose swell and to verify connection length.
- 1.7.7 Pin Connection Length: The distance between the primary and secondary make-up shoulders shall be verified in two locations 180° apart. This distance shall be compared to requirement for the connection being inspected to determine acceptance or rejection. Repairs can only be made by re-threading the connection. (See Section 1.7.5.1. -Repair by Refacing- General, above)
- 1.7.7.1 If the connection length exceeds the specified dimension, repair may be made by refacing the secondary make-up shoulder (pin nose).
 - 1.7.7.2 If the connection length is less than the specified dimension, refacing the primary make-up shoulder may be adequate to repair this condition.
 - 1.7.7.3 Refacing limits are the same as for repair of damaged shoulders.
- 1.7.8 Tong Length: a minimum tong space requirement of 6" for pins and the minimum box tong space shall ensure there is no hardbanding over the box threads and shall be at least equal to the connection length +1" (8" minimum).
- 1.8 Shop Redressing of XT-M Shoulders and Radial Seal: To correct connection length or damage to sealing surfaces, the XT-M connection must be redressed by facilities that have been specifically qualified by NOV Grant Prideco to perform this operation. All three surfaces (Primary shoulder, Secondary shoulder, and 15° Seal) shall be redressed in one operation in accordance with Refacing Thread Drawing. See requirements for refacing benchmark after machining (Para. 1.6.1.2. above.)
- 1.9 Re-threading: This method shall be used to repair connections that fail to meet the requirements stipulated in this inspection procedure.

Product: Field Inspection

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Performance of this operation may not require complete removal of the thread profile if sufficient material can be removed to comply with the new product requirements. (The connection does not have to be “reblanked”, however all torque shoulders, seal surfaces, and thread elements must be machined to 100% “bright metal”. This is not necessary for cylindrical diameters). After completion, the connection must be phosphate coated. (*Copper Sulfate is not an acceptable substitute for phosphate for “re-threaded” connections.*)



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NOV Grant Prideco DPS Bulletin

Bulletin Information	Title:	Running & Handling Procedures for XT® and XT-M™ Connections	Approval	DPS Manager, Marketing & Product Mgmt.:	Jim Brock
	Bulletin Type:	PC-Procedural Bulletin		DPS Manager, Product Engineering	David Chin
	Bulletin Designation:	PC-4.1-2009Feb13-EXT		DPS Manager, Field Services:	Dan Morgan
	Rev. Number:	1		Approval Date:	July 18, 2012
	Rev. Date:	July 18, 2012		Distribution:	EXT-External
	Authored By:	Richard Griffin, Senior Marketing Engineer Sandy Steely, Licensee Services Manager		Distribution Date:	July 18, 2012

Running and Handling Procedure for XT® & XT-M™ Connections

1. Check to ensure the counter balance on the top drive is working properly and provides a minimum amount of weight applied to the connection during make-up operations. If the top drive counter balance is not working or is adjusted incorrectly, too much weight will be applied to the XT/XT-M connection during make-up and may cause connection damage. To make adjustments to the top drive counter balance system, contact the top drive manufacturer for proper counter balance adjustment procedures.
2. Because the XT and XT-M have slower tapers when compared to HI TORQUE or standard API connections, increased effort regarding pin to box alignment during stabbing operations is required. Adjust the bore through the top drive bell stabbing guide so it will not be more than ½" larger in diameter than the drill pipe box tool joint OD. This will guide the pin connection into the box without damaging the box shoulder. For the most common XT connection, the XT57 connection on 5-7/8" drill pipe, the standard 5" drill pipe top drive bell stabbing guide will usually work well (Varco flipper part number is 99304).
3. Visually inspect the pipe and tool joints for damage. If thread protectors are damaged, remove and visually inspect connections.

4. If pipe is picked up with handling plugs, check the plugs for damage before making them up in the drill pipe box connections. Keep protectors on the handling plugs when they are lowered down the V door, and until they are screwed into the box connections.
5. Leave the pin protectors on the pipe as it is pulled up the V door and when the pipe is lowered into the mouse hole. Only remove pin protectors after the pipe is pulled out of the mouse hole.
6. Break in the top drive saver sub by making it up and breaking it out to recommend MUT three times in the rotary table before it is made up in the top drive. Use a short saver sub (5-1/2" shoulder to shoulder). This will position the pipe handler torque wrench 2" below the box shoulder, so it will not crush the counter bore of the box connection.
7. Stab in the top drive near the rig floor so you can see if the pin is centered in the box.
8. Check the top drive torque and iron roughneck torque with the rig tongs and a recently calibrated load cell to make sure the correct torque is being applied to the XT/XT-M connection. Check breakout torque to make sure it is not more than make up torque. It should be 85-95% of makeup torque.
9. Grant Prideco requires the use of a stabbing guide when stabbing any XT or XT-M connection. The use of a stabbing guide 1) ensures proper pin to box alignment and reduces stabbing damage to the box seal face, 2) increases safety by reducing opportunities for finger pinch points when handling the connection, and 3) may actually decrease trip times by reducing time spent by the rig crew when aligning pin to box connections during tripping operations. Stabbing guides are available in many types (plastic and stainless steel) and sizes as shown in the pictures below. The use of a de-stabbing guide is NOT required nor recommended by Grant Prideco when de-stabbing the XT/XT-M connection.



Photos courtesy of Weatherford®

10. Ensure the use of contaminant-free thread compound and proper doping procedures. Standard thread compounds generally used with rotary-shouldered connections such as zinc-based, copper-based, Teflon-based and other metal and metal free thread compounds are compatible with the XT/XT-M connection. Based on in-house testing and field experience, Grant Prideco has seen consistent friction properties for copper-based thread compounds.
11. Proper alignment, along with slow initial make up of the starting threads, is necessary with

the XT/XT-M connection. Caution is required in making up the first 5 or 6 threads before spinning it up. If the connection is made up with misalignment and fast spin up, minor thread damage may occur within the starting threads. Should this happen, it can be removed with a soft grinding wheel or a file. This will not be detrimental to the connection.

Note 1): If a slow speed spinner is not available, one to two inches of initial make up should be made with a chain tong prior to spin up.

Note 2): The information contained above is especially critical to adhere to during the initial running of an XT/XT-M string. Most XT/XT-M connections are made and broke during manufacturing. This make & break operation is done horizontally while the tool joints are loose and not attached to the drill pipe tube. As a result, it differs from rig make-up because axial compressive loading is not placed on the connection during make-up. Therefore, the manufacturing make & break operation successfully work hardens the thread load flanks, but the thread stab flanks are not as work hardened as the load flanks. At the rig site, the stand and portion of the top drive weight are placed on the connection during make-up providing an axial compressive load on the stab flanks. With continued rig make-up, the thread stab flanks of the XT/XT-M connection will gradually work harden and their propensity for thread damage will decrease.

12. When pipe is laid down, ensure thread protectors are installed.

Certificate of Chemistry and Mechanical Testing for Drill Pipe

Mill Chemistry (Wt. %)

Mill	Heat No.	Type	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb/Cb	B
VOESTALPINE TUBULARS GMBH & CO KG	1015377108	Heat	.2892	.7198	.0164	.0027	.2611	.016	.0194	1.1002	.3223	.0784	.0368	.0013
VOESTALPINE TUBULARS GMBH & CO KG	1015377112	Heat	.2767	.7034	.0145	.0019	.2851	.0148	.0175	1.0898	.3277	.0774	.0364	.002
VOESTALPINE TUBULARS GMBH & CO KG	1015377103	Heat	.2875	.7177	.0136	.0031	.2656	.0149	.0487	1.1037	.3277	.0774	.0405	.0017
VOESTALPINE TUBULARS GMBH & CO KG	1015377109	Heat	.2833	.7132	.0139	.0035	.2678	.0157	.0184	1.1072	.3168	.0753	.0358	.0014
VOESTALPINE TUBULARS GMBH & CO KG	1015478580	Heat	.267	.7018	.0101	.0031	.2736	.0154	.0284	1.1119	.3359	.0793	.0378	.0016

Tensile

Position	Heat No.	Tube Body Specimen Size (in.)	Tube Body Tensile (Psi)	Tube Body Yield (Psi)	Tube Body Elong (%)	Tube Body RA (%)	Upset Specimen Size (in.)	Upset Tensile (Psi)	Upset Yield (Psi)	Upset Elong (%)	Upset RA (%)
16 N	1015377103	.99	122000	112000	26.45		.497	123400	105314	24.45	68.51
16 S	1015377103	.991	122000	110000	27		.498	125060	109301	24.99	68.63
201 N	1015377103	.993	128000	117000	26.15		.497	124230	109892	22.95	68.51
247 S	1015377112	.991	127000	115944	25.45		.5	120380	106103	22.25	68.42
455 N	1015377108	.992	126000	116000	27.7		.502	132320	116622	24.7	66.6
455 S	1015377108	.991	127000	116528	25		.502	132290	118718	20.1	64.78
641 N	1015377108	.993	122000	113000	27.65		.493	125880	112989	23.1	66.58
671 S	1015377109	.993	125000	115000	26.6		.493	123420	108437	22.3	69.77
811 N	1015478580	.994	122000	110000	27.1		.495	124050	110327	23.75	67.31
909 ST 829 S	1015478580	.994	121000	111000	28.55		.496	124570	113893	22.4	69.93

Min: 115000

Range: 105000 - 120000

Min: 115000

Range: 105000 - 120000

Impact Charpy-V Notch

Position	Heat No.	Size (mm)	Orientation	Temp (°F)	A (Ft-lb)	B (Ft-lb)	C (Ft-lb)	Avg (Ft-lb)	Avg Shear (%)
16 N	1015377103	3/4 Size	Longitudinal	70	70.7	76.4	73.6	73.57	80
16 S	1015377103	3/4 Size	Longitudinal	70	86.4	87.2	87.3	86.97	80
201 N	1015377103	3/4 Size	Longitudinal	70	61.9	71.7	60.2	64.6	60
247 S	1015377112	3/4 Size	Longitudinal	70	54.7	55.3	51.7	53.9	50
455 N	1015377108	3/4 Size	Longitudinal	70	73.4	71.4	67.2	70.69	70
455 S	1015377108	3/4 Size	Longitudinal	70	65.2	72.9	75.4	71.18	70

Specifications:

In Accordance with API Specification 5DP, Latest Edition
NOV Grant Prideco Spec for Grade CYX-105

All Properties meet the requirements of SPECIFICATION. I Certify that these tests were conducted in accordance with applicable specifications and that the data contained herein is true and correct.

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Certificate of Chemistry and Mechanical Testing for Drill Pipe

641 N	1015377108	3/4 Size	Longitudinal	70	85.6	82.3	89.5	85.8	80
671 S	1015377109	3/4 Size	Longitudinal	70	83.9	82.2	85	83.72	80
811 N	1015478580	3/4 Size	Longitudinal	70	90.5	91.6	92.1	91.4	90
909 ST 829 S	1015478580	3/4 Size	Longitudinal	70	90.2	95.1	86.3	90.52	90
				70	Min. Single: 35			Min. Average: 50	

Specifications:

In Accordance with API Specification 5DP, Latest Edition
NOV Grant Prideco Spec for Grade CYX-105

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Certificate of Chemistry and Mechanical Testing for Pin Tool Joint

Mill Chemistry (Wt. %)

Mill	Heat No.	Heat Code	Type	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Nb/Cb	Ca	Ti	H	N
SEAH STEEL AMERICA INC	B21965	KMVBP	Heat	.36	.93	.013	.004	.27	.07	.06	1.1	.29	.014	.0011	.01	.59	.0068
SEAH STEEL AMERICA INC	B21963	KMVBI	Heat	.37	.94	.014	.004	.27	.07	.06	1.11	.29	.013	.0015	.011	.94	.0069

Tensile

Position	Heat No.	Heat Code	Size (In.)	Tensile (Psi)	Yield (Psi)	Elong (%)	RA (%)
3683-15	B21965	KMVBP	.501	151761	135789	19	61
3684-15	B21965	KMVBP	.5	150885	135503	19	63
3686-15	B21965	KMVBP	.499	149604	133774	19	59
3688-15	B21965	KMVBP	.5	149224	132774	20	61
3691-15	B21963	KMVBI	.502	155050	139497	19	61
3692-15	B21963	KMVBI	.503	154791	138598	17	61
3695-15	B21963	KMVBI	.505	149404	132866	18	61

Min: 140000 Range: 120000 - 165000 Min: 13% Min: 35%

Impact Charpy - V Notch

Position	Heat No.	Heat Code	Size (mm)	Orientation	Temp (°F)	A (Ft-lb)	B (Ft-lb)	C (Ft-lb)	Avg (Ft-lb)	Avg Shear (%)
3683-15	B21965	KMVBP	Full Size	Longitudinal	-4	47.9	49.19	53.69	50.26	100
3684-15	B21965	KMVBP	Full Size	Longitudinal	-4	58.25	59.27	60.08	59.2	100
3686-15	B21965	KMVBP	Full Size	Longitudinal	-4	57.84	61.31	55.71	58.29	100
3688-15	B21965	KMVBP	Full Size	Longitudinal	-4	66	63	68.1	65.7	100
3691-15	B21963	KMVBI	Full Size	Longitudinal	-4	63.68	60.9	61.62	62.06	100
3692-15	B21963	KMVBI	Full Size	Longitudinal	-4	57.23	63.17	59.06	59.82	100
3695-15	B21963	KMVBI	Full Size	Longitudinal	-4	61.83	61.52	59.06	60.8	100

Full Size 70 Min. Single: 35 Min. Average: 40

Hardness

Position	Heat No.	Heat Code	Surface Hardness(HBW)	Through wall		
				OD (HRC)	MID (HRC)	ID (HRC)
3683-15	B21965	KMVBP	335	34.7	35	34.1
3684-15	B21965	KMVBP	313	33.4	34	34.2
3686-15	B21965	KMVBP	313	33.4	33.8	33.7
3688-15	B21965	KMVBP	315	33.2	32.9	32.9
3691-15	B21963	KMVBI	315	34.2	34.8	35.3
3692-15	B21963	KMVBI	315	33	33.7	33.7
3695-15	B21963	KMVBI	317	33.9	34.9	35.7

Range: 285 - 341 Range: 29.9 - 36.6

Specifications:

In Accordance with API Specification 5DP, Latest Edition
NOV Grant Prideco Spec for Grade CYX-105

All Properties meet the requirements of SPECIFICATION. I Certify that these tests were conducted in accordance with applicable specifications and that the data contained herein is true and correct.

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI **Date:** 05/31/2016
NOV GP Sales Order Number: 10000776 **Customer Purchase Order #:** JAPT7605
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Certificate of Chemistry and Mechanical Testing for Box Tool Joint

Mill Chemistry (Wt. %)

Mill	Heat No.	Heat Code	Type	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Nb/ Cb	Ca	Ti	H	N
SEAH STEEL AMERICA INC	B21965	KMVBP	Heat	.36	.93	.013	.004	.27	.07	.06	1.1	.29	.014	.0011	.01	.59	.0068

Tensile

Position	Heat No.	Heat Code	Size (In.)	Tensile (Psi)	Yield (Psi)	Elong (%)	RA (%)
3666-15	B21965	KMVBP	.5	159075	144788	18	59
3667-15	B21965	KMVBP	.5	152940	138403	18	62
3668-15	B21965	KMVBP	.5	151915	136744	19	62
3672-15	B21965	KMVBP	.503	149168	135007	20	64
3679-15	B21965	KMVBP	.503	154427	140177	18	60
3680-15	B21965	KMVBP	.501	153191	139296	19	64
				Min: 140000	Range: 120000 - 165000	Min: 13%	Min: 35%

Impact Charpy - V Notch

Position	Heat No.	Heat Code	Size (mm)	Orientation	Temp (°F)	A (Ft-lb)	B (Ft-lb)	C (Ft-lb)	Avg (Ft-lb)	Avg Shear (%)
3666-15	B21965	KMVBP	Full Size	Longitudinal	-4	51.6	56.9	53.6	54.03	100
3667-15	B21965	KMVBP	Full Size	Longitudinal	-4	62.55	59.16	69.19	63.63	100
3668-15	B21965	KMVBP	Full Size	Longitudinal	-4	69.08	63.99	66.17	66.41	100
3672-15	B21965	KMVBP	Full Size	Longitudinal	-4	53.49	55	53.99	54.16	100
3679-15	B21965	KMVBP	Full Size	Longitudinal	-4	53.49	55	53.99	54.16	100
3680-15	B21965	KMVBP	Full Size	Longitudinal	-4	64.2	69.5	62.75	65.48	100
					Full Size	70	Min. Single: 35	Min. Average: 40		

Hardness

Position	Heat No.	Heat Code	Surface Hardness(HBW)	OD (HRC)	Through wall	
					MID (HRC)	ID (HRC)
3666-15	B21965	KMVBP	333	34.4	34.5	34.5
3667-15	B21965	KMVBP	313	33.4	33.7	33.6
3668-15	B21965	KMVBP	315	32.9	33.3	33.3
3672-15	B21965	KMVBP	315	33	34.3	33.7
3679-15	B21965	KMVBP	317	33.7	34.7	35.5
3680-15	B21965	KMVBP	315	32.9	33.7	33.4
				Range: 285 - 341	Range: 29.9 - 36.6	

Specifications:

In Accordance with API Specification 5DP, Latest Edition
NOV Grant Prideco Spec for Grade CYX-105

All Properties meet the requirements of SPECIFICATION. I Certify that these tests were conducted in accordance with applicable specifications and that the data contained herein is true and correct.

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date



Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

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Certificate of Testing for Weld Area

Mechanical Test Data

Specimen	Position	Size	Tensile PSI	Yield PSI	Elong %	RA %
Weld-Pin	05 (PIN)	0.500	187,444	101,574	16.50	67.60
Weld-Pin	401 (PIN)	0.500	116,234	98,390	16.70	68.20
Weld-Pin	625 (PIN)	0.500	117,222	104,334	17.70	67.80
Weld-Box	05 (BOX)	0.500	113,706	104,408	17.80	67.20
Weld-Box	401 (BOX)	0.500	121,224	115,128	15.70	67.30
Weld-Box	641 (BOX)	0.500	119,140	110,871	17.70	67.50

Longitudinal Charpy-V Notch Impact Data (FT-LBS)

Size(mm)	Temp (F)	Position	A	B	C	Avg	Shear(%)
10 x 10 mm	70	05 (BOX)	56.0	66.0	52.0	58.00	100.00
10 x 10 mm	70	401 (BOX)	52.0	53.0	58.0	54.33	100.00
10 x 10 mm	70	641 (BOX)	55.0	55.0	50.0	53.33	100.00
10 x 10 mm	70	05 (PIN)	75.0	50.0	77.0	67.33	100.00
10 x 10 mm	70	401 (PIN)	50.0	53.0	53.0	52.00	100.00
10 x 10 mm	70	625 (PIN)	86.0	92.0	90.0	89.33	100.00

13 FT-LBS AVG, 11 SINGLE (FULL) @ 70F

180 Degree Bend Test & Microstructure Verification

Position	Side Bend 1	Side Bend 2	Microstructure Verified
05 (BOX)	Pass	Pass	Yes
05 (PIN)	Pass	Pass	Yes
401 (BOX)	Pass	Pass	Yes
401 (PIN)	Pass	Pass	Yes
625 (PIN)	Pass	Pass	Yes
641 (BOX)	Pass	Pass	Yes

Throughwall Hardness HRC

Position	OD	Pipe Average			Tool Joint Average		
		MD	ID	OD	MD	ID	
05 (BOX)	25.5	25.4	23.6	28.6	29.3	27.9	
05 (PIN)	29.4	28.5	27.6	30.6	30.9	32.3	
401 (BOX)	27.9	26.7	26.0	30.0	31.0	30.0	
401 (PIN)	28.2	27.3	26.3	30.4	27.8	27.9	
625 (PIN)	26.7	26.1	25.1	29.1	28.2	28.4	
641 (BOX)	27.7	25.8	25.9	29.3	28.7	28.6	

36 HRC MAX

Specifications:

In Accordance with API Specification 5DP, Latest Edition
NOV Grant Prideco Spec for Grade CYX-105

Caterin Vicente

NOV Grant Prideco Representative

05/31/2016

Date

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14528	257	KMVBP	KMVBP	1015478580	15P3YG1000	31.54	✓	✓	✓	✓	✓
MDAA14529	165	KMVBP	KMVBP	1015377109	15P3YG1001	31.54	✓	✓	✓	✓	✓
MDAA14530	275	KMVBP	KMVBP	1015377109	15P3YG1002	31.55	✓	✓	✓	✓	✓
MDAA14531	729	KMVBP	KMVBP	1015377108	15P3YG1003	31.55	✓	✓	✓	✓	✓
MDAA14532	251	KMVBP	KMVBP	1015478580	15P3YG1004	31.53	✓	✓	✓	✓	✓
MDAA14533	671	KMVBP	KMVBP	1015377112	15P3YG1005	31.55	✓	✓	✓	✓	✓
MDAA14534	569	KMVBP	KMVBP	1015377103	15P3YG1006	31.60	✓	✓	✓	✓	✓
MDAA14535	735	KMVBP	KMVBI	1015377108	15P3YG1007	31.56	✓	✓	✓	✓	✓
MDAA14536	731	KMVBP	KMVBI	1015377103	15P3YG1008	31.55	✓	✓	✓	✓	✓
MDAA14537	782	KMVBP	KMVBI	1015377103	15P3YG1009	31.53	✓	✓	✓	✓	✓
MDAA14538	758	KMVBP	KMVBI	1015377103	15P3YG1010	31.56	✓	✓	✓	✓	✓
MDAA14539	743	KMVBP	KMVBI	1015377108	15P3YG1011	31.57	✓	✓	✓	✓	✓
MDAA14540	757	KMVBP	KMVBI	1015377103	15P3YG1012	31.59	✓	✓	✓	✓	✓
MDAA14541	742	KMVBP	KMVBI	1015377108	15P3YG1013	31.58	✓	✓	✓	✓	✓
MDAA14542	259	KMVBP	KMVBP	1015478580	15P3YG1014	31.55	✓	✓	✓	✓	✓
MDAA14543	736	KMVBP	KMVBP	1015377108	15P3YG1015	31.57	✓	✓	✓	✓	✓
MDAA14544	678	KMVBP	KMVBI	1015377112	15P3YG1016	31.58	✓	✓	✓	✓	✓
MDAA14545	740	KMVBP	KMVBP	1015377108	15P3YG1017	31.60	✓	✓	✓	✓	✓
MDAA14546	732	KMVBP	KMVBP	1015377103	15P3YG1018	31.58	✓	✓	✓	✓	✓
MDAA14547	734	KMVBP	KMVBP	1015377103	15P3YG1019	31.57	✓	✓	✓	✓	✓
MDAA14548	244	KMVBP	KMVBP	1015478580	15P3YG1020	31.54	✓	✓	✓	✓	✓
MDAA14549	207	KMVBP	KMVBP	1015377103	15P3YG1021	31.59	✓	✓	✓	✓	✓
MDAA14550	206	KMVBP	KMVBP	1015377108	15P3YG1022	31.57	✓	✓	✓	✓	✓
MDAA14551	243	KMVBP	KMVBP	1015478580	15P3YG1023	31.54	✓	✓	✓	✓	✓
MDAA14552	155	KMVBP	KMVBP	1015377109	15P3YG1024	31.56	✓	✓	✓	✓	✓
MDAA14553	242	KMVBP	KMVBP	1015478580	15P3YG1025	31.55	✓	✓	✓	✓	✓
MDAA14554	746	KMVBP	KMVBP	1015377103	15P3YG1026	31.55	✓	✓	✓	✓	✓
MDAA14555	241	KMVBP	KMVBP	1015478580	15P3YG1027	31.58	✓	✓	✓	✓	✓
MDAA14556	726	KMVBP	KMVBP	1015377103	15P3YG1028	31.55	✓	✓	✓	✓	✓
MDAA14557	716	KMVBP	KMVBP	1015377103	15P3YG1029	31.57	✓	✓	✓	✓	✓
MDAA14558	708	KMVBP	KMVBP	1015377108	15P3YG1030	31.55	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

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Serialization Log

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NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14559	208	KMVBP	KMVBP	1015377103	15P3YG1031	31.52	✓	✓	✓	✓	✓
MDAA14560	728	KMVBP	KMVBP	1015377103	15P3YG1032	31.53	✓	✓	✓	✓	✓
MDAA14561	727	KMVBP	KMVBP	1015377103	15P3YG1033	31.60	✓	✓	✓	✓	✓
MDAA14562	345	KMVBP	KMVBP	1015377109	15P3YG1034	31.51	✓	✓	✓	✓	✓
MDAA14563	446	KMVBP	KMVBP	1015377112	15P3YG1035	31.56	✓	✓	✓	✓	✓
MDAA14564	866	KMVBP	KMVBP	1015377108	15P3YG1036	31.55	✓	✓	✓	✓	✓
MDAA14565	240	KMVBP	KMVBP	1015478580	15P3YG1037	31.54	✓	✓	✓	✓	✓
MDAA14566	759	KMVBP	KMVBP	1015377103	15P3YG1038	31.57	✓	✓	✓	✓	✓
MDAA14567	176	KMVBP	KMVBP	1015377108	15P3YG1039	31.55	✓	✓	✓	✓	✓
MDAA14568	767	KMVBP	KMVBP	1015377103	15P3YG1040	31.56	✓	✓	✓	✓	✓
MDAA14569	216	KMVBP	KMVBP	1015478580	15P3YG1041	31.55	✓	✓	✓	✓	✓
MDAA14570	775	KMVBP	KMVBP	1015377103	15P3YG1042	31.58	✓	✓	✓	✓	✓
MDAA14571	709	KMVBP	KMVBP	1015377103	15P3YG1043	31.59	✓	✓	✓	✓	✓
MDAA14572	724	KMVBP	KMVBP	1015377103	15P3YG1044	31.57	✓	✓	✓	✓	✓
MDAA14573	644	KMVBP	KMVBI	1015377103	15P3YG1045	31.54	✓	✓	✓	✓	✓
MDAA14574	733	KMVBP	KMVBI	1015377108	15P3YG1046	31.57	✓	✓	✓	✓	✓
MDAA14575	487	KMVBP	KMVBP	1015377109	15P3YG1047	31.54	✓	✓	✓	✓	✓
MDAA14576	720	KMVBP	KMVBP	1015377108	15P3YG1048	31.53	✓	✓	✓	✓	✓
MDAA14577	362	KMVBP	KMVBP	1015478580	15P3YG1049	31.58	✓	✓	✓	✓	✓
MDAA14578	246	KMVBP	KMVBP	1015478580	15P3YG1050	31.56	✓	✓	✓	✓	✓
MDAA14579	642	KMVBP	KMVBP	1015377103	15P3YG1051	31.55	✓	✓	✓	✓	✓
MDAA14580	710	KMVBP	KMVBP	1015377103	15P3YG1052	31.57	✓	✓	✓	✓	✓
MDAA14581	359	KMVBP	KMVBP	1015377103	15P3YG1053	31.54	✓	✓	✓	✓	✓
MDAA14582	213	KMVBP	KMVBP	1015478580	15P3YG1054	31.54	✓	✓	✓	✓	✓
MDAA14583	697	KMVBP	KMVBP	1015377108	15P3YG1055	31.54	✓	✓	✓	✓	✓
MDAA14584	723	KMVBP	KMVBP	1015377103	15P3YG1056	31.56	✓	✓	✓	✓	✓
MDAA14585	725	KMVBP	KMVBP	1015377103	15P3YG1057	31.59	✓	✓	✓	✓	✓
MDAA14586	400	KMVBP	KMVBP	1015377108	15P3YG1058	31.50	✓	✓	✓	✓	✓
MDAA14587	346	KMVBP	KMVBP	1015377109	15P3YG1059	31.52	✓	✓	✓	✓	✓
MDAA14588	739	KMVBP	KMVBI	1015377108	15P3YG1060	31.51	✓	✓	✓	✓	✓
MDAA14589	714	KMVBP	KMVBP	1015377103	15P3YG1061	31.54	✓	✓	✓	✓	✓

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Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tubo Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14590	764	KMVBP	KMVBP	1015377103	15P3YG1062	31.47	✓	✓	✓	✓	✓
MDAA14591	717	KMVBP	KMVBP	1015377103	15P3YG1063	31.52	✓	✓	✓	✓	✓
MDAA14592	853	KMVBP	KMVBP	1015377112	15P3YG1064	31.48	✓	✓	✓	✓	✓
MDAA14593	863	KMVBP	KMVBP	1015377108	15P3YG1065	31.50	✓	✓	✓	✓	✓
MDAA14594	867	KMVBP	KMVBP	1015377108	15P3YG1066	31.56	✓	✓	✓	✓	✓
MDAA14595	253	KMVBP	KMVBP	1015478580	15P3YG1067	31.53	✓	✓	✓	✓	✓
MDAA14596	263	KMVBP	KMVBP	1015478580	15P3YG1068	31.57	✓	✓	✓	✓	✓
MDAA14597	262	KMVBP	KMVBP	1015478580	15P3YG1069	31.53	✓	✓	✓	✓	✓
MDAA14598	624	KMVBP	KMVBP	1015377103	15P3YG1070	31.57	✓	✓	✓	✓	✓
MDAA14599	755	KMVBP	KMVBI	1015377103	15P3YG1071	31.57	✓	✓	✓	✓	✓
MDAA14600	837	KMVBP	KMVBI	1015377108	15P3YG1072	31.52	✓	✓	✓	✓	✓
MDAA14601	795	KMVBP	KMVBI	1015377108	15P3YG1073	31.58	✓	✓	✓	✓	✓
MDAA13735	292	KMVBP	KMVBI	1015478580	15P3YG207	31.59	✓	✓	✓	✓	✓
MDAA13736	328	KMVBP	KMVBP	1015377109	15P3YG208	31.54	✓	✓	✓	✓	✓
MDAA13737	324	KMVBP	KMVBI	1015377109	15P3YG209	31.58	✓	✓	✓	✓	✓
MDAA13738	318	KMVBP	KMVBP	1015377109	15P3YG210	31.59	✓	✓	✓	✓	✓
MDAA13739	299	KMVBP	KMVBP	1015478580	15P3YG211	31.58	✓	✓	✓	✓	✓
MDAA13740	511	KMVBP	KMVBI	1015377103	15P3YG212	31.56	✓	✓	✓	✓	✓
MDAA13741	124	KMVBP	KMVBI	1015377103	15P3YG213	31.59	✓	✓	✓	✓	✓
MDAA13742	151	KMVBP	KMVBP	1015377103	15P3YG214	31.58	✓	✓	✓	✓	✓
MDAA13743	126	KMVBP	KMVBI	1015478580	15P3YG215	31.58	✓	✓	✓	✓	✓
MDAA13744	130	KMVBP	KMVBI	1015478580	15P3YG216	31.55	✓	✓	✓	✓	✓
MDAA13745	152	KMVBP	KMVBI	1015377103	15P3YG217	31.58	✓	✓	✓	✓	✓
MDAA13746	131	KMVBP	KMVBP	1015478580	15P3YG218	31.52	✓	✓	✓	✓	✓
MDAA13747	53	KMVBP	KMVBP	1015478580	15P3YG219	31.52	✓	✓	✓	✓	✓
MDAA13748	54	KMVBP	KMVBI	1015478580	15P3YG220	31.53	✓	✓	✓	✓	✓
MDAA13749	533	KMVBP	KMVBP	1015377112	15P3YG221	31.57	✓	✓	✓	✓	✓
MDAA13750	83	KMVBP	KMVBI	1015377103	15P3YG222	31.58	✓	✓	✓	✓	✓
MDAA13751	323	KMVBP	KMVBI	1015377109	15P3YG223	31.58	✓	✓	✓	✓	✓
MDAA13752	319	KMVBP	KMVBP	1015377109	15P3YG224	31.58	✓	✓	✓	✓	✓
MDAA13753	373	KMVBP	KMVBP	1015377109	15P3YG225	31.54	✓	✓	✓	✓	✓

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Serialization Log

Total Joints: 867
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NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tubo Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA13754	320	KMVBP	KMVBP	1015377109	15P3YG226	31.56	✓	✓	✓	✓	✓
MDAA13755	374	KMVBP	KMVBP	1015377109	15P3YG227	31.54	✓	✓	✓	✓	✓
MDAA13756	321	KMVBP	KMVBP	1015377109	15P3YG228	31.55	✓	✓	✓	✓	✓
MDAA13757	375	KMVBP	KMVBP	1015377112	15P3YG229	31.52	✓	✓	✓	✓	✓
MDAA13758	322	KMVBP	KMVBP	1015377109	15P3YG230	31.54	✓	✓	✓	✓	✓
MDAA13759	376	KMVBP	KMVBP	1015377112	15P3YG231	31.54	✓	✓	✓	✓	✓
MDAA13760	377	KMVBP	KMVBI	1015377112	15P3YG232	31.53	✓	✓	✓	✓	✓
MDAA13761	390	KMVBP	KMVBI	1015377109	15P3YG233	31.52	✓	✓	✓	✓	✓
MDAA13762	211	KMVBP	KMVBP	1015377103	15P3YG234	31.58	✓	✓	✓	✓	✓
MDAA13763	236	KMVBP	KMVBP	1015478580	15P3YG235	31.57	✓	✓	✓	✓	✓
MDAA13764	209	KMVBP	KMVBP	1015377103	15P3YG236	31.55	✓	✓	✓	✓	✓
MDAA13765	326	KMVBP	KMVBP	1015377103	15P3YG237	31.52	✓	✓	✓	✓	✓
MDAA13766	327	KMVBP	KMVBI	1015377109	15P3YG238	31.56	✓	✓	✓	✓	✓
MDAA13767	294	KMVBP	KMVBI	1015478580	15P3YG239	31.56	✓	✓	✓	✓	✓
MDAA13768	283	KMVBP	KMVBI	1015377109	15P3YG240	31.54	✓	✓	✓	✓	✓
MDAA13769	343	KMVBP	KMVBI	1015377109	15P3YG241	31.52	✓	✓	✓	✓	✓
MDAA13770	305	KMVBP	KMVBP	1015478580	15P3YG242	31.57	✓	✓	✓	✓	✓
MDAA13771	302	KMVBP	KMVBP	1015478580	15P3YG243	31.56	✓	✓	✓	✓	✓
MDAA13772	298	KMVBP	KMVBI	1015478580	15P3YG244	31.58	✓	✓	✓	✓	✓
MDAA13773	336	KMVBP	KMVBI	1015377108	15P3YG245	31.54	✓	✓	✓	✓	✓
MDAA13774	307	KMVBP	KMVBI	1015478580	15P3YG246	31.55	✓	✓	✓	✓	✓
MDAA13775	291	KMVBP	KMVBP	1015377109	15P3YG247	31.56	✓	✓	✓	✓	✓
MDAA13776	347	KMVBP	KMVBI	1015377109	15P3YG248	31.56	✓	✓	✓	✓	✓
MDAA13777	230	KMVBP	KMVBI	1015478580	15P3YG249	31.50	✓	✓	✓	✓	✓
MDAA13778	23	KMVBP	KMVBI	1015377103	15P3YG250	31.55	✓	✓	✓	✓	✓
MDAA13779	20	KMVBP	KMVBI	1015377109	15P3YG251	31.54	✓	✓	✓	✓	✓
MDAA13780	228	KMVBP	KMVBI	1015478580	15P3YG252	31.52	✓	✓	✓	✓	✓
MDAA13781	214	KMVBP	KMVBP	1015478580	15P3YG253	31.53	✓	✓	✓	✓	✓
MDAA13782	222	KMVBP	KMVBI	1015377112	15P3YG254	31.47	✓	✓	✓	✓	✓
MDAA13783	387	KMVBP	KMVBP	1015377112	15P3YG255	31.55	✓	✓	✓	✓	✓
MDAA13784	192	KMVBP	KMVBP	1015377103	15P3YG256	31.56	✓	✓	✓	✓	✓

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Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA13785	542	KMVBP	KMVBI	1015377112	15P3YG257	31.51	✓	✓	✓	✓	✓
MDAA13786	187	KMVBP	KMVBI	1015377108	15P3YG258	31.51	✓	✓	✓	✓	✓
MDAA13787	224	KMVBP	KMVBI	1015377109	15P3YG259	31.57	✓	✓	✓	✓	✓
MDAA13788	578	KMVBP	KMVBI	1015377108	15P3YG260	31.56	✓	✓	✓	✓	✓
MDAA13789	576	KMVBP	KMVBI	1015377108	15P3YG261	31.54	✓	✓	✓	✓	✓
MDAA13790	595	KMVBP	KMVBI	1015377112	15P3YG262	31.55	✓	✓	✓	✓	✓
MDAA13791	526	KMVBP	KMVBI	1015377108	15P3YG263	31.56	✓	✓	✓	✓	✓
MDAA13792	596	KMVBP	KMVBI	1015377112	15P3YG264	31.53	✓	✓	✓	✓	✓
MDAA13793	597	KMVBP	KMVBI	1015377112	15P3YG265	31.55	✓	✓	✓	✓	✓
MDAA13794	598	KMVBP	KMVBI	1015377112	15P3YG266	31.54	✓	✓	✓	✓	✓
MDAA13795	521	KMVBP	KMVBI	1015377108	15P3YG267	31.56	✓	✓	✓	✓	✓
MDAA13796	599	KMVBP	KMVBI	1015377112	15P3YG268	31.53	✓	✓	✓	✓	✓
MDAA13797	431	KMVBP	KMVBI	1015377112	15P3YG269	31.55	✓	✓	✓	✓	✓
MDAA13798	496	KMVBP	KMVBP	1015377109	15P3YG270	31.53	✓	✓	✓	✓	✓
MDAA13799	529	KMVBP	KMVBP	1015377112	15P3YG271	31.54	✓	✓	✓	✓	✓
MDAA13800	247	KMVBP	KMVBI	1015478580	15P3YG272	31.56	✓	✓	✓	✓	✓
MDAA13801	265	KMVBP	KMVBI	1015377103	15P3YG273	31.54	✓	✓	✓	✓	✓
MDAA13802	248	KMVBP	KMVBI	1015478580	15P3YG274	31.52	✓	✓	✓	✓	✓
MDAA13803	261	KMVBP	KMVBI	1015377103	15P3YG275	31.57	✓	✓	✓	✓	✓
MDAA13804	250	KMVBP	KMVBP	1015478580	15P3YG276	31.52	✓	✓	✓	✓	✓
MDAA13805	252	KMVBP	KMVBI	1015478580	15P3YG277	31.53	✓	✓	✓	✓	✓
MDAA13806	300	KMVBP	KMVBI	1015478580	15P3YG278	31.56	✓	✓	✓	✓	✓
MDAA13807	335	KMVBP	KMVBI	1015377108	15P3YG279	31.57	✓	✓	✓	✓	✓
MDAA13808	278	KMVBP	KMVBI	1015377109	15P3YG280	31.57	✓	✓	✓	✓	✓
MDAA13809	108	KMVBP	KMVBI	1015377103	15P3YG281	31.53	✓	✓	✓	✓	✓
MDAA13810	329	KMVBP	KMVBI	1015377109	15P3YG282	31.56	✓	✓	✓	✓	✓
MDAA13811	334	KMVBP	KMVBP	1015377108	15P3YG283	31.56	✓	✓	✓	✓	✓
MDAA13812	472	KMVBP	KMVBI	1015377108	15P3YG284	31.56	✓	✓	✓	✓	✓
MDAA13813	315	KMVBP	KMVBP	1015377109	15P3YG285	31.52	✓	✓	✓	✓	✓
MDAA13814	371	KMVBP	KMVBP	1015377112	15P3YG286	31.55	✓	✓	✓	✓	✓
MDAA13815	316	KMVBP	KMVBP	1015377109	15P3YG287	31.56	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA13816	372	KMVBP	KMVBP	1015377109	15P3YG288	31.52	✓	✓	✓	✓	✓
MDAA13817	245	KMVBP	KMVBP	1015478580	15P3YG289	31.55	✓	✓	✓	✓	✓
MDAA13818	235	KMVBP	KMVBP	1015478580	15P3YG290	31.54	✓	✓	✓	✓	✓
MDAA13819	309	KMVBP	KMVBP	1015377108	15P3YG291	31.52	✓	✓	✓	✓	✓
MDAA13820	239	KMVBP	KMVBP	1015478580	15P3YG292	31.57	✓	✓	✓	✓	✓
MDAA13821	234	KMVBP	KMVBP	1015478580	15P3YG293	31.55	✓	✓	✓	✓	✓
MDAA13822	273	KMVBP	KMVBP	1015377108	15P3YG294	31.58	✓	✓	✓	✓	✓
MDAA13823	249	KMVBP	KMVBP	1015478580	15P3YG295	31.53	✓	✓	✓	✓	✓
MDAA13824	310	KMVBP	KMVBP	1015377109	15P3YG296	31.51	✓	✓	✓	✓	✓
MDAA13825	500	KMVBP	KMVBP	1015377109	15P3YG297	31.50	✓	✓	✓	✓	✓
MDAA13826	353	KMVBP	KMVBI	1015377103	15P3YG298	31.57	✓	✓	✓	✓	✓
MDAA13827	301	KMVBP	KMVBP	1015478580	15P3YG299	31.53	✓	✓	✓	✓	✓
MDAA13828	303	KMVBP	KMVBP	1015478580	15P3YG300	31.54	✓	✓	✓	✓	✓
MDAA13829	264	KMVBP	KMVBP	1015478580	15P3YG301	31.54	✓	✓	✓	✓	✓
MDAA13830	332	KMVBP	KMVBP	1015377109	15P3YG302	31.49	✓	✓	✓	✓	✓
MDAA13831	308	KMVBP	KMVBP	1015478580	15P3YG303	31.53	✓	✓	✓	✓	✓
MDAA13832	286	KMVBP	KMVBP	1015377109	15P3YG304	31.55	✓	✓	✓	✓	✓
MDAA13833	274	KMVBP	KMVBP	1015377109	15P3YG305	31.50	✓	✓	✓	✓	✓
MDAA13834	281	KMVBP	KMVBP	1015377109	15P3YG306	31.53	✓	✓	✓	✓	✓
MDAA13835	282	KMVBP	KMVBP	1015377109	15P3YG307	31.49	✓	✓	✓	✓	✓
MDAA13836	645	KMVBP	KMVBI	1015377103	15P3YG308	31.53	✓	✓	✓	✓	✓
MDAA13837	420	KMVBP	KMVBI	1015377112	15P3YG309	31.55	✓	✓	✓	✓	✓
MDAA13838	457	KMVBP	KMVBI	1015377112	15P3YG310	31.50	✓	✓	✓	✓	✓
MDAA13839	471	KMVBP	KMVBI	1015377103	15P3YG311	31.56	✓	✓	✓	✓	✓
MDAA13840	459	KMVBP	KMVBI	1015377112	15P3YG312	31.50	✓	✓	✓	✓	✓
MDAA13841	469	KMVBP	KMVBI	1015377108	15P3YG313	31.59	✓	✓	✓	✓	✓
MDAA13842	582	KMVBP	KMVBI	1015377103	15P3YG314	31.59	✓	✓	✓	✓	✓
MDAA13843	602	KMVBP	KMVBI	1015377112	15P3YG315	31.53	✓	✓	✓	✓	✓
MDAA13844	589	KMVBP	KMVBI	1015377112	15P3YG316	31.52	✓	✓	✓	✓	✓
MDAA13845	572	KMVBP	KMVBI	1015377108	15P3YG317	31.55	✓	✓	✓	✓	✓
MDAA13846	587	KMVBP	KMVBI	1015377112	15P3YG318	31.53	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tubo Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA13847	575	KMVBP	KMVBI	1015377112	15P3YG319	31.52	✓	✓	✓	✓	✓
MDAA13848	583	KMVBP	KMVBI	1015377103	15P3YG320	31.56	✓	✓	✓	✓	✓
MDAA13849	574	KMVBP	KMVBI	1015377108	15P3YG321	31.57	✓	✓	✓	✓	✓
MDAA13850	581	KMVBP	KMVBI	1015377108	15P3YG322	31.60	✓	✓	✓	✓	✓
MDAA13851	460	KMVBP	KMVBI	1015377112	15P3YG323	31.53	✓	✓	✓	✓	✓
MDAA13852	425	KMVBP	KMVBI	1015377112	15P3YG324	31.53	✓	✓	✓	✓	✓
MDAA13853	462	KMVBP	KMVBI	1015377108	15P3YG325	31.58	✓	✓	✓	✓	✓
MDAA13854	426	KMVBP	KMVBI	1015377112	15P3YG326	31.56	✓	✓	✓	✓	✓
MDAA13855	466	KMVBP	KMVBI	1015377108	15P3YG327	31.58	✓	✓	✓	✓	✓
MDAA13856	430	KMVBP	KMVBI	1015377112	15P3YG328	31.52	✓	✓	✓	✓	✓
MDAA13857	468	KMVBP	KMVBI	1015377103	15P3YG329	31.63	✓	✓	✓	✓	✓
MDAA13858	406	KMVBP	KMVBI	1015377103	15P3YG330	31.57	✓	✓	✓	✓	✓
MDAA13859	416	KMVBP	KMVBI	1015377109	15P3YG331	31.58	✓	✓	✓	✓	✓
MDAA13860	643	KMVBP	KMVBI	1015377108	15P3YG332	31.55	✓	✓	✓	✓	✓
MDAA13861	403	KMVBP	KMVBI	1015377103	15P3YG333	31.56	✓	✓	✓	✓	✓
MDAA13862	418	KMVBP	KMVBI	1015377112	15P3YG334	31.73	✓	✓	✓	✓	✓
MDAA13863	398	KMVBP	KMVBI	1015377108	15P3YG335	31.60	✓	✓	✓	✓	✓
MDAA13864	638	KMVBP	KMVBI	1015377108	15P3YG336	31.54	✓	✓	✓	✓	✓
MDAA13865	397	KMVBP	KMVBI	1015377108	15P3YG337	31.59	✓	✓	✓	✓	✓
MDAA13866	419	KMVBP	KMVBI	1015377112	15P3YG338	31.55	✓	✓	✓	✓	✓
MDAA13867	395	KMVBP	KMVBI	1015377108	15P3YG339	31.51	✓	✓	✓	✓	✓
MDAA13868	527	KMVBP	KMVBI	1015377108	15P3YG340	31.51	✓	✓	✓	✓	✓
MDAA13869	615	KMVBP	KMVBI	1015377103	15P3YG341	31.56	✓	✓	✓	✓	✓
MDAA13870	614	KMVBP	KMVBI	1015377103	15P3YG342	31.57	✓	✓	✓	✓	✓
MDAA13871	637	KMVBP	KMVBI	1015377108	15P3YG343	31.52	✓	✓	✓	✓	✓
MDAA13872	7	KMVBP	KMVBI	1015377109	15P3YG344	31.54	✓	✓	✓	✓	✓
MDAA13873	384	KMVBP	KMVBI	1015377112	15P3YG345	31.54	✓	✓	✓	✓	✓
MDAA13874	386	KMVBP	KMVBI	1015377112	15P3YG346	31.49	✓	✓	✓	✓	✓
MDAA13875	442	KMVBP	KMVBI	1015377112	15P3YG347	31.52	✓	✓	✓	✓	✓
MDAA13876	432	KMVBP	KMVBI	1015377112	15P3YG348	31.56	✓	✓	✓	✓	✓
MDAA13877	439	KMVBP	KMVBP	1015377112	15P3YG349	31.54	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA13878	443	KMVBP	KMVBI	1015377112	15P3YG350	31.51	✓	✓	✓	✓	✓
MDAA13879	433	KMVBP	KMVBI	1015478580	15P3YG351	31.53	✓	✓	✓	✓	✓
MDAA13880	414	KMVBP	KMVBP	1015377109	15P3YG352	31.58	✓	✓	✓	✓	✓
MDAA13881	437	KMVBP	KMVBP	1015478580	15P3YG353	31.55	✓	✓	✓	✓	✓
MDAA13882	445	KMVBP	KMVBI	1015377112	15P3YG354	31.53	✓	✓	✓	✓	✓
MDAA13883	444	KMVBP	KMVBP	1015377112	15P3YG355	31.52	✓	✓	✓	✓	✓
MDAA13884	438	KMVBP	KMVBP	1015478580	15P3YG356	31.51	✓	✓	✓	✓	✓
MDAA13885	421	KMVBP	KMVBI	1015377112	15P3YG357	31.53	✓	✓	✓	✓	✓
MDAA13886	547	KMVBP	KMVBI	1015377108	15P3YG358	31.50	✓	✓	✓	✓	✓
MDAA13887	493	KMVBP	KMVBP	1015377109	15P3YG359	31.57	✓	✓	✓	✓	✓
MDAA13888	548	KMVBP	KMVBP	1015377108	15P3YG360	31.51	✓	✓	✓	✓	✓
MDAA13889	662	KMVBP	KMVBP	1015377112	15P3YG361	31.51	✓	✓	✓	✓	✓
MDAA13890	549	KMVBP	KMVBP	1015377108	15P3YG362	31.56	✓	✓	✓	✓	✓
MDAA13891	661	KMVBP	KMVBP	1015377112	15P3YG363	31.52	✓	✓	✓	✓	✓
MDAA13892	550	KMVBP	KMVBP	1015377108	15P3YG364	31.53	✓	✓	✓	✓	✓
MDAA13893	660	KMVBP	KMVBP	1015377112	15P3YG365	31.55	✓	✓	✓	✓	✓
MDAA13894	488	KMVBP	KMVBP	1015377109	15P3YG366	31.58	✓	✓	✓	✓	✓
MDAA13895	654	KMVBP	KMVBP	1015377112	15P3YG367	31.52	✓	✓	✓	✓	✓
MDAA13896	470	KMVBP	KMVBP	1015377108	15P3YG368	31.56	✓	✓	✓	✓	✓
MDAA13897	580	KMVBP	KMVBP	1015377108	15P3YG369	31.57	✓	✓	✓	✓	✓
MDAA13898	489	KMVBP	KMVBP	1015377109	15P3YG370	31.58	✓	✓	✓	✓	✓
MDAA13899	652	KMVBP	KMVBI	1015377108	15P3YG371	31.58	✓	✓	✓	✓	✓
MDAA13900	491	KMVBP	KMVBP	1015377109	15P3YG372	31.55	✓	✓	✓	✓	✓
MDAA13901	154	KMVBP	KMVBP	1015377103	15P3YG373	31.63	✓	✓	✓	✓	✓
MDAA13902	356	KMVBP	KMVBP	1015377103	15P3YG374	31.56	✓	✓	✓	✓	✓
MDAA13903	104	KMVBP	KMVBP	1015377103	15P3YG375	31.56	✓	✓	✓	✓	✓
MDAA13904	107	KMVBP	KMVBP	1015377103	15P3YG376	31.59	✓	✓	✓	✓	✓
MDAA13905	622	KMVBP	KMVBP	1015377103	15P3YG377	31.58	✓	✓	✓	✓	✓
MDAA13906	160	KMVBP	KMVBP	1015377103	15P3YG378	31.54	✓	✓	✓	✓	✓
MDAA13907	161	KMVBP	KMVBI	1015377103	15P3YG379	31.55	✓	✓	✓	✓	✓
MDAA13908	145	KMVBP	KMVBI	1015377112	15P3YG380	31.52	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tubo Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA13909	129	KMVBP	KMVBI	1015478580	15P3YG381	31.48	✓	✓	✓	✓	✓
MDAA13910	143	KMVBP	KMVBI	1015377108	15P3YG382	31.51	✓	✓	✓	✓	✓
MDAA13911	128	KMVBP	KMVBI	1015478580	15P3YG383	31.50	✓	✓	✓	✓	✓
MDAA13912	142	KMVBP	KMVBI	1015377112	15P3YG384	31.54	✓	✓	✓	✓	✓
MDAA13913	127	KMVBP	KMVBI	1015478580	15P3YG385	31.51	✓	✓	✓	✓	✓
MDAA13914	577	KMVBP	KMVBP	1015377108	15P3YG386	31.56	✓	✓	✓	✓	✓
MDAA13915	477	KMVBP	KMVBP	1015377108	15P3YG387	31.50	✓	✓	✓	✓	✓
MDAA13916	579	KMVBP	KMVBP	1015377108	15P3YG388	31.55	✓	✓	✓	✓	✓
MDAA13917	554	KMVBP	KMVBP	1015377108	15P3YG389	31.52	✓	✓	✓	✓	✓
MDAA13918	467	KMVBP	KMVBP	1015377108	15P3YG390	31.54	✓	✓	✓	✓	✓
MDAA13919	541	KMVBP	KMVBP	1015377112	15P3YG391	31.54	✓	✓	✓	✓	✓
MDAA13920	555	KMVBP	KMVBP	1015377108	15P3YG392	31.56	✓	✓	✓	✓	✓
MDAA13921	552	KMVBP	KMVBP	1015377108	15P3YG393	31.52	✓	✓	✓	✓	✓
MDAA13922	404	KMVBP	KMVBP	1015377103	15P3YG394	31.54	✓	✓	✓	✓	✓
MDAA13923	518	KMVBP	KMVBP	1015377108	15P3YG395	31.59	✓	✓	✓	✓	✓
MDAA13924	556	KMVBP	KMVBP	1015377108	15P3YG396	31.57	✓	✓	✓	✓	✓
MDAA13925	553	KMVBP	KMVBP	1015377108	15P3YG397	31.52	✓	✓	✓	✓	✓
MDAA13926	405	KMVBP	KMVBP	1015377103	15P3YG398	31.61	✓	✓	✓	✓	✓
MDAA13927	226	KMVBP	KMVBP	1015377109	15P3YG399	31.58	✓	✓	✓	✓	✓
MDAA13928	407	KMVBP	KMVBP	1015377109	15P3YG400	31.57	✓	✓	✓	✓	✓
MDAA13929	492	KMVBP	KMVBP	1015377103	15P3YG401	31.56	✓	✓	✓	✓	✓
MDAA13930	137	KMVBP	KMVBP	1015377103	15P3YG402	31.59	✓	✓	✓	✓	✓
MDAA13931	156	KMVBP	KMVBP	1015377103	15P3YG403	31.58	✓	✓	✓	✓	✓
MDAA13932	134	KMVBP	KMVBP	1015377103	15P3YG404	31.58	✓	✓	✓	✓	✓
MDAA13933	158	KMVBP	KMVBP	1015377103	15P3YG405	31.57	✓	✓	✓	✓	✓
MDAA13934	157	KMVBP	KMVBP	1015377103	15P3YG406	31.58	✓	✓	✓	✓	✓
MDAA13935	203	KMVBP	KMVBP	1015478580	15P3YG407	31.56	✓	✓	✓	✓	✓
MDAA13936	197	KMVBP	KMVBP	1015377103	15P3YG408	31.57	✓	✓	✓	✓	✓
MDAA13937	378	KMVBP	KMVBP	1015377112	15P3YG409	31.57	✓	✓	✓	✓	✓
MDAA13938	559	KMVBP	KMVBP	1015377108	15P3YG410	31.54	✓	✓	✓	✓	✓
MDAA13939	190	KMVBP	KMVBP	1015377108	15P3YG411	31.56	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tubo Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA13940	204	KMVBP	KMVBP	1015478580	15P3YG412	31.54	✓	✓	✓	✓	✓
MDAA13941	21	KMVBP	KMVBP	1015377109	15P3YG413	31.57	✓	✓	✓	✓	✓
MDAA13942	49	KMVBP	KMVBP	1015478580	15P3YG414	31.56	✓	✓	✓	✓	✓
MDAA13943	45	KMVBP	KMVBP	1015478580	15P3YG415	31.50	✓	✓	✓	✓	✓
MDAA13944	1	KMVBP	KMVBP	1015377109	15P3YG416	31.55	✓	✓	✓	✓	✓
MDAA13945	46	KMVBP	KMVBP	1015478580	15P3YG417	31.57	✓	✓	✓	✓	✓
MDAA13946	2	KMVBP	KMVBP	1015377109	15P3YG418	31.52	✓	✓	✓	✓	✓
MDAA13947	5	KMVBP	KMVBP	1015377109	15P3YG419	31.49	✓	✓	✓	✓	✓
MDAA13948	3	KMVBP	KMVBP	1015377109	15P3YG420	31.53	✓	✓	✓	✓	✓
MDAA13949	210	KMVBP	KMVBI	1015377103	15P3YG421	31.56	✓	✓	✓	✓	✓
MDAA13950	590	KMVBP	KMVBI	1015377112	15P3YG422	31.51	✓	✓	✓	✓	✓
MDAA13951	586	KMVBP	KMVBI	1015377103	15P3YG423	31.53	✓	✓	✓	✓	✓
MDAA13952	465	KMVBP	KMVBI	1015377108	15P3YG424	31.57	✓	✓	✓	✓	✓
MDAA13953	91	KMVBP	KMVBI	1015377103	15P3YG425	31.58	✓	✓	✓	✓	✓
MDAA13954	132	KMVBP	KMVBP	1015478580	15P3YG426	31.55	✓	✓	✓	✓	✓
MDAA13955	138	KMVBP	KMVBI	1015377112	15P3YG427	31.57	✓	✓	✓	✓	✓
MDAA13956	238	KMVBP	KMVBP	1015377109	15P3YG428	31.55	✓	✓	✓	✓	✓
MDAA13957	499	KMVBP	KMVBI	1015377109	15P3YG429	31.56	✓	✓	✓	✓	✓
MDAA13958	532	KMVBP	KMVBP	1015377112	15P3YG430	31.50	✓	✓	✓	✓	✓
MDAA13959	16	KMVBP	KMVBP	1015377109	15P3YG431	31.54	✓	✓	✓	✓	✓
MDAA13960	475	KMVBP	KMVBP	1015377108	15P3YG432	31.55	✓	✓	✓	✓	✓
MDAA13961	476	KMVBP	KMVBP	1015377108	15P3YG433	31.55	✓	✓	✓	✓	✓
MDAA13962	536	KMVBP	KMVBP	1015377112	15P3YG434	31.55	✓	✓	✓	✓	✓
MDAA13963	517	KMVBP	KMVBP	1015377108	15P3YG435	31.56	✓	✓	✓	✓	✓
MDAA13964	537	KMVBP	KMVBP	1015377112	15P3YG436	31.54	✓	✓	✓	✓	✓
MDAA13965	520	KMVBP	KMVBP	1015377108	15P3YG437	31.51	✓	✓	✓	✓	✓
MDAA13966	539	KMVBP	KMVBP	1015377112	15P3YG438	31.51	✓	✓	✓	✓	✓
MDAA13967	653	KMVBP	KMVBP	1015377112	15P3YG439	31.49	✓	✓	✓	✓	✓
MDAA13968	535	KMVBP	KMVBP	1015377112	15P3YG440	31.54	✓	✓	✓	✓	✓
MDAA13969	515	KMVBP	KMVBP	1015377108	15P3YG441	31.55	✓	✓	✓	✓	✓
MDAA13970	675	KMVBP	KMVBP	1015377112	15P3YG442	31.52	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA13971	505	KMVBP	KMVBP	1015377109	15P3YG443	31.58	✓	✓	✓	✓	✓
MDAA13972	676	KMVBP	KMVBP	1015377112	15P3YG444	31.51	✓	✓	✓	✓	✓
MDAA13973	506	KMVBP	KMVBP	1015377108	15P3YG445	31.57	✓	✓	✓	✓	✓
MDAA13974	528	KMVBP	KMVBP	1015377112	15P3YG446	31.53	✓	✓	✓	✓	✓
MDAA13975	181	KMVBP	KMVBP	1015377103	15P3YG447	31.59	✓	✓	✓	✓	✓
MDAA13976	341	KMVBP	KMVBP	1015377109	15P3YG448	31.54	✓	✓	✓	✓	✓
MDAA13977	306	KMVBP	KMVBP	1015478580	15P3YG449	31.56	✓	✓	✓	✓	✓
MDAA13978	125	KMVBP	KMVBP	1015478580	15P3YG450	31.51	✓	✓	✓	✓	✓
MDAA13979	116	KMVBP	KMVBP	1015377109	15P3YG451	31.55	✓	✓	✓	✓	✓
MDAA13980	120	KMVBP	KMVBP	1015377109	15P3YG452	31.53	✓	✓	✓	✓	✓
MDAA13981	118	KMVBP	KMVBP	1015377109	15P3YG453	31.55	✓	✓	✓	✓	✓
MDAA13982	119	KMVBP	KMVBP	1015377109	15P3YG454	31.56	✓	✓	✓	✓	✓
MDAA13983	65	KMVBP	KMVBP	1015377112	15P3YG455	31.50	✓	✓	✓	✓	✓
MDAA13984	96	KMVBP	KMVBP	1015377103	15P3YG456	31.59	✓	✓	✓	✓	✓
MDAA13985	383	KMVBP	KMVBP	1015377112	15P3YG457	31.52	✓	✓	✓	✓	✓
MDAA13986	349	KMVBP	KMVBP	1015377109	15P3YG458	31.53	✓	✓	✓	✓	✓
MDAA13987	149	KMVBP	KMVBP	1015377112	15P3YG459	31.53	✓	✓	✓	✓	✓
MDAA13988	97	KMVBP	KMVBP	1015377103	15P3YG460	31.56	✓	✓	✓	✓	✓
MDAA13989	150	KMVBP	KMVBP	1015377103	15P3YG461	31.58	✓	✓	✓	✓	✓
MDAA13990	147	KMVBP	KMVBP	1015377103	15P3YG462	31.56	✓	✓	✓	✓	✓
MDAA13991	82	KMVBP	KMVBP	1015377112	15P3YG463	31.56	✓	✓	✓	✓	✓
MDAA13992	146	KMVBP	KMVBP	1015377112	15P3YG464	31.58	✓	✓	✓	✓	✓
MDAA13993	115	KMVBP	KMVBP	1015377109	15P3YG465	31.56	✓	✓	✓	✓	✓
MDAA13994	540	KMVBP	KMVBP	1015377112	15P3YG466	31.57	✓	✓	✓	✓	✓
MDAA13995	330	KMVBP	KMVBP	1015377109	15P3YG467	31.57	✓	✓	✓	✓	✓
MDAA13996	276	KMVBP	KMVBP	1015377109	15P3YG468	31.51	✓	✓	✓	✓	✓
MDAA13997	507	KMVBP	KMVBP	1015377108	15P3YG469	31.54	✓	✓	✓	✓	✓
MDAA13998	570	KMVBP	KMVBP	1015377103	15P3YG470	31.56	✓	✓	✓	✓	✓
MDAA13999	61	KMVBP	KMVBP	1015377112	15P3YG471	31.54	✓	✓	✓	✓	✓
MDAA14000	135	KMVBP	KMVBP	1015377103	15P3YG472	31.53	✓	✓	✓	✓	✓
MDAA14001	389	KMVBP	KMVBI	1015377112	15P3YG473	31.53	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14002	427	KMVBP	KMVBI	1015377112	15P3YG474	31.54	✓	✓	✓	✓	✓
MDAA14003	391	KMVBP	KMVBP	1015377112	15P3YG475	31.55	✓	✓	✓	✓	✓
MDAA14004	392	KMVBP	KMVBI	1015377112	15P3YG476	31.54	✓	✓	✓	✓	✓
MDAA14005	423	KMVBP	KMVBI	1015377112	15P3YG477	31.57	✓	✓	✓	✓	✓
MDAA14006	393	KMVBP	KMVBI	1015377112	15P3YG478	31.58	✓	✓	✓	✓	✓
MDAA14007	422	KMVBP	KMVBI	1015377112	15P3YG479	31.57	✓	✓	✓	✓	✓
MDAA14008	394	KMVBP	KMVBI	1015377112	15P3YG480	31.56	✓	✓	✓	✓	✓
MDAA14009	417	KMVBP	KMVBI	1015377112	15P3YG481	31.57	✓	✓	✓	✓	✓
MDAA14010	297	KMVBP	KMVBI	1015478580	15P3YG482	31.58	✓	✓	✓	✓	✓
MDAA14011	199	KMVBP	KMVBI	1015478580	15P3YG483	31.51	✓	✓	✓	✓	✓
MDAA14012	56	KMVBP	KMVBP	1015478580	15P3YG484	31.56	✓	✓	✓	✓	✓
MDAA14013	85	KMVBP	KMVBP	1015377103	15P3YG485	31.57	✓	✓	✓	✓	✓
MDAA14014	113	KMVBP	KMVBP	1015377109	15P3YG486	31.56	✓	✓	✓	✓	✓
MDAA14015	58	KMVBP	KMVBP	1015377112	15P3YG487	31.54	✓	✓	✓	✓	✓
MDAA14016	114	KMVBP	KMVBP	1015377109	15P3YG488	31.58	✓	✓	✓	✓	✓
MDAA14017	99	KMVBP	KMVBP	1015377103	15P3YG489	31.54	✓	✓	✓	✓	✓
MDAA14018	50	KMVBP	KMVBP	1015478580	15P3YG490	31.50	✓	✓	✓	✓	✓
MDAA14019	101	KMVBP	KMVBP	1015377103	15P3YG491	31.56	✓	✓	✓	✓	✓
MDAA14020	26	KMVBP	KMVBP	1015377103	15P3YG492	31.59	✓	✓	✓	✓	✓
MDAA14021	102	KMVBP	KMVBP	1015377103	15P3YG493	31.55	✓	✓	✓	✓	✓
MDAA14022	51	KMVBP	KMVBP	1015478580	15P3YG494	31.54	✓	✓	✓	✓	✓
MDAA14023	109	KMVBP	KMVBP	1015377103	15P3YG495	31.57	✓	✓	✓	✓	✓
MDAA14024	59	KMVBP	KMVBP	1015377112	15P3YG496	31.54	✓	✓	✓	✓	✓
MDAA14025	73	KMVBP	KMVBP	1015377112	15P3YG497	31.52	✓	✓	✓	✓	✓
MDAA14026	71	KMVBP	KMVBP	1015377112	15P3YG498	31.57	✓	✓	✓	✓	✓
MDAA14027	110	KMVBP	KMVBP	1015377103	15P3YG499	31.56	✓	✓	✓	✓	✓
MDAA14028	198	KMVBP	KMVBI	1015377108	15P3YG500	31.54	✓	✓	✓	✓	✓
MDAA14029	168	KMVBP	KMVBI	1015377108	15P3YG501	31.54	✓	✓	✓	✓	✓
MDAA14030	121	KMVBP	KMVBI	1015377109	15P3YG502	31.56	✓	✓	✓	✓	✓
MDAA14031	117	KMVBP	KMVBP	1015377109	15P3YG503	31.52	✓	✓	✓	✓	✓
MDAA14032	237	KMVBP	KMVBI	1015478580	15P3YG504	31.49	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14033	311	KMVBP	KMVBI	1015377109	15P3YG505	31.50	✓	✓	✓	✓	✓
MDAA14034	280	KMVBP	KMVBI	1015377109	15P3YG506	31.54	✓	✓	✓	✓	✓
MDAA14035	312	KMVBP	KMVBI	1015377109	15P3YG507	31.54	✓	✓	✓	✓	✓
MDAA14036	313	KMVBP	KMVBI	1015377109	15P3YG508	31.55	✓	✓	✓	✓	✓
MDAA14037	267	KMVBP	KMVBI	1015377108	15P3YG509	31.58	✓	✓	✓	✓	✓
MDAA14038	271	KMVBP	KMVBI	1015377109	15P3YG510	31.55	✓	✓	✓	✓	✓
MDAA14039	144	KMVBP	KMVBI	1015377112	15P3YG511	31.52	✓	✓	✓	✓	✓
MDAA14040	201	KMVBP	KMVBI	1015478580	15P3YG512	31.54	✓	✓	✓	✓	✓
MDAA14041	272	KMVBP	KMVBI	1015377108	15P3YG513	31.60	✓	✓	✓	✓	✓
MDAA14042	233	KMVBP	KMVBI	1015478580	15P3YG514	31.56	✓	✓	✓	✓	✓
MDAA14043	270	KMVBP	KMVBI	1015377108	15P3YG515	31.53	✓	✓	✓	✓	✓
MDAA14044	232	KMVBP	KMVBI	1015478580	15P3YG516	31.56	✓	✓	✓	✓	✓
MDAA14045	269	KMVBP	KMVBI	1015377108	15P3YG517	31.56	✓	✓	✓	✓	✓
MDAA14046	225	KMVBP	KMVBI	1015478580	15P3YG518	31.56	✓	✓	✓	✓	✓
MDAA14047	388	KMVBP	KMVBI	1015377112	15P3YG519	31.53	✓	✓	✓	✓	✓
MDAA14048	219	KMVBP	KMVBI	1015377103	15P3YG520	31.56	✓	✓	✓	✓	✓
MDAA14049	217	KMVBP	KMVBI	1015377103	15P3YG521	31.54	✓	✓	✓	✓	✓
MDAA14050	136	KMVBP	KMVBI	1015377103	15P3YG522	31.56	✓	✓	✓	✓	✓
MDAA14051	202	KMVBP	KMVBI	1015478580	15P3YG523	31.51	✓	✓	✓	✓	✓
MDAA14052	189	KMVBP	KMVBI	1015377108	15P3YG524	31.55	✓	✓	✓	✓	✓
MDAA14053	296	KMVBP	KMVBI	1015478580	15P3YG525	31.58	✓	✓	✓	✓	✓
MDAA14054	287	KMVBP	KMVBI	1015377109	15P3YG526	31.58	✓	✓	✓	✓	✓
MDAA14055	293	KMVBP	KMVBI	1015478580	15P3YG527	31.55	✓	✓	✓	✓	✓
MDAA14056	295	KMVBP	KMVBI	1015478580	15P3YG528	31.55	✓	✓	✓	✓	✓
MDAA14057	195	KMVBP	KMVBI	1015377103	15P3YG529	31.58	✓	✓	✓	✓	✓
MDAA14058	610	KMVBP	KMVBI	1015377103	15P3YG530	31.58	✓	✓	✓	✓	✓
MDAA14059	167	KMVBP	KMVBI	1015377108	15P3YG531	31.59	✓	✓	✓	✓	✓
MDAA14060	508	KMVBP	KMVBI	1015377108	15P3YG532	31.55	✓	✓	✓	✓	✓
MDAA14061	519	KMVBP	KMVBP	1015377112	15P3YG533	31.52	✓	✓	✓	✓	✓
MDAA14062	531	KMVBP	KMVBP	1015377112	15P3YG534	31.52	✓	✓	✓	✓	✓
MDAA14063	600	KMVBP	KMVBI	1015377109	15P3YG535	31.54	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tubo Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14064	504	KMVBP	KMVBI	1015377109	15P3YG536	31.54	✓	✓	✓	✓	✓
MDAA14065	516	KMVBP	KMVBI	1015377108	15P3YG537	31.57	✓	✓	✓	✓	✓
MDAA14066	530	KMVBP	KMVBI	1015377112	15P3YG538	31.51	✓	✓	✓	✓	✓
MDAA14067	601	KMVBP	KMVBP	1015377112	15P3YG539	31.55	✓	✓	✓	✓	✓
MDAA14068	93	KMVBP	KMVBP	1015377112	15P3YG540	31.52	✓	✓	✓	✓	✓
MDAA14069	153	KMVBP	KMVBP	1015377103	15P3YG541	31.55	✓	✓	✓	✓	✓
MDAA14070	62	KMVBP	KMVBP	1015377112	15P3YG542	31.55	✓	✓	✓	✓	✓
MDAA14071	55	KMVBP	KMVBP	1015377112	15P3YG543	31.53	✓	✓	✓	✓	✓
MDAA14072	94	KMVBP	KMVBP	1015377103	15P3YG544	31.56	✓	✓	✓	✓	✓
MDAA14073	84	KMVBP	KMVBP	1015377103	15P3YG545	31.59	✓	✓	✓	✓	✓
MDAA14074	64	KMVBP	KMVBP	1015377112	15P3YG546	31.50	✓	✓	✓	✓	✓
MDAA14075	95	KMVBP	KMVBP	1015377103	15P3YG547	31.55	✓	✓	✓	✓	✓
MDAA14076	268	KMVBP	KMVBI	1015377108	15P3YG548	31.60	✓	✓	✓	✓	✓
MDAA14077	106	KMVBP	KMVBI	1015377103	15P3YG549	31.58	✓	✓	✓	✓	✓
MDAA14078	133	KMVBP	KMVBI	1015377103	15P3YG550	31.53	✓	✓	✓	✓	✓
MDAA14079	103	KMVBP	KMVBI	1015377103	15P3YG551	31.54	✓	✓	✓	✓	✓
MDAA14080	122	KMVBP	KMVBI	1015377109	15P3YG552	31.57	✓	✓	✓	✓	✓
MDAA14081	112	KMVBP	KMVBI	1015377109	15P3YG553	31.58	✓	✓	✓	✓	✓
MDAA14082	123	KMVBP	KMVBI	1015478580	15P3YG554	31.54	✓	✓	✓	✓	✓
MDAA14083	510	KMVBP	KMVBI	1015377103	15P3YG555	31.60	✓	✓	✓	✓	✓
MDAA14084	538	KMVBP	KMVBI	1015377112	15P3YG556	31.55	✓	✓	✓	✓	✓
MDAA14085	60	KMVBP	KMVBP	1015377112	15P3YG557	31.57	✓	✓	✓	✓	✓
MDAA14086	370	KMVBP	KMVBP	1015377103	15P3YG558	31.58	✓	✓	✓	✓	✓
MDAA14087	379	KMVBP	KMVBP	1015377112	15P3YG559	31.54	✓	✓	✓	✓	✓
MDAA14088	381	KMVBP	KMVBP	1015377112	15P3YG560	31.60	✓	✓	✓	✓	✓
MDAA14089	337	KMVBP	KMVBP	1015377108	15P3YG561	31.59	✓	✓	✓	✓	✓
MDAA14090	338	KMVBP	KMVBP	1015377109	15P3YG562	31.57	✓	✓	✓	✓	✓
MDAA14091	290	KMVBP	KMVBP	1015478580	15P3YG563	31.54	✓	✓	✓	✓	✓
MDAA14092	339	KMVBP	KMVBP	1015377109	15P3YG564	31.59	✓	✓	✓	✓	✓
MDAA14093	340	KMVBP	KMVBP	1015377109	15P3YG565	31.57	✓	✓	✓	✓	✓
MDAA14094	325	KMVBP	KMVBP	1015377109	15P3YG566	31.58	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14095	77	KMVBP	KMVBP	1015377112	15P3YG567	31.53	✓	✓	✓	✓	✓
MDAA14096	76	KMVBP	KMVBP	1015377103	15P3YG568	31.55	✓	✓	✓	✓	✓
MDAA14097	75	KMVBP	KMVBP	1015377103	15P3YG569	31.53	✓	✓	✓	✓	✓
MDAA14098	382	KMVBP	KMVBP	1015377112	15P3YG570	31.52	✓	✓	✓	✓	✓
MDAA14099	79	KMVBP	KMVBP	1015377112	15P3YG571	31.50	✓	✓	✓	✓	✓
MDAA14100	92	KMVBP	KMVBP	1015377112	15P3YG572	31.52	✓	✓	✓	✓	✓
MDAA14101	27	KMVBP	KMVBI	1015377103	15P3YG573	31.51	✓	✓	✓	✓	✓
MDAA14102	86	KMVBP	KMVBI	1015377112	15P3YG574	31.50	✓	✓	✓	✓	✓
MDAA14103	57	KMVBP	KMVBP	1015377112	15P3YG575	31.54	✓	✓	✓	✓	✓
MDAA14104	81	KMVBP	KMVBP	1015377103	15P3YG576	31.56	✓	✓	✓	✓	✓
MDAA14105	28	KMVBP	KMVBP	1015377103	15P3YG577	31.53	✓	✓	✓	✓	✓
MDAA14106	17	KMVBP	KMVBP	1015377109	15P3YG578	31.55	✓	✓	✓	✓	✓
MDAA14107	31	KMVBP	KMVBP	1015377103	15P3YG579	31.55	✓	✓	✓	✓	✓
MDAA14108	25	KMVBP	KMVBP	1015377103	15P3YG580	31.54	✓	✓	✓	✓	✓
MDAA14109	10	KMVBP	KMVBP	1015377109	15P3YG581	31.52	✓	✓	✓	✓	✓
MDAA14110	11	KMVBP	KMVBP	1015377109	15P3YG582	31.50	✓	✓	✓	✓	✓
MDAA14111	14	KMVBP	KMVBP	1015377109	15P3YG583	31.57	✓	✓	✓	✓	✓
MDAA14112	13	KMVBP	KMVBP	1015377109	15P3YG584	31.54	✓	✓	✓	✓	✓
MDAA14113	24	KMVBP	KMVBP	1015377109	15P3YG585	31.52	✓	✓	✓	✓	✓
MDAA14114	369	KMVBP	KMVBI	1015478580	15P3YG586	31.53	✓	✓	✓	✓	✓
MDAA14115	67	KMVBP	KMVBI	1015377112	15P3YG587	31.57	✓	✓	✓	✓	✓
MDAA14116	41	KMVBP	KMVBP	1015377103	15P3YG588	31.59	✓	✓	✓	✓	✓
MDAA14117	360	KMVBP	KMVBP	1015377103	15P3YG589	31.56	✓	✓	✓	✓	✓
MDAA14118	604	KMVBP	KMVBI	1015377112	15P3YG590	31.54	✓	✓	✓	✓	✓
MDAA14119	618	KMVBP	KMVBP	1015377103	15P3YG591	31.54	✓	✓	✓	✓	✓
MDAA14120	623	KMVBP	KMVBP	1015377103	15P3YG592	31.57	✓	✓	✓	✓	✓
MDAA14121	626	KMVBP	KMVBP	1015377103	15P3YG593	31.55	✓	✓	✓	✓	✓
MDAA14122	627	KMVBP	KMVBP	1015377109	15P3YG594	31.54	✓	✓	✓	✓	✓
MDAA14123	629	KMVBP	KMVBI	1015377109	15P3YG595	31.56	✓	✓	✓	✓	✓
MDAA14124	221	KMVBP	KMVBP	1015377109	15P3YG596	31.57	✓	✓	✓	✓	✓
MDAA14125	452	KMVBP	KMVBP	1015377112	15P3YG597	31.52	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



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Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tubo Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14126	607	KMVBP	KMVBP	1015377112	15P3YG598	31.52	✓	✓	✓	✓	✓
MDAA14127	630	KMVBP	KMVBP	1015377109	15P3YG599	31.55	✓	✓	✓	✓	✓
MDAA14128	591	KMVBP	KMVBP	1015377112	15P3YG600	31.54	✓	✓	✓	✓	✓
MDAA14129	584	KMVBP	KMVBI	1015377103	15P3YG601	31.53	✓	✓	✓	✓	✓
MDAA14130	205	KMVBP	KMVBI	1015478580	15P3YG602	31.50	✓	✓	✓	✓	✓
MDAA14131	631	KMVBP	KMVBI	1015377108	15P3YG603	31.57	✓	✓	✓	✓	✓
MDAA14132	585	KMVBP	KMVBI	1015377108	15P3YG604	31.56	✓	✓	✓	✓	✓
MDAA14133	632	KMVBP	KMVBI	1015377108	15P3YG605	31.55	✓	✓	✓	✓	✓
MDAA14134	551	KMVBP	KMVBI	1015377108	15P3YG606	31.54	✓	✓	✓	✓	✓
MDAA14135	424	KMVBP	KMVBI	1015377112	15P3YG607	31.52	✓	✓	✓	✓	✓
MDAA14136	140	KMVBP	KMVBI	1015377112	15P3YG608	31.52	✓	✓	✓	✓	✓
MDAA14137	78	KMVBP	KMVBI	1015377112	15P3YG609	31.52	✓	✓	✓	✓	✓
MDAA14138	18	KMVBP	KMVBP	1015377109	15P3YG610	31.52	✓	✓	✓	✓	✓
MDAA14139	12	KMVBP	KMVBI	1015377109	15P3YG611	31.53	✓	✓	✓	✓	✓
MDAA14140	314	KMVBP	KMVBI	1015377109	15P3YG612	31.56	✓	✓	✓	✓	✓
MDAA14141	668	KMVBP	KMVBP	1015377112	15P3YG613	31.53	✓	✓	✓	✓	✓
MDAA14142	689	KMVBP	KMVBP	1015377112	15P3YG614	31.53	✓	✓	✓	✓	✓
MDAA14143	669	KMVBP	KMVBP	1015377112	15P3YG615	31.51	✓	✓	✓	✓	✓
MDAA14144	686	KMVBP	KMVBI	1015377112	15P3YG616	31.50	✓	✓	✓	✓	✓
MDAA14145	514	KMVBP	KMVBP	1015377108	15P3YG617	31.54	✓	✓	✓	✓	✓
MDAA14146	672	KMVBP	KMVBI	1015377112	15P3YG618	31.48	✓	✓	✓	✓	✓
MDAA14147	695	KMVBP	KMVBP	1015377103	15P3YG619	31.55	✓	✓	✓	✓	✓
MDAA14148	673	KMVBP	KMVBP	1015377112	15P3YG620	31.53	✓	✓	✓	✓	✓
MDAA14149	667	KMVBP	KMVBP	1015377112	15P3YG621	31.50	✓	✓	✓	✓	✓
MDAA14150	683	KMVBP	KMVBP	1015377112	15P3YG622	31.50	✓	✓	✓	✓	✓
MDAA14151	690	KMVBP	KMVBP	1015377112	15P3YG623	31.52	✓	✓	✓	✓	✓
MDAA14152	674	KMVBP	KMVBI	1015377112	15P3YG624	31.53	✓	✓	✓	✓	✓
MDAA14153	681	KMVBP	KMVBP	1015377112	15P3YG625	31.54	✓	✓	✓	✓	✓
MDAA14154	677	KMVBP	KMVBP	1015377112	15P3YG626	31.50	✓	✓	✓	✓	✓
MDAA14155	19	KMVBP	KMVBP	1015377109	15P3YG627	31.55	✓	✓	✓	✓	✓
MDAA14156	348	KMVBP	KMVBP	1015377109	15P3YG628	31.53	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tubo Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14157	543	KMVBP	KMVBP	1015377108	15P3YG629	31.54	✓	✓	✓	✓	✓
MDAA14158	544	KMVBP	KMVBP	1015377108	15P3YG630	31.51	✓	✓	✓	✓	✓
MDAA14159	545	KMVBP	KMVBP	1015377108	15P3YG631	31.50	✓	✓	✓	✓	✓
MDAA14160	350	KMVBP	KMVBI	1015377109	15P3YG632	31.52	✓	✓	✓	✓	✓
MDAA14161	546	KMVBP	KMVBP	1015377108	15P3YG633	31.52	✓	✓	✓	✓	✓
MDAA14162	351	KMVBP	KMVBP	1015377109	15P3YG634	31.50	✓	✓	✓	✓	✓
MDAA14163	490	KMVBP	KMVBP	1015377109	15P3YG635	31.53	✓	✓	✓	✓	✓
MDAA14164	485	KMVBP	KMVBP	1015377109	15P3YG636	31.54	✓	✓	✓	✓	✓
MDAA14165	484	KMVBP	KMVBP	1015377109	15P3YG637	31.57	✓	✓	✓	✓	✓
MDAA14166	478	KMVBP	KMVBP	1015377108	15P3YG638	31.55	✓	✓	✓	✓	✓
MDAA14167	461	KMVBP	KMVBP	1015377112	15P3YG639	31.56	✓	✓	✓	✓	✓
MDAA14168	608	KMVBP	KMVBP	1015377112	15P3YG640	31.53	✓	✓	✓	✓	✓
MDAA14169	111	KMVBP	KMVBP	1015377109	15P3YG641	31.52	✓	✓	✓	✓	✓
MDAA14170	458	KMVBP	KMVBI	1015377112	15P3YG642	31.55	✓	✓	✓	✓	✓
MDAA14171	633	KMVBP	KMVBP	1015377108	15P3YG643	31.55	✓	✓	✓	✓	✓
MDAA14172	634	KMVBP	KMVBI	1015377108	15P3YG644	31.53	✓	✓	✓	✓	✓
MDAA14173	635	KMVBP	KMVBI	1015377108	15P3YG645	31.50	✓	✓	✓	✓	✓
MDAA14174	612	KMVBP	KMVBP	1015377103	15P3YG646	31.51	✓	✓	✓	✓	✓
MDAA14175	636	KMVBP	KMVBI	1015377108	15P3YG647	31.55	✓	✓	✓	✓	✓
MDAA14176	613	KMVBP	KMVBP	1015377103	15P3YG648	31.56	✓	✓	✓	✓	✓
MDAA14177	639	KMVBP	KMVBP	1015377108	15P3YG649	31.54	✓	✓	✓	✓	✓
MDAA14178	616	KMVBP	KMVBP	1015377103	15P3YG650	31.55	✓	✓	✓	✓	✓
MDAA14179	640	KMVBP	KMVBP	1015377108	15P3YG651	31.48	✓	✓	✓	✓	✓
MDAA14180	617	KMVBP	KMVBP	1015377103	15P3YG652	31.58	✓	✓	✓	✓	✓
MDAA14181	464	KMVBP	KMVBI	1015377108	15P3YG653	31.57	✓	✓	✓	✓	✓
MDAA14182	229	KMVBP	KMVBP	1015478580	15P3YG654	31.52	✓	✓	✓	✓	✓
MDAA14183	463	KMVBP	KMVBP	1015377109	15P3YG655	31.56	✓	✓	✓	✓	✓
MDAA14184	87	KMVBP	KMVBP	1015377103	15P3YG656	31.55	✓	✓	✓	✓	✓
MDAA14185	215	KMVBP	KMVBI	1015478580	15P3YG657	31.53	✓	✓	✓	✓	✓
MDAA14186	440	KMVBP	KMVBP	1015377112	15P3YG658	31.55	✓	✓	✓	✓	✓
MDAA14187	501	KMVBP	KMVBI	1015377109	15P3YG659	31.54	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14188	436	KMVBP	KMVBI	1015377112	15P3YG660	31.57	✓	✓	✓	✓	✓
MDAA14189	495	KMVBP	KMVBI	1015377109	15P3YG661	31.53	✓	✓	✓	✓	✓
MDAA14190	502	KMVBP	KMVBI	1015377109	15P3YG662	31.55	✓	✓	✓	✓	✓
MDAA14191	434	KMVBP	KMVBI	1015478580	15P3YG663	31.54	✓	✓	✓	✓	✓
MDAA14192	450	KMVBP	KMVBI	1015377112	15P3YG664	31.54	✓	✓	✓	✓	✓
MDAA14193	441	KMVBP	KMVBI	1015377112	15P3YG665	31.53	✓	✓	✓	✓	✓
MDAA14194	429	KMVBP	KMVBP	1015377112	15P3YG666	31.57	✓	✓	✓	✓	✓
MDAA14195	159	KMVBP	KMVBI	1015377103	15P3YG667	31.60	✓	✓	✓	✓	✓
MDAA14196	605	KMVBP	KMVBP	1015377112	15P3YG668	31.55	✓	✓	✓	✓	✓
MDAA14197	606	KMVBP	KMVBP	1015377112	15P3YG669	31.53	✓	✓	✓	✓	✓
MDAA14198	220	KMVBP	KMVBP	1015377103	15P3YG670	31.55	✓	✓	✓	✓	✓
MDAA14199	525	KMVBP	KMVBP	1015377108	15P3YG671	31.58	✓	✓	✓	✓	✓
MDAA14200	408	KMVBP	KMVBI	1015377109	15P3YG672	31.56	✓	✓	✓	✓	✓
MDAA14201	571	KMVBP	KMVBI	1015377103	15P3YG673	31.58	✓	✓	✓	✓	✓
MDAA14202	409	KMVBP	KMVBI	1015377109	15P3YG674	31.52	✓	✓	✓	✓	✓
MDAA14203	412	KMVBP	KMVBI	1015377109	15P3YG675	31.55	✓	✓	✓	✓	✓
MDAA14204	566	KMVBP	KMVBI	1015377103	15P3YG676	31.61	✓	✓	✓	✓	✓
MDAA14205	560	KMVBP	KMVBI	1015377108	15P3YG677	31.56	✓	✓	✓	✓	✓
MDAA14206	380	KMVBP	KMVBI	1015377112	15P3YG678	31.52	✓	✓	✓	✓	✓
MDAA14207	415	KMVBP	KMVBI	1015377109	15P3YG679	31.55	✓	✓	✓	✓	✓
MDAA14208	223	KMVBP	KMVBI	1015377109	15P3YG680	31.51	✓	✓	✓	✓	✓
MDAA14209	396	KMVBP	KMVBI	1015377103	15P3YG681	31.58	✓	✓	✓	✓	✓
MDAA14210	182	KMVBP	KMVBP	1015377103	15P3YG682	31.54	✓	✓	✓	✓	✓
MDAA14211	32	KMVBP	KMVBP	1015377112	15P3YG683	31.55	✓	✓	✓	✓	✓
MDAA14212	6	KMVBP	KMVBP	1015377109	15P3YG684	31.57	✓	✓	✓	✓	✓
MDAA14213	80	KMVBP	KMVBP	1015377112	15P3YG685	31.54	✓	✓	✓	✓	✓
MDAA14214	33	KMVBP	KMVBP	1015377112	15P3YG686	31.51	✓	✓	✓	✓	✓
MDAA14215	174	KMVBP	KMVBP	1015377108	15P3YG687	31.55	✓	✓	✓	✓	✓
MDAA14216	30	KMVBP	KMVBP	1015377112	15P3YG688	31.52	✓	✓	✓	✓	✓
MDAA14217	34	KMVBP	KMVBP	1015377112	15P3YG689	31.56	✓	✓	✓	✓	✓
MDAA14218	186	KMVBP	KMVBP	1015377108	15P3YG690	31.55	✓	✓	✓	✓	✓

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NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14219	169	KMVBP	KMVBP	1015377103	15P3YG691	31.55	✓	✓	✓	✓	✓
MDAA14220	35	KMVBP	KMVBP	1015377112	15P3YG692	31.56	✓	✓	✓	✓	✓
MDAA14221	164	KMVBP	KMVBP	1015377103	15P3YG693	31.56	✓	✓	✓	✓	✓
MDAA14222	447	KMVBP	KMVBP	1015377112	15P3YG694	31.52	✓	✓	✓	✓	✓
MDAA14223	659	KMVBP	KMVBP	1015377112	15P3YG695	31.56	✓	✓	✓	✓	✓
MDAA14224	663	KMVBP	KMVBP	1015377112	15P3YG696	31.53	✓	✓	✓	✓	✓
MDAA14225	483	KMVBP	KMVBP	1015377108	15P3YG697	31.58	✓	✓	✓	✓	✓
MDAA14226	451	KMVBP	KMVBP	1015377112	15P3YG698	31.54	✓	✓	✓	✓	✓
MDAA14227	453	KMVBP	KMVBP	1015377112	15P3YG699	31.55	✓	✓	✓	✓	✓
MDAA14228	454	KMVBP	KMVBP	1015377112	15P3YG700	31.55	✓	✓	✓	✓	✓
MDAA14229	455	KMVBP	KMVBP	1015377112	15P3YG701	31.53	✓	✓	✓	✓	✓
MDAA14230	456	KMVBP	KMVBP	1015377112	15P3YG702	31.55	✓	✓	✓	✓	✓
MDAA14231	473	KMVBP	KMVBP	1015377103	15P3YG703	31.61	✓	✓	✓	✓	✓
MDAA14232	648	KMVBP	KMVBI	1015377108	15P3YG704	31.60	✓	✓	✓	✓	✓
MDAA14233	650	KMVBP	KMVBI	1015377108	15P3YG705	31.56	✓	✓	✓	✓	✓
MDAA14234	523	KMVBP	KMVBI	1015377108	15P3YG706	31.56	✓	✓	✓	✓	✓
MDAA14235	651	KMVBP	KMVBI	1015377108	15P3YG707	31.58	✓	✓	✓	✓	✓
MDAA14236	524	KMVBP	KMVBI	1015377108	15P3YG708	31.52	✓	✓	✓	✓	✓
MDAA14237	52	KMVBP	KMVBI	1015478580	15P3YG709	31.54	✓	✓	✓	✓	✓
MDAA14238	47	KMVBP	KMVBI	1015478580	15P3YG710	31.54	✓	✓	✓	✓	✓
MDAA14239	628	KMVBP	KMVBI	1015377109	15P3YG711	31.52	✓	✓	✓	✓	✓
MDAA14240	8	KMVBP	KMVBI	1015377109	15P3YG712	31.57	✓	✓	✓	✓	✓
MDAA14241	625	KMVBP	KMVBI	1015377103	15P3YG713	31.62	✓	✓	✓	✓	✓
MDAA14242	9	KMVBP	KMVBI	1015377109	15P3YG714	31.53	✓	✓	✓	✓	✓
MDAA14243	620	KMVBP	KMVBI	1015377103	15P3YG715	31.56	✓	✓	✓	✓	✓
MDAA14244	357	KMVBP	KMVBI	1015478580	15P3YG716	31.52	✓	✓	✓	✓	✓
MDAA14245	611	KMVBP	KMVBI	1015377103	15P3YG717	31.52	✓	✓	✓	✓	✓
MDAA14246	603	KMVBP	KMVBI	1015377112	15P3YG718	31.58	✓	✓	✓	✓	✓
MDAA14247	411	KMVBP	KMVBI	1015377109	15P3YG719	31.54	✓	✓	✓	✓	✓
MDAA14248	399	KMVBP	KMVBI	1015377108	15P3YG720	31.60	✓	✓	✓	✓	✓
MDAA14249	410	KMVBP	KMVBI	1015377109	15P3YG721	31.52	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

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Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14250	401	KMVBP	KMVBI	1015377103	15P3YG722	31.54	✓	✓	✓	✓	✓
MDAA14251	42	KMVBP	KMVBP	1015377112	15P3YG723	31.52	✓	✓	✓	✓	✓
MDAA14252	48	KMVBP	KMVBP	1015478580	15P3YG724	31.57	✓	✓	✓	✓	✓
MDAA14253	363	KMVBP	KMVBP	1015478580	15P3YG725	31.56	✓	✓	✓	✓	✓
MDAA14254	43	KMVBP	KMVBP	1015377109	15P3YG726	31.56	✓	✓	✓	✓	✓
MDAA14255	367	KMVBP	KMVBP	1015478580	15P3YG727	31.55	✓	✓	✓	✓	✓
MDAA14256	44	KMVBP	KMVBP	1015377109	15P3YG728	31.52	✓	✓	✓	✓	✓
MDAA14257	361	KMVBP	KMVBP	1015377108	15P3YG729	31.54	✓	✓	✓	✓	✓
MDAA14258	352	KMVBP	KMVBP	1015377103	15P3YG730	31.53	✓	✓	✓	✓	✓
MDAA14259	40	KMVBP	KMVBP	1015377112	15P3YG731	31.58	✓	✓	✓	✓	✓
MDAA14260	358	KMVBP	KMVBP	1015478580	15P3YG732	31.58	✓	✓	✓	✓	✓
MDAA14261	36	KMVBP	KMVBI	1015377112	15P3YG733	31.51	✓	✓	✓	✓	✓
MDAA14262	72	KMVBP	KMVBI	1015377112	15P3YG734	31.52	✓	✓	✓	✓	✓
MDAA14263	74	KMVBP	KMVBI	1015377103	15P3YG735	31.55	✓	✓	✓	✓	✓
MDAA14264	38	KMVBP	KMVBI	1015377112	15P3YG736	31.56	✓	✓	✓	✓	✓
MDAA14265	355	KMVBP	KMVBI	1015377103	15P3YG737	31.60	✓	✓	✓	✓	✓
MDAA14266	39	KMVBP	KMVBI	1015377112	15P3YG738	31.56	✓	✓	✓	✓	✓
MDAA14267	592	KMVBP	KMVBI	1015377112	15P3YG739	31.48	✓	✓	✓	✓	✓
MDAA14268	70	KMVBP	KMVBP	1015377112	15P3YG740	31.55	✓	✓	✓	✓	✓
MDAA14269	534	KMVBP	KMVBP	1015377112	15P3YG741	31.55	✓	✓	✓	✓	✓
MDAA14270	657	KMVBP	KMVBI	1015377112	15P3YG742	31.58	✓	✓	✓	✓	✓
MDAA14271	66	KMVBP	KMVBI	1015478580	15P3YG743	31.53	✓	✓	✓	✓	✓
MDAA14272	557	KMVBP	KMVBP	1015478580	15P3YG744	31.50	✓	✓	✓	✓	✓
MDAA14273	365	KMVBP	KMVBI	1015377103	15P3YG745	31.58	✓	✓	✓	✓	✓
MDAA14274	368	KMVBP	KMVBP	1015377103	15P3YG746	31.57	✓	✓	✓	✓	✓
MDAA14275	366	KMVBP	KMVBI	1015377103	15P3YG747	31.59	✓	✓	✓	✓	✓
MDAA14276	29	KMVBP	KMVBI	1015377103	15P3YG748	31.56	✓	✓	✓	✓	✓
MDAA14277	68	KMVBP	KMVBP	1015377112	15P3YG749	31.50	✓	✓	✓	✓	✓
MDAA14278	15	KMVBP	KMVBP	1015377109	15P3YG750	31.51	✓	✓	✓	✓	✓
MDAA14279	69	KMVBP	KMVBP	1015377112	15P3YG751	31.50	✓	✓	✓	✓	✓
MDAA14280	513	KMVBP	KMVBP	1015377108	15P3YG752	31.56	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



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Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14281	563	KMVBP	KMVBI	1015377108	15P3YG753	31.57	✓	✓	✓	✓	✓
MDAA14282	564	KMVBP	KMVBI	1015377108	15P3YG754	31.61	✓	✓	✓	✓	✓
MDAA14283	655	KMVBP	KMVBI	1015377112	15P3YG755	31.54	✓	✓	✓	✓	✓
MDAA14284	565	KMVBP	KMVBI	1015377103	15P3YG756	31.54	✓	✓	✓	✓	✓
MDAA14285	656	KMVBP	KMVBI	1015377112	15P3YG757	31.57	✓	✓	✓	✓	✓
MDAA14286	568	KMVBP	KMVBI	1015377103	15P3YG758	31.59	✓	✓	✓	✓	✓
MDAA14287	170	KMVBP	KMVBI	1015377108	15P3YG759	31.56	✓	✓	✓	✓	✓
MDAA14288	480	KMVBP	KMVBI	1015377108	15P3YG760	31.57	✓	✓	✓	✓	✓
MDAA14289	428	KMVBP	KMVBI	1015377112	15P3YG761	31.50	✓	✓	✓	✓	✓
MDAA14290	494	KMVBP	KMVBI	1015377109	15P3YG762	31.62	✓	✓	✓	✓	✓
MDAA14291	482	KMVBP	KMVBI	1015377108	15P3YG763	31.55	✓	✓	✓	✓	✓
MDAA14292	179	KMVBP	KMVBI	1015377103	15P3YG764	31.58	✓	✓	✓	✓	✓
MDAA14293	171	KMVBP	KMVBI	1015377103	15P3YG765	31.63	✓	✓	✓	✓	✓
MDAA14294	191	KMVBP	KMVBI	1015377108	15P3YG766	31.57	✓	✓	✓	✓	✓
MDAA14295	172	KMVBP	KMVBI	1015377108	15P3YG767	31.57	✓	✓	✓	✓	✓
MDAA14296	180	KMVBP	KMVBI	1015377103	15P3YG768	31.57	✓	✓	✓	✓	✓
MDAA14297	177	KMVBP	KMVBI	1015377108	15P3YG769	31.69	✓	✓	✓	✓	✓
MDAA14298	185	KMVBP	KMVBI	1015377108	15P3YG770	31.60	✓	✓	✓	✓	✓
MDAA14299	665	KMVBP	KMVBP	1015377112	15P3YG771	31.54	✓	✓	✓	✓	✓
MDAA14300	694	KMVBP	KMVBI	1015377103	15P3YG772	31.57	✓	✓	✓	✓	✓
MDAA14301	666	KMVBP	KMVBP	1015377112	15P3YG773	31.57	✓	✓	✓	✓	✓
MDAA14302	558	KMVBP	KMVBI	1015377108	15P3YG774	31.57	✓	✓	✓	✓	✓
MDAA14303	561	KMVBP	KMVBI	1015377108	15P3YG775	31.54	✓	✓	✓	✓	✓
MDAA14304	4	KMVBP	KMVBP	1015377109	15P3YG776	31.54	✓	✓	✓	✓	✓
MDAA14305	562	KMVBP	KMVBI	1015377108	15P3YG777	31.60	✓	✓	✓	✓	✓
MDAA14306	162	KMVBP	KMVBI	1015377103	15P3YG778	31.60	✓	✓	✓	✓	✓
MDAA14307	163	KMVBP	KMVBP	1015377103	15P3YG779	31.59	✓	✓	✓	✓	✓
MDAA14308	194	KMVBP	KMVBP	1015377103	15P3YG780	31.60	✓	✓	✓	✓	✓
MDAA14309	621	KMVBP	KMVBP	1015377103	15P3YG781	31.57	✓	✓	✓	✓	✓
MDAA14310	593	KMVBP	KMVBP	1015377112	15P3YG782	31.57	✓	✓	✓	✓	✓
MDAA14311	22	KMVBP	KMVBP	1015377109	15P3YG783	31.57	✓	✓	✓	✓	✓

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Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14312	609	KMVBP	KMVBP	1015377103	15P3YG784	31.57	✓	✓	✓	✓	✓
MDAA14313	218	KMVBP	KMVBP	1015377103	15P3YG785	31.53	✓	✓	✓	✓	✓
MDAA14314	594	KMVBP	KMVBP	1015377112	15P3YG786	31.55	✓	✓	✓	✓	✓
MDAA14315	277	KMVBP	KMVBP	1015377109	15P3YG787	31.53	✓	✓	✓	✓	✓
MDAA14316	173	KMVBP	KMVBP	1015377108	15P3YG788	31.57	✓	✓	✓	✓	✓
MDAA14317	284	KMVBP	KMVBP	1015377109	15P3YG789	31.55	✓	✓	✓	✓	✓
MDAA14318	279	KMVBP	KMVBP	1015377109	15P3YG790	31.53	✓	✓	✓	✓	✓
MDAA14319	193	KMVBP	KMVBP	1015377103	15P3YG791	31.55	✓	✓	✓	✓	✓
MDAA14320	166	KMVBP	KMVBP	1015377108	15P3YG792	31.59	✓	✓	✓	✓	✓
MDAA14321	188	KMVBP	KMVBP	1015377108	15P3YG793	31.55	✓	✓	✓	✓	✓
MDAA14322	196	KMVBP	KMVBP	1015377103	15P3YG794	31.60	✓	✓	✓	✓	✓
MDAA14323	178	KMVBP	KMVBP	1015377103	15P3YG795	31.58	✓	✓	✓	✓	✓
MDAA14324	619	KMVBP	KMVBP	1015377103	15P3YG796	31.58	✓	✓	✓	✓	✓
MDAA14325	139	KMVBP	KMVBI	1015377112	15P3YG797	31.48	✓	✓	✓	✓	✓
MDAA14326	364	KMVBP	KMVBP	1015377103	15P3YG798	31.49	✓	✓	✓	✓	✓
MDAA14327	497	KMVBP	KMVBI	1015377109	15P3YG799	31.56	✓	✓	✓	✓	✓
MDAA14328	288	KMVBP	KMVBP	1015377109	15P3YG800	31.53	✓	✓	✓	✓	✓
MDAA14329	588	KMVBP	KMVBP	1015377112	15P3YG801	31.54	✓	✓	✓	✓	✓
MDAA14330	148	KMVBP	KMVBP	1015377103	15P3YG802	31.54	✓	✓	✓	✓	✓
MDAA14331	503	KMVBP	KMVBI	1015377109	15P3YG803	31.57	✓	✓	✓	✓	✓
MDAA14332	498	KMVBP	KMVBI	1015377109	15P3YG804	31.57	✓	✓	✓	✓	✓
MDAA14333	184	KMVBP	KMVBP	1015377108	15P3YG805	31.54	✓	✓	✓	✓	✓
MDAA14334	402	KMVBP	KMVBI	1015377108	15P3YG806	31.56	✓	✓	✓	✓	✓
MDAA14335	413	KMVBP	KMVBI	1015377109	15P3YG807	31.56	✓	✓	✓	✓	✓
MDAA14336	567	KMVBP	KMVBI	1015377103	15P3YG808	31.59	✓	✓	✓	✓	✓
MDAA14337	573	KMVBP	KMVBI	1015377108	15P3YG809	31.57	✓	✓	✓	✓	✓
MDAA14338	474	KMVBP	KMVBP	1015377108	15P3YG810	31.56	✓	✓	✓	✓	✓
MDAA14339	289	KMVBP	KMVBP	1015377109	15P3YG811	31.55	✓	✓	✓	✓	✓
MDAA14340	63	KMVBP	KMVBP	1015377112	15P3YG812	31.55	✓	✓	✓	✓	✓
MDAA14341	304	KMVBP	KMVBP	1015478580	15P3YG813	31.56	✓	✓	✓	✓	✓
MDAA14342	385	KMVBP	KMVBP	1015377112	15P3YG814	31.55	✓	✓	✓	✓	✓

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Serialization Log

Total Joints: 867
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NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14343	512	KMVBP	KMVBP	1015377108	15P3YG815	31.52	✓	✓	✓	✓	✓
MDAA14344	649	KMVBP	KMVBI	1015377103	15P3YG816	31.58	✓	✓	✓	✓	✓
MDAA14345	522	KMVBP	KMVBP	1015377108	15P3YG817	31.53	✓	✓	✓	✓	✓
MDAA14346	98	KMVBP	KMVBP	1015377103	15P3YG818	31.52	✓	✓	✓	✓	✓
MDAA14347	37	KMVBP	KMVBI	1015377112	15P3YG819	31.54	✓	✓	✓	✓	✓
MDAA14348	803	KMVBP	KMVBP	1015377103	15P3YG820	31.56	✓	✓	✓	✓	✓
MDAA14349	776	KMVBP	KMVBI	1015377103	15P3YG821	31.57	✓	✓	✓	✓	✓
MDAA14350	835	KMVBP	KMVBI	1015377108	15P3YG822	31.54	✓	✓	✓	✓	✓
MDAA14351	828	KMVBP	KMVBI	1015377103	15P3YG823	31.55	✓	✓	✓	✓	✓
MDAA14352	843	KMVBP	KMVBI	1015377108	15P3YG824	31.56	✓	✓	✓	✓	✓
MDAA14353	258	KMVBP	KMVBI	1015478580	15P3YG825	31.57	✓	✓	✓	✓	✓
MDAA14354	718	KMVBP	KMVBI	1015377103	15P3YG826	31.54	✓	✓	✓	✓	✓
MDAA14355	730	KMVBP	KMVBI	1015377103	15P3YG827	31.56	✓	✓	✓	✓	✓
MDAA14356	794	KMVBP	KMVBI	1015377103	15P3YG828	31.54	✓	✓	✓	✓	✓
MDAA14357	787	KMVBP	KMVBI	1015377108	15P3YG829	31.55	✓	✓	✓	✓	✓
MDAA14358	788	KMVBP	KMVBI	1015377108	15P3YG830	31.56	✓	✓	✓	✓	✓
MDAA14359	789	KMVBP	KMVBI	1015377103	15P3YG831	31.54	✓	✓	✓	✓	✓
MDAA14360	791	KMVBP	KMVBI	1015377108	15P3YG832	31.58	✓	✓	✓	✓	✓
MDAA14361	793	KMVBP	KMVBI	1015377103	15P3YG833	31.56	✓	✓	✓	✓	✓
MDAA14362	797	KMVBP	KMVBI	1015377103	15P3YG834	31.54	✓	✓	✓	✓	✓
MDAA14363	792	KMVBP	KMVBI	1015377108	15P3YG835	31.56	✓	✓	✓	✓	✓
MDAA14364	840	KMVBP	KMVBI	1015377108	15P3YG836	31.53	✓	✓	✓	✓	✓
MDAA14365	839	KMVBP	KMVBI	1015377108	15P3YG837	31.56	✓	✓	✓	✓	✓
MDAA14366	779	KMVBP	KMVBI	1015377103	15P3YG838	31.55	✓	✓	✓	✓	✓
MDAA14367	838	KMVBP	KMVBI	1015377108	15P3YG839	31.59	✓	✓	✓	✓	✓
MDAA14368	698	KMVBP	KMVBI	1015377108	15P3YG840	31.59	✓	✓	✓	✓	✓
MDAA14369	749	KMVBP	KMVBI	1015377103	15P3YG841	31.54	✓	✓	✓	✓	✓
MDAA14370	762	KMVBP	KMVBI	1015377103	15P3YG842	31.54	✓	✓	✓	✓	✓
MDAA14371	747	KMVBP	KMVBI	1015377108	15P3YG843	31.53	✓	✓	✓	✓	✓
MDAA14372	761	KMVBP	KMVBI	1015377108	15P3YG844	31.50	✓	✓	✓	✓	✓
MDAA14373	745	KMVBP	KMVBI	1015377108	15P3YG845	31.51	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14374	760	KMVBP	KMVBI	1015377108	15P3YG846	31.55	✓	✓	✓	✓	✓
MDAA14375	744	KMVBP	KMVBI	1015377108	15P3YG847	31.52	✓	✓	✓	✓	✓
MDAA14376	834	KMVBP	KMVBI	1015377103	15P3YG848	31.54	✓	✓	✓	✓	✓
MDAA14377	846	KMVBP	KMVBI	1015377108	15P3YG849	31.59	✓	✓	✓	✓	✓
MDAA14378	829	KMVBP	KMVBI	1015377103	15P3YG850	31.59	✓	✓	✓	✓	✓
MDAA14379	872	KMVBP	KMVBI	1015377108	15P3YG851	31.53	✓	✓	✓	✓	✓
MDAA14380	774	KMVBP	KMVBI	1015377103	15P3YG852	31.58	✓	✓	✓	✓	✓
MDAA14381	771	KMVBP	KMVBI	1015377103	15P3YG853	31.53	✓	✓	✓	✓	✓
MDAA14382	781	KMVBP	KMVBI	1015377103	15P3YG854	31.51	✓	✓	✓	✓	✓
MDAA14383	693	KMVBP	KMVBI	1015377103	15P3YG855	31.52	✓	✓	✓	✓	✓
MDAA14384	841	KMVBP	KMVBI	1015377108	15P3YG856	31.55	✓	✓	✓	✓	✓
MDAA14385	684	KMVBP	KMVBI	1015377112	15P3YG857	31.49	✓	✓	✓	✓	✓
MDAA14386	780	KMVBP	KMVBI	1015377103	15P3YG858	31.53	✓	✓	✓	✓	✓
MDAA14387	801	KMVBP	KMVBI	1015377103	15P3YG859	31.56	✓	✓	✓	✓	✓
MDAA14388	784	KMVBP	KMVBI	1015377103	15P3YG860	31.53	✓	✓	✓	✓	✓
MDAA14389	800	KMVBP	KMVBI	1015377103	15P3YG861	31.56	✓	✓	✓	✓	✓
MDAA14390	773	KMVBP	KMVBI	1015377103	15P3YG862	31.56	✓	✓	✓	✓	✓
MDAA14391	713	KMVBP	KMVBI	1015377103	15P3YG863	31.57	✓	✓	✓	✓	✓
MDAA14392	722	KMVBP	KMVBI	1015377103	15P3YG864	31.60	✓	✓	✓	✓	✓
MDAA14393	707	KMVBP	KMVBI	1015377108	15P3YG865	31.57	✓	✓	✓	✓	✓
MDAA14394	705	KMVBP	KMVBI	1015377103	15P3YG866	31.60	✓	✓	✓	✓	✓
MDAA14395	753	KMVBP	KMVBI	1015377103	15P3YG867	31.56	✓	✓	✓	✓	✓
MDAA14396	435	KMVBP	KMVBI	1015377103	15P3YG868	31.62	✓	✓	✓	✓	✓
MDAA14397	738	KMVBP	KMVBI	1015377108	15P3YG869	31.56	✓	✓	✓	✓	✓
MDAA14398	699	KMVBP	KMVBI	1015377108	15P3YG870	31.54	✓	✓	✓	✓	✓
MDAA14399	89	KMVBP	KMVBI	1015377112	15P3YG871	31.59	✓	✓	✓	✓	✓
MDAA14400	685	KMVBP	KMVBI	1015377112	15P3YG872	31.57	✓	✓	✓	✓	✓
MDAA14401	344	KMVBP	KMVBI	1015377109	15P3YG873	31.56	✓	✓	✓	✓	✓
MDAA14402	845	KMVBP	KMVBI	1015377108	15P3YG874	31.53	✓	✓	✓	✓	✓
MDAA14403	827	KMVBP	KMVBI	1015377103	15P3YG875	31.58	✓	✓	✓	✓	✓
MDAA14404	842	KMVBP	KMVBI	1015377108	15P3YG876	31.56	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14405	721	KMVBP	KMVBI	1015377108	15P3YG877	31.57	✓	✓	✓	✓	✓
MDAA14406	885	KMVBP	KMVBI	1015377108	15P3YG878	31.60	✓	✓	✓	✓	✓
MDAA14407	810	KMVBP	KMVBI	1015377108	15P3YG879	31.62	✓	✓	✓	✓	✓
MDAA14408	814	KMVBP	KMVBI	1015377108	15P3YG880	31.62	✓	✓	✓	✓	✓
MDAA14409	812	KMVBP	KMVBI	1015377108	15P3YG881	31.58	✓	✓	✓	✓	✓
MDAA14410	884	KMVBP	KMVBI	1015377108	15P3YG882	31.53	✓	✓	✓	✓	✓
MDAA14411	817	KMVBP	KMVBI	1015377108	15P3YG883	31.52	✓	✓	✓	✓	✓
MDAA14412	883	KMVBP	KMVBI	1015377108	15P3YG884	31.58	✓	✓	✓	✓	✓
MDAA14413	826	KMVBP	KMVBI	1015377103	15P3YG885	31.57	✓	✓	✓	✓	✓
MDAA14414	882	KMVBP	KMVBI	1015377108	15P3YG886	31.52	✓	✓	✓	✓	✓
MDAA14415	831	KMVBP	KMVBI	1015377108	15P3YG887	31.56	✓	✓	✓	✓	✓
MDAA14416	790	KMVBP	KMVBI	1015377103	15P3YG888	31.58	✓	✓	✓	✓	✓
MDAA14417	802	KMVBP	KMVBI	1015377103	15P3YG889	31.56	✓	✓	✓	✓	✓
MDAA14418	785	KMVBP	KMVBI	1015377103	15P3YG890	31.56	✓	✓	✓	✓	✓
MDAA14419	887	KMVBP	KMVBP	1015377108	15P3YG891	31.51	✓	✓	✓	✓	✓
MDAA14420	886	KMVBP	KMVBP	1015377108	15P3YG892	31.60	✓	✓	✓	✓	✓
MDAA14421	876	KMVBP	KMVBP	1015377108	15P3YG893	31.61	✓	✓	✓	✓	✓
MDAA14422	342	KMVBP	KMVBI	1015377109	15P3YG894	31.53	✓	✓	✓	✓	✓
MDAA14423	875	KMVBP	KMVBI	1015377108	15P3YG895	31.52	✓	✓	✓	✓	✓
MDAA14424	825	KMVBP	KMVBP	1015377103	15P3YG896	31.61	✓	✓	✓	✓	✓
MDAA14425	832	KMVBP	KMVBP	1015377103	15P3YG897	31.56	✓	✓	✓	✓	✓
MDAA14426	799	KMVBP	KMVBP	1015377103	15P3YG898	31.54	✓	✓	✓	✓	✓
MDAA14427	763	KMVBP	KMVBP	1015377103	15P3YG899	31.58	✓	✓	✓	✓	✓
MDAA14428	798	KMVBP	KMVBP	1015377103	15P3YG900	31.57	✓	✓	✓	✓	✓
MDAA14429	879	KMVBP	KMVBP	1015377108	15P3YG901	31.53	✓	✓	✓	✓	✓
MDAA14430	860	KMVBP	KMVBP	1015377108	15P3YG902	31.49	✓	✓	✓	✓	✓
MDAA14431	816	KMVBP	KMVBP	1015377108	15P3YG903	31.54	✓	✓	✓	✓	✓
MDAA14432	861	KMVBP	KMVBP	1015377108	15P3YG904	31.53	✓	✓	✓	✓	✓
MDAA14433	873	KMVBP	KMVBP	1015377103	15P3YG905	31.61	✓	✓	✓	✓	✓
MDAA14434	892	KMVBP	KMVBP	1015377108	15P3YG906	31.56	✓	✓	✓	✓	✓
MDAA14435	888	KMVBP	KMVBP	1015377108	15P3YG907	31.57	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14436	804	KMVBP	KMVBP	1015377103	15P3YG908	31.50	✓	✓	✓	✓	✓
MDAA14437	818	KMVBP	KMVBP	1015377103	15P3YG909	31.56	✓	✓	✓	✓	✓
MDAA14438	809	KMVBP	KMVBP	1015377103	15P3YG910	31.60	✓	✓	✓	✓	✓
MDAA14439	877	KMVBP	KMVBP	1015377108	15P3YG911	31.53	✓	✓	✓	✓	✓
MDAA14440	894	KMVBP	KMVBP	1015377112	15P3YG912	31.54	✓	✓	✓	✓	✓
MDAA14441	889	KMVBP	KMVBP	1015377108	15P3YG913	31.57	✓	✓	✓	✓	✓
MDAA14442	890	KMVBP	KMVBP	1015377108	15P3YG914	31.56	✓	✓	✓	✓	✓
MDAA14443	833	KMVBP	KMVBP	1015377108	15P3YG915	31.54	✓	✓	✓	✓	✓
MDAA14444	830	KMVBP	KMVBP	1015377108	15P3YG916	31.54	✓	✓	✓	✓	✓
MDAA14445	851	KMVBP	KMVBP	1015377108	15P3YG917	31.58	✓	✓	✓	✓	✓
MDAA14446	868	KMVBP	KMVBP	1015377108	15P3YG918	31.54	✓	✓	✓	✓	✓
MDAA14447	850	KMVBP	KMVBP	1015377108	15P3YG919	31.59	✓	✓	✓	✓	✓
MDAA14448	813	KMVBP	KMVBP	1015377108	15P3YG920	31.59	✓	✓	✓	✓	✓
MDAA14449	858	KMVBP	KMVBP	1015377108	15P3YG921	31.50	✓	✓	✓	✓	✓
MDAA14450	895	KMVBP	KMVBP	1015377112	15P3YG922	31.57	✓	✓	✓	✓	✓
MDAA14451	857	KMVBP	KMVBP	1015377108	15P3YG923	31.56	✓	✓	✓	✓	✓
MDAA14452	836	KMVBP	KMVBP	1015377108	15P3YG924	31.59	✓	✓	✓	✓	✓
MDAA14453	847	KMVBP	KMVBP	1015377108	15P3YG925	31.56	✓	✓	✓	✓	✓
MDAA14454	854	KMVBP	KMVBP	1015377108	15P3YG926	31.57	✓	✓	✓	✓	✓
MDAA14455	859	KMVBP	KMVBP	1015377108	15P3YG927	31.57	✓	✓	✓	✓	✓
MDAA14456	893	KMVBP	KMVBP	1015377108	15P3YG928	31.56	✓	✓	✓	✓	✓
MDAA14457	852	KMVBP	KMVBP	1015377112	15P3YG929	31.59	✓	✓	✓	✓	✓
MDAA14458	871	KMVBP	KMVBP	1015377108	15P3YG930	31.56	✓	✓	✓	✓	✓
MDAA14459	844	KMVBP	KMVBP	1015377108	15P3YG931	31.57	✓	✓	✓	✓	✓
MDAA14460	752	KMVBP	KMVBP	1015377103	15P3YG932	31.55	✓	✓	✓	✓	✓
MDAA14461	880	KMVBP	KMVBP	1015377108	15P3YG933	31.56	✓	✓	✓	✓	✓
MDAA14462	820	KMVBP	KMVBP	1015377108	15P3YG934	31.56	✓	✓	✓	✓	✓
MDAA14463	806	KMVBP	KMVBP	1015377103	15P3YG935	31.56	✓	✓	✓	✓	✓
MDAA14464	865	KMVBP	KMVBP	1015377108	15P3YG936	31.50	✓	✓	✓	✓	✓
MDAA14465	849	KMVBP	KMVBP	1015377108	15P3YG937	31.58	✓	✓	✓	✓	✓
MDAA14466	862	KMVBP	KMVBP	1015377108	15P3YG938	31.54	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14467	848	KMVBP	KMVBP	1015377108	15P3YG939	31.53	✓	✓	✓	✓	✓
MDAA14468	878	KMVBP	KMVBP	1015377108	15P3YG940	31.56	✓	✓	✓	✓	✓
MDAA14469	819	KMVBP	KMVBP	1015377108	15P3YG941	31.57	✓	✓	✓	✓	✓
MDAA14470	741	KMVBP	KMVBI	1015377103	15P3YG942	31.56	✓	✓	✓	✓	✓
MDAA14471	754	KMVBP	KMVBI	1015377103	15P3YG943	31.56	✓	✓	✓	✓	✓
MDAA14472	786	KMVBP	KMVBI	1015377103	15P3YG944	31.56	✓	✓	✓	✓	✓
MDAA14473	704	KMVBP	KMVBI	1015377108	15P3YG945	31.56	✓	✓	✓	✓	✓
MDAA14474	703	KMVBP	KMVBI	1015377108	15P3YG946	31.55	✓	✓	✓	✓	✓
MDAA14475	701	KMVBP	KMVBI	1015377108	15P3YG947	31.54	✓	✓	✓	✓	✓
MDAA14476	750	KMVBP	KMVBI	1015377103	15P3YG948	31.56	✓	✓	✓	✓	✓
MDAA14477	765	KMVBP	KMVBI	1015377103	15P3YG949	31.54	✓	✓	✓	✓	✓
MDAA14478	706	KMVBP	KMVBP	1015377108	15P3YG950	31.55	✓	✓	✓	✓	✓
MDAA14479	766	KMVBP	KMVBI	1015377103	15P3YG951	31.55	✓	✓	✓	✓	✓
MDAA14480	711	KMVBP	KMVBI	1015377103	15P3YG952	31.58	✓	✓	✓	✓	✓
MDAA14481	712	KMVBP	KMVBI	1015377103	15P3YG953	31.56	✓	✓	✓	✓	✓
MDAA14482	770	KMVBP	KMVBI	1015377103	15P3YG954	31.57	✓	✓	✓	✓	✓
MDAA14483	715	KMVBP	KMVBI	1015377103	15P3YG955	31.57	✓	✓	✓	✓	✓
MDAA14484	772	KMVBP	KMVBI	1015377103	15P3YG956	31.56	✓	✓	✓	✓	✓
MDAA14485	719	KMVBP	KMVBI	1015377103	15P3YG957	31.54	✓	✓	✓	✓	✓
MDAA14486	646	KMVBP	KMVBI	1015377103	15P3YG958	31.59	✓	✓	✓	✓	✓
MDAA14487	680	KMVBP	KMVBI	1015377112	15P3YG959	31.52	✓	✓	✓	✓	✓
MDAA14488	768	KMVBP	KMVBP	1015377103	15P3YG960	31.54	✓	✓	✓	✓	✓
MDAA14489	777	KMVBP	KMVBI	1015377103	15P3YG961	31.53	✓	✓	✓	✓	✓
MDAA14490	796	KMVBP	KMVBI	1015377108	15P3YG962	31.53	✓	✓	✓	✓	✓
MDAA14491	769	KMVBP	KMVBP	1015377103	15P3YG963	31.52	✓	✓	✓	✓	✓
MDAA14492	891	KMVBP	KMVBP	1015377108	15P3YG964	31.60	✓	✓	✓	✓	✓
MDAA14493	824	KMVBP	KMVBP	1015377103	15P3YG965	31.60	✓	✓	✓	✓	✓
MDAA14494	811	KMVBP	KMVBP	1015377108	15P3YG966	31.55	✓	✓	✓	✓	✓
MDAA14495	823	KMVBP	KMVBP	1015377103	15P3YG967	31.59	✓	✓	✓	✓	✓
MDAA14496	869	KMVBP	KMVBP	1015377108	15P3YG968	31.55	✓	✓	✓	✓	✓
MDAA14497	870	KMVBP	KMVBP	1015377108	15P3YG969	31.54	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Serialization Log

Total Joints: 867
Total Length: 27354.38

NOV GP Order Confirmation: 10000776
Line Number: 5

Pipe Serial No.	Tube Insp. #	Box Heat Code	Pin Heat Code	Pipe Heat No.	Cust Seq. No.	Length	OD	ID	BD	VT	UT/Mag
MDAA14498	855	KMVBP	KMVBP	1015377108	15P3YG970	31.57	✓	✓	✓	✓	✓
MDAA14499	805	KMVBP	KMVBP	1015377103	15P3YG971	31.49	✓	✓	✓	✓	✓
MDAA14500	822	KMVBP	KMVBP	1015377103	15P3YG972	31.56	✓	✓	✓	✓	✓
MDAA14501	808	KMVBP	KMVBP	1015377103	15P3YG973	31.52	✓	✓	✓	✓	✓
MDAA14502	807	KMVBP	KMVBP	1015377103	15P3YG974	31.59	✓	✓	✓	✓	✓
MDAA14503	679	KMVBP	KMVBP	1015377112	15P3YG975	31.57	✓	✓	✓	✓	✓
MDAA14504	647	KMVBP	KMVBI	1015377103	15P3YG976	31.59	✓	✓	✓	✓	✓
MDAA14505	687	KMVBP	KMVBP	1015377112	15P3YG977	31.53	✓	✓	✓	✓	✓
MDAA14506	254	KMVBP	KMVBP	1015478580	15P3YG978	31.55	✓	✓	✓	✓	✓
MDAA14507	449	KMVBP	KMVBP	1015377112	15P3YG979	31.54	✓	✓	✓	✓	✓
MDAA14508	748	KMVBP	KMVBP	1015377103	15P3YG980	31.54	✓	✓	✓	✓	✓
MDAA14509	200	KMVBP	KMVBP	1015478580	15P3YG981	31.50	✓	✓	✓	✓	✓
MDAA14510	90	KMVBP	KMVBP	1015377112	15P3YG982	31.57	✓	✓	✓	✓	✓
MDAA14511	260	KMVBP	KMVBP	1015377103	15P3YG983	31.58	✓	✓	✓	✓	✓
MDAA14512	856	KMVBP	KMVBP	1015377108	15P3YG984	31.57	✓	✓	✓	✓	✓
MDAA14513	100	KMVBP	KMVBI	1015377103	15P3YG985	31.56	✓	✓	✓	✓	✓
MDAA14514	682	KMVBP	KMVBI	1015377112	15P3YG986	31.54	✓	✓	✓	✓	✓
MDAA14515	696	KMVBP	KMVBI	1015377103	15P3YG987	31.60	✓	✓	✓	✓	✓
MDAA14516	331	KMVBP	KMVBP	1015377108	15P3YG988	31.61	✓	✓	✓	✓	✓
MDAA14517	874	KMVBP	KMVBP	1015377112	15P3YG989	31.53	✓	✓	✓	✓	✓
MDAA14518	448	KMVBP	KMVBP	1015377112	15P3YG990	31.54	✓	✓	✓	✓	✓
MDAA14519	256	KMVBP	KMVBP	1015377103	15P3YG991	31.54	✓	✓	✓	✓	✓
MDAA14520	881	KMVBP	KMVBP	1015377108	15P3YG992	31.56	✓	✓	✓	✓	✓
MDAA14521	481	KMVBP	KMVBP	1015377108	15P3YG993	31.58	✓	✓	✓	✓	✓
MDAA14522	702	KMVBP	KMVBP	1015377108	15P3YG994	31.57	✓	✓	✓	✓	✓
MDAA14523	227	KMVBP	KMVBP	1015478580	15P3YG995	31.59	✓	✓	✓	✓	✓
MDAA14524	641	KMVBP	KMVBP	1015377108	15P3YG996	31.59	✓	✓	✓	✓	✓
MDAA14525	691	KMVBP	KMVBP	1015377112	15P3YG997	31.59	✓	✓	✓	✓	✓
MDAA14526	737	KMVBP	KMVBP	1015377103	15P3YG998	31.55	✓	✓	✓	✓	✓
MDAA14527	175	KMVBP	KMVBP	1015377108	15P3YG999	31.58	✓	✓	✓	✓	✓

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Order Confirmation #: 10000776

Customer Purchase Order #: JAPT7605



Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING

Hardness Test Results - Ring Samples for Products

NOVGP Sales Order Number: 10000776
 Specifications: In Accordance with API Specification 5DP, Latest Edition
 NOV Grant Prideco Spec for Grade CYX-105
 Spec. Requirements: Tube Max Average: 30.0 - Tool Joints 29.9-36.6 HRC Average

HEAT#	HEAT CODE Mill Heat Number	POSITION	PRODUCT	LOC	QUADRANT 1				QUADRANT 2				QUADRANT 3				QUADRANT 4				
					1	2	3	Avg													
1015478580		811 N	Tube	OD	26.1	26.1	28.5	26.90	26.1	27.8	26	26.60	25.2	24.5	25	24.90	28.8	26.3	26.1	27.10	
				MID	26.3	25.6	25.4	25.80	25.2	24.5	30.4	26.70	29.1	25.2	25.6	26.60	29.5	25.5	26.1	27.00	
				MOD																	
1015478580		909 ST 829 S	Tube	OD	27.8	23.3	24.8	25.30	24.2	26.4	26.7	25.80	24.8	25.5	25.6	25.30	25.3	23.7	25.8	24.90	
				MID	26.2	25.7	28.4	26.80	25.5	26.5	27.6	26.50	25.7	28.4	28	27.40	26.5	27.1	28	27.20	
				MOD																	
1015377108		641 N	Tube	OD	28.3	25.7	27	27.00	28.8	27	27.4	27.70	29.1	26.7	28.1	28.00	26.9	27.8	27.4	27.40	
				MID	26.5	27.7	26.8	27.00	26.3	26.9	27.2	26.80	26.9	27.7	26.5	27.00	28.4	26.6	27.1	27.40	
				MOD																	
1015377109		671 S	Tube	OD	26.7	27.1	26.5	26.80	28	27	25.7	26.90	26.5	27.2	27.7	27.10	26	27.5	27.5	27.00	
				MID	27.3	25.3	26.5	26.40	27.9	27.8	26.8	27.50	27.2	26.1	27.9	27.10	26.3	27.7	25.6	26.50	
				MOD																	
1015377108		455 S	Tube	OD	27	28	28.5	27.80	24.5	28.9	26.2	26.50	26.9	27.9	29.4	28.10	27	27.9	26.6	27.20	
				MID	26.8	28.3	27.4	27.50	26.9	29.7	27.2	27.90	27.7	27.9	27.6	27.70	28	26.7	28.3	27.70	
				MOD																	
1015377103		201 N	Tube	OD	26.1	26.6	27.7	26.80	25.6	27.2	29.1	27.30	24	26.6	28.1	26.20	24.7	24.1	26.3	25.00	
				MID																	
				MOD																	

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Hardness Test Results - Ring Samples for Products

NOVGP Sales Order Number: 10000776
 Specifications: In Accordance with API Specification 5DP, Latest Edition
 NOV Grant Prideco Spec for Grade CYX-105
 Spec. Requirements: Tube Max Average: 30.0 - Tool Joints 29.9-36.6 HRC Average

HEAT#	HEAT CODE Mill Heat Number	POSITION	PRODUCT	LOC	QUADRANT 1				QUADRANT 2				QUADRANT 3				QUADRANT 4			
					1	2	3	Avg												
				MID	25	26.5	25.9	25.80	28.1	26.5	27.4	27.30	26.6	26.6	28.5	27.20	25.9	27.9	25.1	26.30
				MOD																
				ID	25.2	25.5	26.5	25.70	25.6	27.2	29.1	27.30	26.9	28	25.5	26.80	25.9	27.9	25.1	26.30
1015377112		247 S	Tube	OD	27	27.9	26.9	27.30	27.2	27.3	25.8	26.80	26.8	26.2	27.4	26.80	25.5	27.7	26.7	26.60
				MID	27.2	26.7	27.6	27.20	27.9	25.2	26.4	26.50	27.2	26	26.2	26.50	26	27	26.9	26.60
				MOD																
				ID	26.2	26	28.6	26.90	27.2	27.3	25.8	26.80	26.6	27.5	28.1	27.40	26	27	26.9	26.60
1015377103		16 S	Tube	OD	27.7	25.5	25.3	26.20	26.7	25.9	25.1	25.90	29.3	25.7	26.1	27.00	27.6	26.6	27.5	27.20
				MID	26.2	24.6	27.2	26.00	27.1	26.5	24.7	26.10	25.7	27.6	25.4	26.20	26.7	25.8	26.4	26.30
				MOD																
				ID	25.8	28.2	24.4	26.10	26.7	25.9	25.1	25.90	26	27	27.4	26.80	26.7	25.8	26.4	26.30
B21963	KMVBI	3695-15	Pin	OD	32.3	34.7	34.3	33.80	33.3	34.2	35.2	34.20	33.3	34.7	33.9	34.00	32.5	34.6	33.5	33.50
				MID	33.9	35	34.6	34.50	35	35.3	36	35.40	34.3	33.9	34.7	34.30	36	34.8	35.2	35.30
				MOD																
				ID	35.4	36.4	34.7	35.50	36.1	36.5	33.3	35.30	35.9	34.9	35.1	35.90	36	34.8	35.2	35.30
B21963	KMVBI	3692-15	Pin	OD	32.4	33.8	33.8	33.30	32.8	32.8	32.5	32.70	33.3	33.5	33.2	33.30	32.8	32.5	32.6	32.60
				MID	34.8	34.7	34.5	34.70	32.8	32.2	32.3	32.40	33.1	33.9	34.9	34.00	33.8	33.8	33.7	33.80
				MOD																
				ID	34.1	33.5	33.9	33.80	33.7	33.1	33.5	33.40	33.2	33.3	33.5	35.90	33.8	33.8	33.7	33.80
B21963	KMVBI	3691-15	Pin	OD	32.9	34.3	34.4	33.90	33	34.7	34.8	34.20	33.4	35	35.4	34.60	32.8	34.4	35.6	34.30
				MID	34.6	36.2	35.1	35.30	34.2	34.5	34.9	34.50	35.7	33.8	35.6	35.00	34.6	35.2	33.7	34.50

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Hardness Test Results - Ring Samples for Products

NOVGP Sales Order Number: 10000776
 Specifications: In Accordance with API Specification 5DP, Latest Edition
 NOV Grant Prideco Spec for Grade CYX-105
 Spec. Requirements: Tube Max Average: 30.0 - Tool Joints 29.9-36.6 HRC Average

HEAT#	HEAT CODE	POSITION	PRODUCT	LOC	QUADRANT 1				QUADRANT 2				QUADRANT 3				QUADRANT 4			
					1	2	3	Avg												
				MOD																
				ID	36.4	35.3	34.1	35.30	35.3	35.9	35.5	35.60	34.8	35.3	35	35.90	34.6	35.2	33.7	34.50
B21965	KMVBP	3688-15	Pin	OD	33	33.9	33.2	33.40	33.1	33	33.6	33.20	32.2	33.3	33.3	32.90	32.7	33.3	33.5	33.20
				MID	33.2	33.7	32.5	33.10	32.7	33.4	33.4	33.20	32.5	32.9	33.3	32.90	32	33	32.7	32.60
				MOD																
				ID	33.2	32.9	33	33.00	32.9	33.5	33.9	33.40	32.1	32.8	33.2	32.70	32	33	32.7	32.60
B21965	KMVBP	3686-15	Pin	OD	34.2	34	34.1	34.10	33	33.5	33.3	33.30	33.5	33.5	33.3	33.40	32.4	33.2	33.3	33.00
				MID	34.1	33.2	34	33.80	33.5	33.9	33.6	33.70	34.5	33.5	34.1	34.00	33.9	34	33.6	33.80
				MOD																
				ID	32.6	32.5	33.7	32.90	33.7	34.5	34.5	34.20	33.7	33.6	34	33.80	33.9	34	33.6	33.80
B21965	KMVBP	3684-15	Pin	OD	33.4	33.4	33.7	33.50	32.7	33.6	32.9	33.10	34	33.3	33.4	33.60	33.1	33.2	33.6	33.30
				MID	33.9	34.4	34.3	34.20	33.4	33.9	33.8	33.70	33.9	34.3	34.3	34.20	34.2	34.1	34	34.10
				MOD																
				ID	33.9	33.4	34.6	34.00	34.1	34.4	33.5	34.00	34.5	34	34	34.20	34.2	34.1	34	34.10
B21965	KMVBP	3683-15	PIN	OD	34.5	34.7	34.9	34.70	34.6	34.6	34.3	34.50	34.5	34.9	34.7	34.50	34.4	35.2	35.3	35.00
				MID	34.9	35.5	34.5	35.00	34.8	35	34.5	34.80	35	34.9	35.1	35.00	35	35.5	34.8	35.10
				MOD																
				ID	35	34.2	33.5	34.20	33.1	34	34.9	34.00	34.5	34.6	33.7	34.30	35	35.5	34.8	35.10
B21965	KMVBP	3680-15	BOX	OD	33.1	33	32.8	33.00	32.9	33.1	33.3	33.10	32.5	33	33.3	32.90	32.4	33.1	32.8	32.80
				MID	33.6	33.6	33.8	33.70	33.9	33.7	34.1	33.90	33.9	33.8	33.8	33.80	33.2	33.5	33.8	33.50
				MOD																

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



Hardness Test Results - Ring Samples for Products

NOVGP Sales Order Number: 10000776
 Specifications: In Accordance with API Specification 5DP, Latest Edition
 NOV Grant Prideco Spec for Grade CYX-105
 Spec. Requirements: Tube Max Average: 30.0 - Tool Joints 29.9-36.6 HRC Average

HEAT#	HEAT CODE	POSITION	PRODUCT	LOC	QUADRANT 1				QUADRANT 2				QUADRANT 3				QUADRANT 4			
					1	2	3	Avg												
				ID	32.4	32.9	33.6	33.00	33	33.6	34	33.50	33.2	33.9	33.3	33.50	33.2	33.5	33.8	33.50
B21965	KMVBP	3679-15	Box	OD	32.7	34.1	34.3	33.70	34.1	32.3	33.9	33.40	36.3	32.4	33.9	34.20	32.6	33.9	33.5	33.30
				MID	35.6	35.9	36.3	35.90	32.5	34.4	34.8	33.90	33	34.8	34.7	34.20	35.6	35.3	33.7	34.90
				MOD																
				ID	36.4	36.2	37	36.50	34.2	35.1	34.6	34.60	34.8	34.6	34.9	35.90	35.6	35.3	33.7	34.90
B21965	KMVBP	3672-15	Box	OD	32.5	32.7	33	32.70	32.4	32.9	33.3	32.90	32.8	33.8	33.8	33.50	33.1	33	33.2	33.10
				MID	33.7	33.6	34	33.80	34.4	34.1	33.9	34.10	34.5	34.9	34.7	34.70	34.6	34.7	34	34.40
				MOD																
				ID	34.5	33.9	33.9	34.10	34.2	34.5	34.4	34.40	33.2	33.5	33.4	33.40	34.6	34.7	34	34.40
B21965	KMVBP	3666-15	Box	OD	34.2	35.2	34	34.50	35	34.9	33.6	34.50	34.3	34.8	35.1	34.70	33.6	34.3	34	34.00
				MID	35	35.1	34.1	34.70	34.1	33.6	35.3	34.30	34.6	33.9	35.2	34.60	34.3	34.8	33.6	34.20
				MOD																
				ID	34.6	34.8	34.7	34.70	34.2	34.4	34.8	34.50	35	34.1	34.9	34.70	34.3	34.8	33.6	34.20
B21965	KMVBP	3668-15	Box	OD	32.1	32.7	32.7	32.50	32.3	33	33.1	32.80	33	33	32.5	32.80	32.9	33.4	33.8	33.40
				MID	32.9	33	33.3	33.10	33.3	33.4	33.4	33.40	33.5	33.3	33.9	33.60	33.1	33.1	33.8	33.30
				MOD																
				ID	33.7	33.5	33.3	33.50	33.3	33.3	33.7	33.40	33.2	32.9	34.4	33.50	33.1	33.1	33.8	33.30
B21965	KMVBP	3667-15	Box	OD	32.9	32.9	33.7	33.20	32.5	34.2	33.6	33.40	34	33.7	33.7	33.80	32.8	33.8	33.3	33.30
				MID	33.1	33.4	33.8	33.40	33.7	33.1	34	33.60	34.4	34	34.1	34.20	33.5	33.5	34.1	33.70
				MOD																
				ID	33.7	33.2	33.2	33.40	33.5	33.9	33.5	33.60	32.9	33.7	33.9	33.50	33.5	33.5	34.1	33.70

Customer: NATIONAL OILWELL VARCO - DUBAI

Date: 05/31/2016

NOV GP Sales Order Number: 10000776

Customer Purchase Order #: JAPT7605

Description: 4" OD 15.7 LB./FT. .38 WT IU UPSET Range 2 GRADE CYX-105 DRILL STRING WITH XT38 4.563 Bevel PIN 4.75" OD X 2.438" ID 10" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS AND XT38 4.563 Bevel BOX 4.75" OD X 2.438" ID 15" TONG SPACE WITH TCS-8000 HARDBANDING & WITH SE 3/32 & WITH H-Series BENCHMARKS, TK-34P COATING



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8652 Kindberg-Aumuehl
T. +43/3865/22 15-0
F. +43/3865/2215-532
www.vatubulars.com

Legal Structure: Limited Partnership
Location: Kindberg/Austria
Company Registry Number 165400k
Commercial Court of Leoben
DPR 0592684, VAT Nr. ATU 43630406

General Partner: voestalpine Tubulars GmbH
Legal Structure: Limited Liability Company
Location: Linz, Company Registry Number 106933f
Commercial Court of Linz

INSPECTION - CERTIFICATE 3.1

(according to EN 10204)

ABNAHMEPRUEFZEUGNIS 3.1

(gem. EN 10204)

CERTIFICAT DE CONTROLE DES PRODUITS PAR L'USINE 3.1

(selon EN 10204)

Hersteller:
Manufacturer:
Producteur:

voestalpine Tubulars GmbH & Co KG, Austria

Besteller:
Purchaser:
Archeteur:

NOV GRANT PRIDECO

Pruefgegenstand:
Object of tests:
Eprouvette:

Seamless Green Pipe

Werkstoff:
Material:
Matières:

GREEN-PIPE

Anforderungen:
Requirements:
Exigence:

GRANT-SPEC-347.6 dated 03/10/15

Ausführung:
Condition:
Cond. de livraison:

NUE, PLAIN END, PE, LENGTH AIM OF 31,83 ft

Wärmebehandlung:
Heat treatment:
Traitement de chaleur:

Coupl.die stamped:
Coupl.paint stencilling:

Coupl.Colour coding: Fully painted: Bands:

Tube die stamped:
Tube paint stencilling: va 4,000" * 0,401" GRANT PO# 2003652 Spec. 347/6 / Heat No. MADE IN AUSTRIA

Tube Colour coding: Fully painted: Bands:

Label:
Remarks:

No. 116309 Rev.: 0

Auftrags-Nr.: 19694 / 1
Our works order No.:
No usine:

Bestellnr.: 2003652
Your order No.:
No de la commande:

Zeichen des Lieferwerks: **va**
Marking of producer:
Marque du fabricant:

Erschmelzungsart: **BOF**
Melting process: fully killed, produced to
Procédé d'élaboration: fine grain practice

Kindberg, 23.10.2015

Page 1 of 9

No. 116309

Abnahmeprüfzeugnis wurde digital signiert und ist ohne
Originalunterschrift gültig/
Inspection certificate has been signed digitally and is
valid without an original signature

voestalpine Tubulars GmbH & Co KG
Qualitätsstelle / Quality Department
WEITZER

Abnahmebeauftragter
authorized inspection representative
représentant autorisé du controle

Umfang der Lieferung / Volume of delivery / Contenu de la livraison:

Versandanzeige: Dispatch advice No. Avis d'expédition:	Pos.: Pos.:	Abmessung: Dimension: Dimension:	Bundnr.: Bundle No.: Nombre Fret:	Stückzahl: Number Of: Pièces:	Länge: Length: Longueur:	Gewicht: Weight: Poids:	Los: Lot: Lot:
	1	4.000" x 0.401"	1-144	2246	73306,119 ft	520087,00 kg	

Volume of delivery

Heat	Lot	Remark
1015377103	202809	-- 01
1015377104	202810	-- 01
1015377105	202812	-- 01
1015377106	202811	-- 01
1015377107	202808	-- 01
1015377108	202807	-- 01
1015377109	202805	-- 01
1015377110	202804	-- 01
1015377112	202803	-- 01
1015478580	202806	-- 01

Kindberg, 23.10.2015

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Qualitätsstelle / Quality Department
WEITZER

Abnahmebeauftragter
authorized inspection representative
représentant autorisé du contrôle

voestalpine

ONE STEP AHEAD.

Additional tests and inspections performed on pipe

- 1 Dimensionskontrolle/ Dimensional Inspection: bestanden/passed
- 2 Streuflusspruefung / Flux Leakage testing: bestanden/passed
- 3 Visuelle Inspektion/ Visual Inspection: bestanden/passed

Test remarks

Wir bestätigen, dass die gelieferten Erzeugnisse den Anforderungen der Bestellung entsprechen.
We hereby certify that the goods delivered are in compliance with the requirements of the order.

Kindberg, 23.10.2015

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représentant autorisé du controle

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ONE STEP AHEAD.

voestalpine Tubulars GmbH & Co KG

Metallography

Lot No: 202803 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	TS Requirement:	TS Results:	HS Requirement:	HS Results:
		A	1.50	0.50		
		B	1.50	1.00		
		C	1.50	0.50		
		D	1.50	0.50		

Lot No: 202803 -- 01 Sample Type: Standard Sample No.: 2

Purity Grade:	Method: ASTM E45	Type of Inclusion:	TS Requirement:	TS Results:	HS Requirement:	HS Results:
		A	1.50	0.50		
		B	1.50	0.50		
		C	1.50	0.50		
		D	1.50	0.50		

Lot No: 202804 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	TS Requirement:	TS Results:	HS Requirement:	HS Results:
		A	1.50	0.50		
		B	1.50	0.50		
		C	1.50	1.00		
		D	1.50	0.50		

Lot No: 202804 -- 01 Sample Type: Standard Sample No.: 2

Purity Grade:	Method: ASTM E45	Type of Inclusion:	TS Requirement:	TS Results:	HS Requirement:	HS Results:
		A	1.50	0.50		
		B	1.50	0.00		
		C	1.50	0.50		
		D	1.50	0.50		

Lot No: 202805 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	TS Requirement:	TS Results:	HS Requirement:	HS Results:
		A	1.50	0.50		
		B	1.50	0.50		
		C	1.50	0.50		
		D	1.50	0.50		

Lot No: 202805 -- 01 Sample Type: Standard Sample No.: 2

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voestalpine

ONE STEP AHEAD.

Metallography

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	1.00		
			D	1.50	0.50		
				1.50	0.50		

Lot No: 202806 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.00		
			D	1.50	0.50		
				1.50	0.50		

Lot No: 202806 -- 01 Sample Type: Standard Sample No.: 2

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	1.00		
			D	1.50	0.50		
				1.50	0.50		

Lot No: 202807 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.50		
			D	1.50	0.50		
				1.50	0.50		

Lot No: 202807 -- 01 Sample Type: Standard Sample No.: 2

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.50		
			D	1.50	1.00		
				1.50	0.50		

Lot No: 202808 -- 01 Sample Type: Standard Sample No.: 1

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Metallography

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.00		
			D	1.50	0.50		

Lot No: 202808 -- 01 Sample Type: Standard Sample No.: 2

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.50		
			D	1.50	1.00		

Lot No: 202809 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.50		
			D	1.50	0.50		

Lot No: 202809 -- 01 Sample Type: Standard Sample No.: 2

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	1.00		
			D	1.50	0.50		

Lot No: 202810 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	1.00		
			D	1.50	0.50		

Lot No: 202810 -- 01 Sample Type: Standard Sample No.: 2

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Abnahmebeauftragter
authorized inspection representative
représentant autorisé du contrôle

Metallography

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.50		
			D	1.50	0.50		

Lot No: 202811 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.00		
			D	1.50	0.50		

Lot No: 202811 -- 01 Sample Type: Standard Sample No.: 2

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.50		
			D	1.50	0.50		

Lot No: 202812 -- 01 Sample Type: Standard Sample No.: 1

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	0.00		
			D	1.50	0.50		

Lot No: 202812 -- 01 Sample Type: Standard Sample No.: 2

Purity Grade:	Method: ASTM E45	Type of Inclusion:	A	TS Requirem.:	TS Results:	HS Requirem.:	HS Results:
			B	1.50	0.50		
			C	1.50	1.00		
			D	1.50	0.50		

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Chemical testing

Heat analysis

C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	Mo	V	Sn	B	N2	Nb	Ca	CEQ
min. Requ.																	
0.2600	0.1500	0.6000			1.0000					0.3000	0.0600		0.0005		0.0300		
max. Requ.																	
0.3000	0.3500	0.8000	0.0150	0.0050	1.1500	0.1000	0.2500			0.3500	0.1000		0.0020				
1015377103																	
0.2875	0.2656	0.7177	0.0136	0.0031	1.1037	0.0487	0.0149	0.0298	0.0015	0.3277	0.0774	0.0003	0.0017	0.0071	0.0405	0.0015	0.7131
1015377104																	
0.2709	0.2581	0.7066	0.0147	0.0041	1.0807	0.0394	0.0145	0.0434	0.0015	0.3225	0.0780	0.0003	0.0020	0.0064	0.0356	0.0013	0.6885
1015377105																	
0.2805	0.2579	0.7150	0.0129	0.0025	1.0949	0.0291	0.0163	0.0263	0.0014	0.3228	0.0787	0.0005	0.0019	0.0086	0.0377	0.0012	0.7020
1015377106																	
0.2692	0.2483	0.7047	0.0147	0.0023	1.0961	0.0181	0.0145	0.0311	0.0016	0.3227	0.0803	0.0002	0.0020	0.0065	0.0388	0.0014	0.6886
1015377107																	
0.2929	0.2552	0.8588	0.0134	0.0027	1.0935	0.0176	0.0153	0.0348	0.0014	0.3220	0.0759	0.0003	0.0019	0.0078	0.0366	0.0013	0.7365
1015377108																	
0.2892	0.2611	0.7198	0.0164	0.0027	1.1002	0.0194	0.0160	0.0260	0.0015	0.3223	0.0784	0.0005	0.0013	0.0098	0.0368	0.0012	0.7117
1015377109																	
0.2833	0.2678	0.7132	0.0139	0.0035	1.1072	0.0184	0.0157	0.0433	0.0014	0.3168	0.0753	0.0004	0.0014	0.0075	0.0358	0.0011	0.7043
1015377110																	
0.2842	0.2588	0.7085	0.0145	0.0022	1.0982	0.0182	0.0148	0.0319	0.0012	0.3213	0.0804	0.0002	0.0020	0.0064	0.0381	0.0014	0.7045
1015377112																	
0.2767	0.2851	0.7034	0.0145	0.0019	1.0898	0.0175	0.0148	0.0249	0.0015	0.3277	0.0774	0.0002	0.0020	0.0070	0.0364	0.0013	0.6951
1015478580																	
0.2670	0.2736	0.7018	0.0101	0.0031	1.1119	0.0284	0.0154	0.0475	0.0017	0.3359	0.0793	0.0003	0.0016	0.0086	0.0378	0.0013	0.6923

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ONE STEP AHEAD.

Chemical testing

Product analysis

C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	Mo	V	Sn	B	N2	Nb	Ca	CEQ
Lot No. 202803 -- 01 1				Standard				Heat No. 1015377112									
0.2796	0.2792	0.6784	0.0134	0.0019	1.0750	0.0183	0.0150	0.0226	0.0021	0.3271	0.0764	0.0012	0.0018	0.0067	0.0343	0.0000	0.6906
Lot No. 202803 -- 01 2				Standard				Heat No. 1015377112									
0.2840	0.2691	0.6823	0.0137	0.0017	1.0772	0.0186	0.0154	0.0228	0.0019	0.3240	0.0766	0.0012	0.0019	0.0061	0.0344	0.0000	0.6955
Lot No. 202804 -- 01 1				Standard				Heat No. 1015377110									
0.2876	0.2552	0.6849	0.0141	0.0020	1.0900	0.0190	0.0156	0.0286	0.0018	0.3256	0.0802	0.0014	0.0020	0.0076	0.0379	0.0000	0.7032
Lot No. 202804 -- 01 2				Standard				Heat No. 1015377110									
0.2858	0.2523	0.6884	0.0136	0.0019	1.0835	0.0193	0.0157	0.0279	0.0017	0.3218	0.0796	0.0014	0.0020	0.0069	0.0360	0.0000	0.6998
Lot No. 202805 -- 01 1				Standard				Heat No. 1015377109									
0.2800	0.2577	0.6844	0.0129	0.0034	1.0883	0.0197	0.0152	0.0359	0.0019	0.3165	0.0743	0.0013	0.0013	0.0073	0.0329	0.0000	0.6922
Lot No. 202805 -- 01 2				Standard				Heat No. 1015377109									
0.2762	0.2608	0.6859	0.0125	0.0034	1.0912	0.0191	0.0155	0.0383	0.0020	0.3173	0.0749	0.0014	0.0013	0.0075	0.0333	0.0000	0.6895
Lot No. 202806 -- 01 1				Standard				Heat No. 1015478580									
0.2690	0.2649	0.6697	0.0107	0.0042	1.0788	0.0289	0.0145	0.0412	0.0021	0.3296	0.0788	0.0013	0.0016	0.0086	0.0315	0.0000	0.6810
Lot No. 202806 -- 01 2				Standard				Heat No. 1015478580									
0.2718	0.2681	0.6789	0.0114	0.0044	1.0886	0.0290	0.0148	0.0398	0.0022	0.3428	0.0806	0.0011	0.0016	0.0078	0.0357	0.0000	0.6903
Lot No. 202807 -- 01 1				Standard				Heat No. 1015377108									
0.2825	0.2378	0.7334	0.0151	0.0028	1.0661	0.0198	0.0152	0.0227	0.0017	0.3195	0.0738	0.0008	0.0013	0.0090	0.0327	0.0000	0.6989
Lot No. 202807 -- 01 2				Standard				Heat No. 1015377108									
0.2783	0.2380	0.6913	0.0153	0.0026	1.0641	0.0203	0.0163	0.0215	0.0017	0.3154	0.0734	0.0010	0.0011	0.0092	0.0313	0.0000	0.6865
Lot No. 202808 -- 01 1				Standard				Heat No. 1015377107									
0.2850	0.2315	0.8230	0.0131	0.0025	1.0647	0.0189	0.0152	0.0281	0.0017	0.3187	0.0714	0.0008	0.0017	0.0089	0.0337	0.0000	0.7154
Lot No. 202808 -- 01 2				Standard				Heat No. 1015377107									
0.2822	0.2318	0.8160	0.0125	0.0026	1.0575	0.0188	0.0153	0.0281	0.0016	0.3144	0.0706	0.0010	0.0016	0.0080	0.0316	0.0000	0.7090
Lot No. 202809 -- 01 1				Standard				Heat No. 1015377103									
0.2772	0.2600	0.7002	0.0121	0.0030	1.0989	0.0412	0.0156	0.0259	0.0020	0.3330	0.0763	0.0012	0.0017	0.0078	0.0356	0.0000	0.6993
Lot No. 202809 -- 01 2				Standard				Heat No. 1015377103									
0.2764	0.2518	0.6932	0.0115	0.0030	1.0887	0.0469	0.0151	0.0255	0.0018	0.3245	0.0747	0.0010	0.0015	0.0074	0.0334	0.0000	0.6936
Lot No. 202810 -- 01 1				Standard				Heat No. 1015377104									
0.2778	0.2514	0.6939	0.0138	0.0037	1.0816	0.0414	0.0145	0.0361	0.0020	0.3302	0.0779	0.0011	0.0018	0.0074	0.0335	0.0000	0.6951
Lot No. 202810 -- 01 2				Standard				Heat No. 1015377104									
0.2784	0.2483	0.6999	0.0139	0.0043	1.0819	0.0398	0.0150	0.0351	0.0019	0.3286	0.0774	0.0013	0.0018	0.0062	0.0338	0.0000	0.6963
Lot No. 202811 -- 01 1				Standard				Heat No. 1015377106									
0.2852	0.2472	0.7103	0.0138	0.0030	1.0830	0.0195	0.0164	0.0275	0.0020	0.3237	0.0782	0.0014	0.0019	0.0071	0.0357	0.0000	0.7030
Lot No. 202811 -- 01 2				Standard				Heat No. 1015377106									
0.2812	0.2477	0.6897	0.0135	0.0027	1.0819	0.0201	0.0162	0.0275	0.0020	0.3264	0.0793	0.0015	0.0019	0.0072	0.0357	0.0000	0.6961
Lot No. 202812 -- 01 1				Standard				Heat No. 1015377105									
0.2827	0.2506	0.7001	0.0123	0.0021	1.0851	0.0276	0.0164	0.0240	0.0019	0.3277	0.0786	0.0013	0.0017	0.0077	0.0349	0.0000	0.7006
Lot No. 202812 -- 01 2				Standard				Heat No. 1015377105									
0.2897	0.2514	0.7083	0.0121	0.0020	1.0858	0.0304	0.0172	0.0234	0.0018	0.3276	0.0781	0.0016	0.0017	0.0082	0.0345	0.0000	0.7092

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Qualitätsstelle / Quality Department

WEITZER

Abnahmebeauftragter
authorized inspection representative
représentant autorisé du contrôle

voestalpine

ONE STEP AHEAD.



SĕAH Besteel
522, Oehang-ro, Gunsan-si,
Jeollabuk-do, Korea (573-711)

MATERIAL CERTIFICATE

TEL : +82-(0)63-460-8573, 8572(QA)
+82-(0)63-460-8114(Repres.)
FAX : +82-(0)63-460-8423

ISO 9001
SPATIAL
SALES

Page

Date : 2014-12-31	Specification :	Size (inch) : 4.25
Cert. No. : 201412-012719	Steel Grade : 4137MA	Length (mm) : 6,250
Customer : GRANT PRIDECO MEXICO	Shape of Product : Square Bar	Weight (kg) : 55,806
Heat No. : B21965	Delivery Condition : As Rolled	Quantity (pcs) : 96
Serial-No. :	Melting Process : EAF-LF-VD(RH)-CC	



Inspection Items		Surface Inspection (mm)		Inspection Items		Ultrasonic Test	
Spec.	Min. / Max.			Spec.	Min. / Max.		
		GOOD				GOOD	
Result				Result			

<<Remark>> * STEEL MAKING PROCESS : EAF-LHF-VD-CC BLOOM
 * ACC. TO GRANT PRIDECO SPEC 394 REV.0.DATED MAR. 31, 2011
 * UT TEST : ACC. TO ASTM A388 & GRANT SPEC 394 REV.0 (8.4). 100% UT TESTED.
 * EAF, LADLE TREAT, VD, BLOOM CAST 390X510MM DOUBLE EMS
 * MERCURY FREE, NO WELD
 * PPA P.O.NO. : 151-B176
 * GRANT P.O. NO.: 1258787
 * MADE IN KOREA / * P.O.# : 400756

We hereby certify that the material described herein has been made in accordance with the rules of the contract.

Our quality system is certified in accordance with ISO/TS 16949:2009 by KSA

※ 본 품질보증서에 명기된 규격용도의 사용시 안전상 문제가 발생할 수 있으며, 품질보증서 위,변조시 사문서 위조(형법231조)로 불이익을 당하실 수 있습니다.

Certified by S.W. Hong

Manager of Quality Assurance Dept.





SēAH Besteel
522, Oehang-ro, Gunsan-si,
Jeollabuk-do, Korea (573-711)

MATERIAL CERTIFICATE

TEL : +82-(0)63-460-8573, 8572(OA)
+82-(0)63-460-8114(Repres.)
FAX : +82-(0)63-460-8423

Page 1

Date : 2014-12-31	Specification :	Size (inch) :	4.25
Cert. No. : 201412-012716	Steel Grade : 4137MA	Length (mm) :	6,250
Customer : GRANT PRIDECO MEXICO	Shape of Product : Square Bar	Weight (kg) :	83,500
Heat No. : B21963	Delivery Condition : As Rolled	Quantity (pcs) :	144
Serial-No. :	Melting Process : EAF-LF-VD(RH)-CC		



Inspection Items		Surface Inspection (mm)		Inspection Items		Ultrasonic Test	
Spec.	Min. / Max.			Spec.	Min. / Max.		
Result		GOOD		Result		GOOD	

<<Remark>> * STEEL MAKING PROCESS : EAF-LHF-VD-CC BLOOM
 * ACC. TO GRANT PRIDECO SPEC 394 REV.0.DATED MAR. 31, 2011
 * UT TEST : ACC. TO ASTM A388 & GRANT SPEC 394 REV.0 (8.4). 100% UT TESTED.
 * EAF, LADLE TREAT, VD, BLOOM CAST 390X510MM DOUBLE EMS
 * MERCURY FREE, NO WELD
 * PPA P.O.NO. : 151-B176
 * GRANT P.O. NO. : 1258787
 * MADE IN KOREA / * P.O.# : 400756

We hereby certify that the material described herein has been made in accordance with the rules of the contract.

Our quality system is certified in accordance with ISO/TS 16949:2009 by KSA

※ 본 품질보증서에 명기된 규격용도의 사용시 안전상 문제가 발생할 수 있으며, 품질보증서 위,변조시 사문서 위조(형법231조)로 불이익을 당하실 수 있습니다.

Certified by *S.W. Hong*

Manager of Quality Assurance Dept.



HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13735					24			24		
	MDAA13736					22			24		
	MDAA13737					22			23		
	MDAA13738					24			23		
	MDAA13739					24			22		
	MDAA13740					25			24		
	MDAA13741					24			24		
	MDAA13742					23			22		
	MDAA13743					24			24		
	MDAA13744					22			23		
	MDAA13745					23			24		
	MDAA13746					24			23		
	MDAA13747					24			25		
	MDAA13748					25			23		
	MDAA13749					23			26		
	MDAA13750					24			24		
	MDAA13751					26			23		
	MDAA13752					24			24		
	MDAA13753					23			25		
	MDAA13754					23			24		
	MDAA13755					26			25		
	MDAA13756					23			26		
	MDAA13757					25			22		
	MDAA13758					25			24		
	MDAA13759					24			25		
	MDAA13760					24			26		
	MDAA13761					24			25		
	MDAA13762					25			23		
	MDAA13763					24			24		
	MDAA13764					24			23		
	MDAA13765					23			24		
	MDAA13766					24			24		

HARDNESS REPORT

WORK ORDER: 10000776

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CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13767					24			23		
	MDAA13768					23			24		
	MDAA13769					23			24		
	MDAA13770					24			23		
	MDAA13771					24			24		
	MDAA13772					24			23		
	MDAA13773					24			25		
	MDAA13774					23			26		
	MDAA13775					24			25		
	MDAA13776		25			22					
	MDAA13777		23			24					
	MDAA13778		24			23					
	MDAA13779		24			24					
	MDAA13780		25			24					
	MDAA13781		24			24					
	MDAA13782					25			23		
	MDAA13783					24			25		
	MDAA13784					22			24		
	MDAA13785					23			25		
	MDAA13786					25			24		
	MDAA13787					24			24		
	MDAA13788					26			22		
	MDAA13789					23			24		
	MDAA13790					24			23		
	MDAA13791					24			25		
	MDAA13792					23			24		
	MDAA13793					24			24		
	MDAA13794					24			24		
	MDAA13795					23			23		
	MDAA13796					25			25		
	MDAA13797					24			24		
	MDAA13798					25			24		

HARDNESS REPORT

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DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13799					24			25		
	MDAA13800					23			24		
	MDAA13801					22			24		
	MDAA13802					24			25		
	MDAA13803					23			24		
	MDAA13804					24			24		
	MDAA13805					24			24		
	MDAA13806					23			24		
	MDAA13807					24			24		
	MDAA13808					24			25		
	MDAA13809					23			23		
	MDAA13810					24			22		
	MDAA13811					25			24		
	MDAA13812					24			24		
	MDAA13813					23			25		
	MDAA13814					26			26		
	MDAA13815					25			24		
	MDAA13816					24			25		
	MDAA13817					24			25		
	MDAA13818					26			25		
	MDAA13819					25			25		
	MDAA13820					25			24		
	MDAA13821					26			25		
	MDAA13822					25			25		
	MDAA13823					25			24		
	MDAA13824					24			24		
	MDAA13825					24			24		
	MDAA13826					25			25		
	MDAA13827					25			25		
	MDAA13828					24			25		
	MDAA13829					25			25		
	MDAA13830					24			24		

HARDNESS REPORT

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PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13831					24			26		
	MDAA13832					25			24		
	MDAA13833					23			25		
	MDAA13834					24			25		
	MDAA13835					25			24		
	MDAA13836		25			24					
	MDAA13837		24			25					
	MDAA13838		23			24					
	MDAA13839					24			24		
	MDAA13840					23			23		
	MDAA13841					24			24		
	MDAA13842					23			25		
	MDAA13843		25			25					
	MDAA13844		26			26					
	MDAA13845		24			24					
	MDAA13846		23			23					
	MDAA13847		24			24					
	MDAA13848		23			23					
	MDAA13849		25			25					
	MDAA13850		24			24					
	MDAA13851		23			23					
	MDAA13852		24			24					
	MDAA13853		23			23					
	MDAA13854		25			25					
	MDAA13855		24			24					
	MDAA13856		24			24					
	MDAA13857		24			24					
	MDAA13858		23			23					
	MDAA13859		24			24					
	MDAA13860		24			24					
	MDAA13861		23			23					
	MDAA13862		23			23					

HARDNESS REPORT

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DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13863		24			24					
	MDAA13864		25			25					
	MDAA13865		24			24					
	MDAA13866		23			23					
	MDAA13867		24			24					
	MDAA13868		24			24					
	MDAA13869		24			24					
	MDAA13870		25			25					
	MDAA13871		26			26					
	MDAA13872		24			24					
	MDAA13873		25			25					
	MDAA13874		24			24					
	MDAA13875		24			24					
	MDAA13876		24			24					
	MDAA13877		23			23					
	MDAA13878		24			24					
	MDAA13879		24			23					
	MDAA13880		24			24					
	MDAA13881		25			24					
	MDAA13882		23			24					
	MDAA13883		24			25					
	MDAA13884		24			24					
	MDAA13885		25			24					
	MDAA13886		23			24					
	MDAA13887		24			23					
	MDAA13888		23			24					
	MDAA13889		24			25					
	MDAA13890		23			25					
	MDAA13891		25			24					
	MDAA13892		26			26					
	MDAA13893		24			23					
	MDAA13894		24			24					

HARDNESS REPORT

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PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13895		24			24					
	MDAA13896		24			24					
	MDAA13897		25			25					
	MDAA13898		26			23					
	MDAA13899		24			24					
	MDAA13900		24			25					
	MDAA13901		25			24					
	MDAA13902		26			23					
	MDAA13903		25			24					
	MDAA13904		24			26					
	MDAA13905		24			25					
	MDAA13906		23			24					
	MDAA13907		24			24					
	MDAA13908		23			25					
	MDAA13909		24			24					
	MDAA13910		24			23					
	MDAA13911		23			25					
	MDAA13912		24			24					
	MDAA13913		25			24					
	MDAA13914		25			24					
	MDAA13915		26			23					
	MDAA13916		24			24					
	MDAA13917		23			23					
	MDAA13918		24			24					
	MDAA13919		22			25					
	MDAA13920		25			25					
	MDAA13921		24			24					
	MDAA13922		27			26					
	MDAA13923		27			24					
	MDAA13924		26			24					
	MDAA13925		24			23					
	MDAA13926		23			24					

HARDNESS REPORT

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PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13927		24			24					
	MDAA13928		25			25					
	MDAA13929		26			24					
	MDAA13930		24			24					
	MDAA13931		24			24					
	MDAA13932		24			24					
	MDAA13933		24			24					
	MDAA13934		25			25					
	MDAA13935		23			24					
	MDAA13936		24			24					
	MDAA13937		24			23					
	MDAA13938		23			22					
	MDAA13939		24			25					
	MDAA13940		23			24					
	MDAA13941		24			25					
	MDAA13942		23			24					
	MDAA13943		24			25					
	MDAA13944		26			24					
	MDAA13945		24			24					
	MDAA13946		25			24					
	MDAA13947		23			23					
	MDAA13948		22			24					
	MDAA13949		22			25					
	MDAA13950		24			24					
	MDAA13951		23			24					
	MDAA13952		24			23					
	MDAA13953		24			24					
	MDAA13954		24			25					
	MDAA13955		23			25					
	MDAA13956		25			24					
	MDAA13957		24			24					
	MDAA13958		23			23					

HARDNESS REPORT

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DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13959		22			24					
	MDAA13960		24			25					
	MDAA13961		23			23					
	MDAA13962		24			23					
	MDAA13963		22			22					
	MDAA13964		25			24					
	MDAA13965		24			25					
	MDAA13966		25			24					
	MDAA13967		24			24					
	MDAA13968		24			24					
	MDAA13969		24			25					
	MDAA13970		24			25					
	MDAA13971		25			24					
	MDAA13972		24			23					
	MDAA13973		25			24					
	MDAA13974		26			22					
	MDAA13975		23			23					
	MDAA13976					24		23			
	MDAA13977					24		25			
	MDAA13978					24		24			
	MDAA13979					23		25			
	MDAA13980					25		24			
	MDAA13981					26		24			
	MDAA13982					24		25			
	MDAA13983					23		26			
	MDAA13984					25		24			
	MDAA13985					23		24			
	MDAA13986					24		26			
	MDAA13987					24		25			
	MDAA13988					24		24			
	MDAA13989					25		25			
	MDAA13990					25		24			

HARDNESS REPORT

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PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA13991					24			25		
	MDAA13992					24			26		
	MDAA13993					24			26		
	MDAA13994					25			25		
	MDAA13995					24			24		
	MDAA13996					23			24		
	MDAA13997					24			25		
	MDAA13998					25			25		
	MDAA13999					26			24		
	MDAA14000					24			22		
	MDAA14001					25			25		
	MDAA14002					24			25		
	MDAA14003					24			24		
	MDAA14004					25			24		
	MDAA14005					25			24		
	MDAA14006					24			23		
	MDAA14007					24			24		
	MDAA14008					25			25		
	MDAA14009		24			26					
	MDAA14010		25			24					
	MDAA14011		24			24					
	MDAA14012		25			24					
	MDAA14013		25			23					
	MDAA14014		24			24					
	MDAA14015					25			24		
	MDAA14016					24			24		
	MDAA14017					24			25		
	MDAA14018					24			24		
	MDAA14019					25			24		
	MDAA14020					23			24		
	MDAA14021					24			25		
	MDAA14022					24			24		

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14023					24			24		
	MDAA14024					24			25		
	MDAA14025					25			24		
	MDAA14026					24			23		
	MDAA14027					24			26		
	MDAA14028					23			23		
	MDAA14029					25			24		
	MDAA14030					25			25		
	MDAA14031					23			24		
	MDAA14032					23			26		
	MDAA14033					25			25		
	MDAA14034					25			25		
	MDAA14035					23			26		
	MDAA14036					24			25		
	MDAA14037					23			25		
	MDAA14038					24			24		
	MDAA14039					24			24		
	MDAA14040					25			24		
	MDAA14041					24			25		
	MDAA14042					26			26		
	MDAA14043					25			26		
	MDAA14044					25			24		
	MDAA14045					24			25		
	MDAA14046					25			25		
	MDAA14047					24			24		
	MDAA14048					24			24		
	MDAA14049					23			23		
	MDAA14050					23			23		
	MDAA14051					24			23		
	MDAA14052					26			24		
	MDAA14053					23			23		
	MDAA14054					23			23		

HARDNESS REPORT

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DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14055					24			24		
	MDAA14056					24			26		
	MDAA14057					24			26		
	MDAA14058					24			26		
	MDAA14059					24			24		
	MDAA14060					24			25		
	MDAA14061					23			24		
	MDAA14062					24			24		
	MDAA14063					22			24		
	MDAA14064					24			25		
	MDAA14065					24			24		
	MDAA14066					23			23		
	MDAA14067					25			23		
	MDAA14068					24			24		
	MDAA14069					23			24		
	MDAA14070					24			25		
	MDAA14071					25			23		
	MDAA14072					24			23		
	MDAA14073					24			23		
	MDAA14074					23			24		
	MDAA14075					24			24		
	MDAA14076					24			24		
	MDAA14077					25			23		
	MDAA14078					23			24		
	MDAA14079					24			22		
	MDAA14080					23			24		
	MDAA14081					24			24		
	MDAA14082					23			23		
	MDAA14083					24			23		
	MDAA14084					25			24		
	MDAA14085					23			24		
	MDAA14086					24			24		

HARDNESS REPORT

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PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14087					24			24		
	MDAA14088					24			24		
	MDAA14089		23			23					
	MDAA14090		24			22					
	MDAA14091		24			24					
	MDAA14092		22			25					
	MDAA14093		24			23					
	MDAA14094		24			24					
	MDAA14095		24			24					
	MDAA14096		24			24					
	MDAA14097		24			24					
	MDAA14098		25			23					
	MDAA14099		24			24					
	MDAA14100		23			23					
	MDAA14101		24			24					
	MDAA14102		24			25					
	MDAA14103		25			23					
	MDAA14104		23			24					
	MDAA14105		26			24					
	MDAA14106		27			23					
	MDAA14107		24			22					
	MDAA14108		23			26					
	MDAA14109		25			23					
	MDAA14110		24			24					
	MDAA14111		23			23					
	MDAA14112		25			24					
	MDAA14113		26			24					
	MDAA14114		23			25					
	MDAA14115		25			23					
	MDAA14116		26			24					
	MDAA14117		24			24					
	MDAA14118		24			23					

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PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14119		24			23					
	MDAA14120		23			25					
	MDAA14121		22			22					
	MDAA14122		24			23					
	MDAA14123		24			26					
	MDAA14124		22			24					
	MDAA14125		22			24					
	MDAA14126		22			23					
	MDAA14127		25			24					
	MDAA14128		23			24					
	MDAA14129		24			22					
	MDAA14130		22			22					
	MDAA14131		22			23					
	MDAA14132		23			24					
	MDAA14133		26			24					
	MDAA14134		24			22					
	MDAA14135		25			23					
	MDAA14136		22			24					
	MDAA14137		24			24					
	MDAA14138		23			23					
	MDAA14139		24			24					
	MDAA14140		23			23					
	MDAA14141		24			24					
	MDAA14142		23			24					
	MDAA14143		24			24					
	MDAA14144		25			24					
	MDAA14145		24			24					
	MDAA14146		24			24					
	MDAA14147		25			24					
	MDAA14148		24			25					
	MDAA14149		24			23					
	MDAA14150		25			24					

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DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14151		23			22					
	MDAA14152		24			24					
	MDAA14153		23			23					
	MDAA14154		24			24					
	MDAA14155		24			22					
	MDAA14156		25			26					
	MDAA14157		23			23					
	MDAA14158		23			25					
	MDAA14159		24			25					
	MDAA14160		24			24					
	MDAA14161		24			23					
	MDAA14162		23			25					
	MDAA14163		23			23					
	MDAA14164		23			24					
	MDAA14165		24			23					
	MDAA14166		24			23					
	MDAA14167		23			24					
	MDAA14168		24			23					
	MDAA14169		24			23					
	MDAA14170		22			22					
	MDAA14171		26			22					
	MDAA14172		25			24					
	MDAA14173		25			24					
	MDAA14174		24			23					
	MDAA14175		24			23					
	MDAA14176		23			22					
	MDAA14177		23			22					
	MDAA14178		22			22					
	MDAA14179		24			22					
	MDAA14180		23			24					
	MDAA14181		25			24					
	MDAA14182		24			23					

HARDNESS REPORT

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PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14183		24			22					
	MDAA14184		24			24					
	MDAA14185		23			25					
	MDAA14186		22			24					
	MDAA14187		24			24					
	MDAA14188		25			23					
	MDAA14189		23			22					
	MDAA14190		23			24					
	MDAA14191		24			25					
	MDAA14192		24			23					
	MDAA14193		24			22					
	MDAA14194		25			25					
	MDAA14195		24			23					
	MDAA14196		25			24					
	MDAA14197		24			25					
	MDAA14198		24			24					
	MDAA14199		23			25					
	MDAA14200		24			24					
	MDAA14201		24			24					
	MDAA14202		24			25					
	MDAA14203		24			25					
	MDAA14204		23			24					
	MDAA14205		25			25					
	MDAA14206		22			22					
	MDAA14207		23			24					
	MDAA14208		24			23					
	MDAA14209		22			22					
	MDAA14210		26			23					
	MDAA14211		22			26					
	MDAA14212		24			25					
	MDAA14213		25			23					
	MDAA14214		23			24					

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14215		22			23					
	MDAA14216		25			22					
	MDAA14217		24			24					
	MDAA14218		25			24					
	MDAA14219		26			25					
	MDAA14220		24			25					
	MDAA14221		23			24					
	MDAA14222		24			22					
	MDAA14223		24			23					
	MDAA14224		22			22					
	MDAA14225		22			23					
	MDAA14226		23			23					
	MDAA14227		26			22					
	MDAA14228		24			24					
	MDAA14229		23			26					
	MDAA14230		24			22					
	MDAA14231		25			24					
	MDAA14232		23			23					
	MDAA14233		24			22					
	MDAA14234		23			24					
	MDAA14235		24			23					
	MDAA14236		25			25					
	MDAA14237		26			26					
	MDAA14238		24			23					
	MDAA14239		24			24					
	MDAA14240		21			24					
	MDAA14241		28			26					
	MDAA14242		27			23					
	MDAA14243		26			25					
	MDAA14244		22			23					
	MDAA14245		24			24					
	MDAA14246		24			23					

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14247		23			24					
	MDAA14248		22			23					
	MDAA14249		24			24					
	MDAA14250		24			24					
	MDAA14251		23			24					
	MDAA14252		25			25					
	MDAA14253		26			24					
	MDAA14254		23			26					
	MDAA14255		24			24					
	MDAA14256		22			23					
	MDAA14257		26			25					
	MDAA14258		23			26					
	MDAA14259		25			24					
	MDAA14260		24			22					
	MDAA14261		24			26					
	MDAA14262		23			25					
	MDAA14263		24			23					
	MDAA14264		24			22					
	MDAA14265		23			24					
	MDAA14266		25			25					
	MDAA14267		25			24					
	MDAA14268		26			24					
	MDAA14269		23			26					
	MDAA14270		25			22					
	MDAA14271		24			26					
	MDAA14272		26			22					
	MDAA14273		25			24					
	MDAA14274		24			24					
	MDAA14275		23			25					
	MDAA14276		26			24					
	MDAA14277		24			22					
	MDAA14278		24			25					

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14279		23			24					
	MDAA14280		25			26					
	MDAA14281		23			26					
	MDAA14282		24			23					
	MDAA14283		23			24					
	MDAA14284		22			25					
	MDAA14285		22			22					
	MDAA14286		24			23					
	MDAA14287		24			24					
	MDAA14288		23			23					
	MDAA14289		24			24					
	MDAA14290		24			25					
	MDAA14291		22			27					
	MDAA14292		24			26					
	MDAA14293		23			25					
	MDAA14294		23			23					
	MDAA14295		24			24					
	MDAA14296		25			24					
	MDAA14297		23			23					
	MDAA14298		24			24					
	MDAA14299		24			24					
	MDAA14300		25			25					
	MDAA14301		26			23					
	MDAA14302		24			24					
	MDAA14303		22			26					
	MDAA14304		23			22					
	MDAA14305		25			24					
	MDAA14306		25			23					
	MDAA14307		22			22					
	MDAA14308		24			26					
	MDAA14309		23			24					
	MDAA14310		23			23					

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14311		24			22					
	MDAA14312		25			24					
	MDAA14313		22			24					
	MDAA14314		24			23					
	MDAA14315		23			22					
	MDAA14316		24			24					
	MDAA14317		25			24					
	MDAA14318		24			23					
	MDAA14319		23			23					
	MDAA14320		26			24					
	MDAA14321		23			24					
	MDAA14322		24			25					
	MDAA14323		25			23					
	MDAA14324		24			24					
	MDAA14325		24			24					
	MDAA14326		24			22					
	MDAA14327		22			24					
	MDAA14328		23			22					
	MDAA14329		24			24					
	MDAA14330		23			25					
	MDAA14331		23			25					
	MDAA14332		24			24					
	MDAA14333		24			24					
	MDAA14334		24			22					
	MDAA14335		22			22					
	MDAA14336		25			22					
	MDAA14337		23			24					
	MDAA14338		22			24					
	MDAA14339					24		24			
	MDAA14340					23		23			
	MDAA14341					24		23			
	MDAA14342					25		24			

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14343					23			22		
	MDAA14344					26			24		
	MDAA14345					24			25		
	MDAA14346		23			23					
	MDAA14347		27			24					
	MDAA14348					23			24		
	MDAA14349					26			25		
	MDAA14350					25			25		
	MDAA14351					23			23		
	MDAA14352					24			25		
	MDAA14353					23			24		
	MDAA14354					25			25		
	MDAA14355					24			23		
	MDAA14356					24			23		
	MDAA14357					26			25		
	MDAA14358					23			25		
	MDAA14359					24			23		
	MDAA14360					24			25		
	MDAA14361					25			24		
	MDAA14362					24			24		
	MDAA14363					23			24		
	MDAA14364					24			23		
	MDAA14365					23			24		
	MDAA14366					22			22		
	MDAA14367					24			24		
	MDAA14368					25			23		
	MDAA14369					24			22		
	MDAA14370					23			23		
	MDAA14371					24			26		
	MDAA14372					24			25		
	MDAA14373					24			24		
	MDAA14374					25			25		

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14375					23			24		
	MDAA14376					25			24		
	MDAA14377					24			24		
	MDAA14378					23			25		
	MDAA14379					24			23		
	MDAA14380					25			24		
	MDAA14381					24			24		
	MDAA14382					24			24		
	MDAA14383					22			24		
	MDAA14384					23			25		
	MDAA14385					24			24		
	MDAA14386					24			26		
	MDAA14387					23			26		
	MDAA14388					24			26		
	MDAA14389					24			24		
	MDAA14390					23			25		
	MDAA14391					24			25		
	MDAA14392					24			24		
	MDAA14393					24			24		
	MDAA14394					26			24		
	MDAA14395					26			24		
	MDAA14396					24			23		
	MDAA14397					24			24		
	MDAA14398					23			26		
	MDAA14399					24			25		
	MDAA14400					24			24		
	MDAA14401					25			23		
	MDAA14402					24			24		
	MDAA14403					24			24		
	MDAA14404					24			24		
	MDAA14405					24			25		
	MDAA14406					23			23		

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14407					24			22		
	MDAA14408					23			25		
	MDAA14409					24			24		
	MDAA14410					24			23		
	MDAA14411					23			24		
	MDAA14412					24			25		
	MDAA14413					23			23		
	MDAA14414					24			23		
	MDAA14415					24			24		
	MDAA14416					24			24		
	MDAA14417					24			25		
	MDAA14418					24			26		
	MDAA14419					24			23		
	MDAA14420					25			24		
	MDAA14421					26			24		
	MDAA14422					24			23		
	MDAA14423					24			24		
	MDAA14424					24			24		
	MDAA14425					25			23		
	MDAA14426					23			23		
	MDAA14427					24			24		
	MDAA14428					23			25		
	MDAA14429					24			24		
	MDAA14430					24			23		
	MDAA14431					24			24		
	MDAA14432					23			23		
	MDAA14433					24			24		
	MDAA14434					25			23		
	MDAA14435					23			24		
	MDAA14436					24			25		
	MDAA14437					24			26		
	MDAA14438					23			24		

HARDNESS REPORT

WORK ORDER: 10000776

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CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14439					24			24		
	MDAA14440					24			24		
	MDAA14441					23			24		
	MDAA14442					26			25		
	MDAA14443					23			26		
	MDAA14444					24			26		
	MDAA14445					25			24		
	MDAA14446					24			24		
	MDAA14447					24			23		
	MDAA14448					24			22		
	MDAA14449					23			24		
	MDAA14450					24			25		
	MDAA14451					24			24		
	MDAA14452					25			23		
	MDAA14453					25			26		
	MDAA14454					26			26		
	MDAA14455					24			24		
	MDAA14456					24			25		
	MDAA14457					25			24		
	MDAA14458					24			24		
	MDAA14459					23			24		
	MDAA14460					24			23		
	MDAA14461					23			24		
	MDAA14462					24			24		
	MDAA14463					23			24		
	MDAA14464					26			23		
	MDAA14465					27			24		
	MDAA14466					26			24		
	MDAA14467					23			25		
	MDAA14468					24			24		
	MDAA14469					25			25		
	MDAA14470					24			23		

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14471					24			24		
	MDAA14472					25			24		
	MDAA14473					24			24		
	MDAA14474					24			24		
	MDAA14475					23			24		
	MDAA14476					24			23		
	MDAA14477					22			24		
	MDAA14478					24			24		
	MDAA14479					23			23		
	MDAA14480					24			24		
	MDAA14481					22			23		
	MDAA14482					24			24		
	MDAA14483					24			24		
	MDAA14484					24			24		
	MDAA14485					22			22		
	MDAA14486					23			23		
	MDAA14487					24			23		
	MDAA14488					24			24		
	MDAA14489					25			25		
	MDAA14490					25			24		
	MDAA14491					24			24		
	MDAA14492					24			24		
	MDAA14493					23			24		
	MDAA14494					23			23		
	MDAA14495					24			25		
	MDAA14496					24			24		
	MDAA14497					24			23		
	MDAA14498					23			24		
	MDAA14499					23			25		
	MDAA14500					24			24		
	MDAA14501					25			24		
	MDAA14502					26			23		

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14503					26			23		
	MDAA14504					24			24		
	MDAA14505					24			24		
	MDAA14506					23			23		
	MDAA14507		25			25					
	MDAA14508		25			24					
	MDAA14509		24			24					
	MDAA14510		24			22					
	MDAA14511		25			24					
	MDAA14512		24			24					
	MDAA14513		23			26					
	MDAA14514		24			24					
	MDAA14515		24			25					
	MDAA14516		23			26					
	MDAA14517		24			24					
	MDAA14518		24			22					
	MDAA14519		25			24					
	MDAA14520		23			23					
	MDAA14521		24			24					
	MDAA14522					25			23		
	MDAA14523					24			24		
	MDAA14524					24			25		
	MDAA14525					23			25		
	MDAA14526					24			23		
	MDAA14527		25			24					
	MDAA14528		24			23					
	MDAA14529		24			25					
	MDAA14530		25			25					
	MDAA14531		24			24					
	MDAA14532		24			24					
	MDAA14533		25			25					
	MDAA14534		25			24					

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14535					23			24		
	MDAA14536					23			24		
	MDAA14537		24			25					
	MDAA14538					26			22		
	MDAA14539					25			23		
	MDAA14540					26			23		
	MDAA14541					26			26		
	MDAA14542		24			25					
	MDAA14543					25			28		
	MDAA14544					24			24		
	MDAA14545		24			25					
	MDAA14546		24			23					
	MDAA14547					24			24		
	MDAA14548					24			24		
	MDAA14549					25			25		
	MDAA14550					25			24		
	MDAA14551					24			23		
	MDAA14552					24			23		
	MDAA14553					24			24		
	MDAA14554					23			24		
	MDAA14555					24			25		
	MDAA14556					24			24		
	MDAA14557					25			24		
	MDAA14558					23			24		
	MDAA14559					23			23		
	MDAA14560					24			24		
	MDAA14561					25			24		
	MDAA14562					26			25		
	MDAA14563					24			23		
	MDAA14564					24			24		
	MDAA14565					23			24		
	MDAA14566					24			23		

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14567					24			24		
	MDAA14568					25			24		
	MDAA14569					24			23		
	MDAA14570					25			26		
	MDAA14571					24			26		
	MDAA14572					24			25		
	MDAA14573					25			24		
	MDAA14574					23			24		
	MDAA14575					24			23		
	MDAA14576					23			24		
	MDAA14577					25			24		
	MDAA14578					24			24		
	MDAA14579					24			23		
	MDAA14580					23			24		
	MDAA14581					24			23		
	MDAA14582					23			24		
	MDAA14583					24			23		
	MDAA14584					24			24		
	MDAA14585					24			24		
	MDAA14586					24			24		
	MDAA14587					23			25		
	MDAA14588					24			23		
	MDAA14589					24			24		
	MDAA14590					22			24		
	MDAA14591					23			25		
	MDAA14592					24			25		
	MDAA14593					22			25		
	MDAA14594		24			25					
	MDAA14595		25			24					
	MDAA14596		24			23					
	MDAA14597		24			24					
	MDAA14598		25			24					

HARDNESS REPORT

WORK ORDER: 10000776

MO:

CUSTOMER: NOV GRANT PRIDECO DUBAI

PO:

DESCRIPTION: 4"OD DP(15.7 LB./FT 0.380"WT) GRADE CYX105-120 RANGE 2 DRILL PIPE

CUSTOMER NO.	DSA NO.	PIN			TUBE			BOX			WALL
	MDAA14599					24			23		
	MDAA14600					24			24		
	MDAA14601					24			26		

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Version 1.6 Revision Date: 09/24/2015 SDS Number: 114857-00006 Date of last issue: 09/04/2015
 Date of first issue: 05/12/2015

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	>= 30 - < 50
Talc	14807-96-6	>= 5 - < 10
Calcium oxide	1305-78-8	>= 1 - < 5
Zinc oxide	1314-13-2	>= 1 - < 5
12-Hydroxy lithium stearate	7620-77-1	>= 1 - < 5
Quartz	14808-60-7	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
 When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
 Get medical attention if symptoms occur.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.
 Remove contaminated clothing and shoes.
 Get medical attention.
 Wash clothing before reuse.
 Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
 If easy to do, remove contact lens, if worn.
 Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting.
 Get medical attention if symptoms occur.
 Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Causes serious eye irritation.

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Version	Revision Date:	SDS Number:	Date of last issue: 09/04/2015
1.6	09/24/2015	114857-00006	Date of first issue: 05/12/2015

- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.
-

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
Metal oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
-

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
-

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Version 1.6 Revision Date: 09/24/2015 SDS Number: 114857-00006 Date of last issue: 09/04/2015
 Date of first issue: 05/12/2015

SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not get on skin or clothing.
 Do not swallow.
 Do not get in eyes.
 Handle in accordance with good industrial hygiene and safety practice.
 Keep away from water.
 Protect from moisture.
 Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.
 Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
 Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	TWA (Mist)	5 mg/m ³	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m ³	ACGIH
		TWA (Mist)	5 mg/m ³	NIOSH REL
Talc	14807-96-6	ST (Mist)	10 mg/m ³	NIOSH REL
		TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (Respirable)	2 mg/m ³	NIOSH REL
Calcium oxide	1305-78-8	TWA (Respirable fraction)	2 mg/m ³	ACGIH
		TWA	2 mg/m ³	NIOSH REL
		TWA	5 mg/m ³	OSHA Z-1
Zinc oxide	1314-13-2	TWA (Respirable fraction)	2 mg/m ³	ACGIH
		STEL (Respirable fraction)	10 mg/m ³	ACGIH

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		pirable fraction)		
		TWA (Dust)	5 mg/m ³	NIOSH REL
		TWA (Fumes)	5 mg/m ³	NIOSH REL
		ST (Fumes)	10 mg/m ³	NIOSH REL
		C (Dust)	15 mg/m ³	NIOSH REL
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Fumes)	5 mg/m ³	OSHA Z-1
12-Hydroxy lithium stearate	7620-77-1	TWA	10 mg/m ³	ACGIH
Quartz	14808-60-7	TWA (total dust)	30 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	10 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (Respirable fraction)	0.025 mg/m ³ (Silica)	ACGIH
		TWA (Respirable dust)	0.05 mg/m ³ (Silica)	NIOSH REL

Occupational exposure limits of decomposition products

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Calcium hydroxide	1305-62-0	TWA	5 mg/m ³	ACGIH
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA	5 mg/m ³	NIOSH REL

Engineering measures : Processing may form hazardous compounds (see section 10).
 Ensure adequate ventilation, especially in confined areas.
 Minimize workplace exposure concentrations.
 Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m³ - total dust, 5 mg/m³ - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m³ - respirable particles, 10 mg/m³ - inhalable particles.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where

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concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

- Hand protection
Material : Impervious gloves
- Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
- Eye protection : Wear the following personal protective equipment:
Safety goggles
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Viscous semi-solid
- Color : gray
- Odor : Petroleum
- Odor Threshold : No data available
- pH : Not applicable (not an aqueous solution)
- Melting point/freezing point : No data available
- Initial boiling point and boiling range : No data available

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Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	1.8
Solubility(ies)		
Water solubility	:	negligible
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Flow time	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air.
Conditions to avoid	:	Exposure to moisture.
Incompatible materials	:	Oxidizing agents Water
Hazardous decomposition products		
Contact with water or humid air	:	Calcium hydroxide

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SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Ingredients:**Distillates (petroleum), hydrotreated heavy naphthenic:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Talc:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: Based on data from similar materials

Calcium oxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 425
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,500 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Zinc oxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5.7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

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12-Hydroxy lithium stearate:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Quartz:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Ingredients:**Distillates (petroleum), hydrotreated heavy naphthenic:**

Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

Talc:

Species: Rabbit
Result: No skin irritation

Calcium oxide:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Skin irritation
Remarks: Based on data from similar materials

Zinc oxide:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

12-Hydroxy lithium stearate:

Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye irritation.

Ingredients:**Distillates (petroleum), hydrotreated heavy naphthenic:**

Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

Talc:

Species: Rabbit
Result: No eye irritation

Calcium oxide:

Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405

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Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Talc:

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro
Species: Rat
Application Route: Ingestion
Result: negative

Calcium oxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Zinc oxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Product:

Carcinogenicity - Assessment : Petroleum distillates have been classified as not carcinogenic based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Ingredients:**Distillates (petroleum), hydrotreated heavy naphthenic:**

Species: Mouse
Application Route: Skin contact
Exposure time: 78 weeks
Method: OECD Test Guideline 451
Result: negative

Talc:

Species: Mouse
Application Route: inhalation (dust/mist/fume)
Exposure time: 2 Years
Result: negative

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Calcium oxide:

Species: Rat
 Application Route: Ingestion
 Exposure time: 104 weeks
 Result: negative
 Remarks: Based on data from similar materials

Quartz:

Species: Humans
 Application Route: inhalation (dust/mist/fume)
 Result: positive
 Remarks: IARC (International Agency for Research on Cancer)
 The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment : Positive evidence from human epidemiological studies (inhalation)

IARC

Group 1: Carcinogenic to humans

Quartz 14808-60-7

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

Known to be human carcinogen

Quartz 14808-60-7

Reproductive toxicity

Not classified based on available information.

Ingredients:**Talc:**

Effects on fetal development : Test Type: Embryo-fetal development
 Species: Rat
 Application Route: Ingestion
 Result: negative

Calcium oxide:

Effects on fetal development : Test Type: Embryo-fetal development
 Species: Mouse
 Application Route: Ingestion
 Method: OECD Test Guideline 414
 Result: negative

Zinc oxide:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
 Species: Rat
 Application Route: Ingestion
 Method: OECD Test Guideline 416
 Result: negative

Effects on fetal development : Test Type: Embryo-fetal development

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Species: Hamster
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

Ingredients:**Calcium oxide:**

Assessment: May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Ingredients:**Zinc oxide:**

Routes of exposure: inhalation (dust/mist/fume)

Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

12-Hydroxy lithium stearate:

Routes of exposure: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Quartz:

Routes of exposure: inhalation (dust/mist/fume)

Target Organs: Lungs

Assessment: Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.

Repeated dose toxicity**Ingredients:****Distillates (petroleum), hydrotreated heavy naphthenic:**

Species: Rat

NOAEL: > 0.98 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 28 Days

Remarks: Based on data from similar materials

Zinc oxide:

Species: Rat

NOAEL: 1.5 mg/m³

Application Route: inhalation (dust/mist/fume)

Exposure time: 3 Months

Method: OECD Test Guideline 413

12-Hydroxy lithium stearate:

Species: Rat

NOAEL: > 88 mg/kg

Application Route: Ingestion

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Exposure time: 90 Days

Quartz:

Species: Humans

LOAEL: 0.053 mg/m³

Application Route: inhalation (dust/mist/fume)

Remarks: The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:****Distillates (petroleum), hydrotreated heavy naphthenic:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
 Exposure time: 48 h
 Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
 Exposure time: 21 d
 Remarks: Based on data from similar materials

Toxicity to bacteria : NOEC: > 1.93 mg/l
 Exposure time: 10 min
 Remarks: Based on data from similar materials

Talc:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 100,000 mg/l
 Exposure time: 24 h

Calcium oxide:

Toxicity to fish : LC50 (Gasterosteus aculeatus (threespine stickleback)): 457 mg/l
 Exposure time: 96 h
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : LC50: 158 mg/l
 Exposure time: 96 h
 Remarks: Based on data from similar materials

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Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 184.57 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): 48 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 32 mg/l
 Exposure time: 12 d
 Remarks: Based on data from similar materials

Toxicity to bacteria : EC50: 300.4 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209
 Remarks: Based on data from similar materials

Zinc oxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 330 - 780 µg/l
 Exposure time: 96 h
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6.9 - 16.2 mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 136 µg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201

NOEC (Selenastrum capricornutum (green algae)): 24 µg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 199 µg/l
 Exposure time: 30 d
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 37 µg/l
 Exposure time: 21 d
 Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to bacteria : EC50: 5.2 mg/l
 Exposure time: 3 h

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Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

12-Hydroxy lithium stearate:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : NOELR (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Quartz:

Ecotoxicology Assessment
Acute aquatic toxicity : No toxicity at the limit of solubility.

Chronic aquatic toxicity : No toxicity at the limit of solubility.

Persistence and degradability**Ingredients:****Distillates (petroleum), hydrotreated heavy naphthenic:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

12-Hydroxy lithium stearate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 78 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Bioaccumulative potential**Ingredients:****Zinc oxide:**

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 177

Mobility in soil

No data available

Other adverse effects

No data available

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SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION**International Regulation****UNRTDG**

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Zinc, Zinc oxide)

Class : 9

Packing group : III

Labels : 9

IATA-DGR

UN/ID No. : UN 3077

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Zinc, Zinc oxide)

Class : 9

Packing group : III

Labels : Miscellaneous

Packing instruction (cargo aircraft) : 956

Packing instruction (passenger aircraft) : 956

IMDG-Code

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Zinc, Zinc oxide)

Class : 9

Packing group : III

Labels : 9

EmS Code : F-A, S-F

Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**49 CFR**

UN/ID/NA number : UN 3077

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Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
 (Zinc, Zinc oxide)
 Class : 9
 Packing group : III
 Labels : CLASS 9
 ERG Code : 171
 Marine pollutant : yes (Zinc, Zinc oxide)
 Remarks : Above applies only to containers over 119 gallons or 450 liters., Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Zinc	7440-66-6	1000	2000
Lead	7439-92-1	10	13333
Cadmium	7440-43-9	10	28571

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Zinc	7440-66-6	50 %
Zinc oxide	1314-13-2	2.5 %

US State Regulations**Pennsylvania Right To Know**

Zinc	7440-66-6	50 - 70 %
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	30 - 50 %
Talc	14807-96-6	5 - 10 %
Calcium oxide	1305-78-8	1 - 5 %
Zinc oxide	1314-13-2	1 - 5 %
Lead	7439-92-1	0 - 0.1 %

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Cadmium	7440-43-9	0 - 0.1 %
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	0 - 0.1 %
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	0 - 0.1 %
Distillates (petroleum), solvent-refined light paraffinic	64741-89-5	0 - 0.1 %

New Jersey Right To Know

Zinc	7440-66-6	50 - 70 %
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	30 - 50 %
Talc	14807-96-6	5 - 10 %
Calcium oxide	1305-78-8	1 - 5 %
Zinc oxide	1314-13-2	1 - 5 %
Quartz	14808-60-7	0.1 - 1 %

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

Quartz	14808-60-7
Lead	7439-92-1
Cadmium	7440-43-9

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

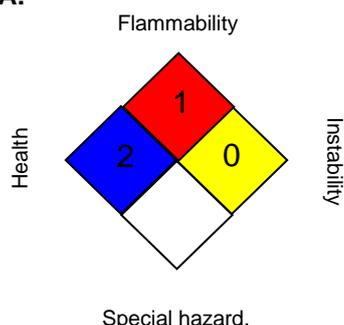
Lead	7439-92-1
Cadmium	7440-43-9

The ingredients of this product are reported in the following inventories:

- DSL : All components of this product are on the Canadian DSL
- TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
- AICS : All ingredients listed or exempt.

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SECTION 16. OTHER INFORMATION**Further information****NFPA:****HMIS III:**

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
 2 = Moderate, 3 = High
 4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	: USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NIOSH REL / TWA	: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
NIOSH REL / C	: Ceiling value not be exceeded at any time.
OSHA Z-1 / TWA	: 8-hour time weighted average
OSHA Z-3 / TWA	: 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); EC_x - Concentration associated with x% response; EHS - Extremely Hazardous Substance; EL_x - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC_x - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC₅₀ - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC₅₀ - Lethal Concentration to 50 % of a test population; LD₅₀

ZN-50

Version	Revision Date:	SDS Number:	Date of last issue: 09/04/2015
1.6	09/24/2015	114857-00006	Date of first issue: 05/12/2015

- Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 09/24/2015

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

KOPR-KOTE®

TOOL JOINT & DRILL COLLAR COMPOUND

DESCRIPTION

KOPR-KOTE® drill collar and tool joint compound is a premium-quality, unleaded compound containing copper flake, graphite, and other natural extreme pressure and anti-wear additives. **KOPR-KOTE's** solids package is formulated to prevent excessive circumferential makeup by increasing the coefficient of friction under compressive forces. As stress levels rise above 50% of yield, the friction factor increases, limiting downhole makeup. Full hydraulic joint efficiency is maintained allowing joint shoulder faces to mate completely without standoff or deformation. **For invert or high-pH muds, use Jet-Lube EXTREME™.**

- Not classified as marine pollutant - DOT Approval CA2004080025
- NSF Registered H2 (No. 120923)
- Contains no lead or zinc.
- Extreme pressure additives provide additional protection against seizing and galling and allow consistent make-up.
- Aluminum complex grease base protects against rust and corrosion.
- Sticks to wet joints.
- Unequaled resistance to makeup downhole.
- Available in Arctic, Thermal and Specialty grades.
- Approved by NAM/Shell for under-balanced drilling applications.
- Conforms to assembly bill 1953

SERVICE RATING:
0°F (-18°C) TO 450° (232°C)

PRODUCT CHARACTERISTICS

Thickener	Aluminum Complex
Fluid Type	Petroleum
Dropping Point	450°F (232°C)
(ASTM D-2265)	
Specific Gravity	1.15
Density (lb/gal)	9.6
Oil Separation (ASTM D-6184)	<3.0
Wt. % Loss @ 212°F (100°C)	
Flash Point (ASTM D-92)	>430°F (221°C)
NLGI Grade	1
Penetration @ 77°F	310 - 330
(ASTM D-217)	
Copper Strip Corrosion	1A, typical
(ASTM D-4048)	
4-Ball (ASTM D-2596)	
Weld Point, kgf	800, typical

PACKAGING

Code No.	Container Size	Shipping Wt.
10023	1 gal.	11 lb.
10012	2 gal.	20 lb.
10015	5 gal.	52 lb.
10024	15 gal.	152 lb.
10029	50 gal.	514 lb.

LIMITED WARRANTY

Jet-Lube, Inc. makes the Limited Express Warranty that at the date of delivery, this product shall be free from defects in Jet-Lube, Inc. materials and workmanship.

This Limited Express Warranty is expressly in lieu of any other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, and of any other obligation on the part of Jet-Lube, Inc.

The sole remedy for breach of the Limited Express Warranty shall be the refund of the purchase price. All other liability is negated and disclaimed, and Jet-Lube, Inc. shall not be liable for incidental or consequential damages.

CORPORATE LOCATIONS

Houston, Texas—World Headquarters

Maidenhead, England

Edmonton, Canada



JET-LUBE, INC.
4849 HOMESTEAD RD.,
SUITE 232
HOUSTON, TX 77028

WATS: 800-538-5823
PHONE: 713-670-5700
FAX: 713-678-4604
sales@jetlube.com
www.jetlube.com

WATERWELL WATERWELL WATERWELL WATERWELL

JET-LUBE, INC.

MATERIAL SAFETY DATA SHEET

Product Name: KOPR-KOTE®
Chemical Family: Petroleum based lubricating grease
Use: Tool joint and drill collar compound/anti-seize (MIL-PRF-907F) jacking lubricant

Manufacturer/Supplier: JET-LUBE, INC.
Address: 4849 Homestead Rd., Ste. #232
 Houston, TX, 77028 USA **Phone:** 713-670-5700
Emergency Phone: 713-670-5700 **Fax:** 713-678-4604
Chemtrec 24 hours (USA): 800-424-9300
Outside the USA: 703-527-3887

Hazardous Components	CAS No.	Wt%	OSHA PEL	ACGIH TLV	Other Limits of Exposure
Lubricating Grease	74868219	60	N/A	N/A	STEL:
Nonhazardous Blend	7782435/1317335 13776744/471341	20-30	UN	UN	STEL: UN STEL: UN
Metallic Copper	7440508	10	N/A	1mg/M³	STEL: 2mg/M³

Main Hazards—Health Effects

Eyes: May cause irritation. **Inhalation:** Viscous nature may block breathing passages if inhaled. **Ingestion:** May cause diarrhea.
Skin: For hypersensitive persons, may irritate the skin after prolonged periods of contact.

Eyes: Flush with water until all residual material is gone. If irritation persists, seek medical help. **Inhalation:** Clear air passage. If respiratory difficulty continues, seek medical help. **Ingestion:** Wash out mouth immediately. Consult physician. **Skin:** Wash thoroughly with hand cleanser, followed by soap & water. Contaminated clothing should be dry cleaned before reuse.

Extinguishing Media: Foam, dry powder, Halon®, carbon dioxide, sand, earth & water mist. **Unsuitable Extinguishing Media:** Water jet.
Protective Equipment for Fire fighting: Self-contained breathing apparatus.

Personal Precautions: Wear gloves & protective overalls. **Environmental Precautions:** Do not allow it to enter drains. **Spillage:** Scrape up bulk, then wipe up remainder with cloth. To prevent walking hazard, pick up remaining residue with diatomaceous earth.

Handling: No special handling precautions necessary. **Storage:** Do not store at elevated temperatures.

Respiratory Protection: None needed. **Hand Protection:** Protective gloves for hypersensitive persons.
Eye Protection: Glasses, if applied to parts in motion. **Body Protection:** Overalls.

Physical State: Semisolid paste **Color:** Copper/Bronze **Odor:** Petroleum **pH:** Neutral **Boiling Range/Point °F (°C):** <600 (316)
Melting Point °F (°C): 500 (260) **Flash Point (COC) °F (°C):** 430 (221) **Autoignition Temperature °F (°C):** >500 (260)
Explosive Properties: LEL: 0.9% UEL: 7% **Evaporation Rate (Butyl Acetate):** <0.01 **Partition Coefficient (Log Pow):** N/A
Vapor Pressure (kPa): <0.01 **Percent Volatiles:** Nil **Density (g/cm³):** 1.15 **Flammability:** Not flammable at ambient temperature.
OAR Value: N/A **Oxidizing Properties:** None **Water Solubility:** Nil **Vapor Density:** >5

Stability: Chemically stable under normal conditions. No photoreactive agents. **Conditions to Avoid:** Powerful sources of ignition & extreme temps. **Materials to Avoid:** Strong inorganic & organic acids, oxidizing & copper reactive agents. **Hazardous Decomposition Products:** Burning generates smoke, airborne soot, hydrocarbons & oxides of carbon, sulfur & nitrogen. Residue mainly comprised of soot & mineral oxides.
Acute Toxicity: Not known. **Irritancy—Skin:** Very mild. **Skin Sensitization:** Not known. **Subacute/Sub-chronic Toxicity:** Not known.
Genotoxicity: None known. **Chronic Toxicity:** None known. **California Prop 65:** N/A **Carcinogen:** NTP: No IARC: No OSHA: No
EC Classification (67/548/EEC): No **Allergens:** None known. **LC-50:** 1.98gm/l—actual test data - mysidopsis bahia. **LD-50:** N/A

Possible Effects: In extreme cases, may generate oil fractions that could act as a marine pollutant. Occurrences of this nature are highly unlikely.
Behavior: Relatively well behaved. Bioaccumulation potential nil.
Environmental Fate: Highly unlikely to cause widespread contamination. Nontoxic to marine or land organisms.

Product Disposal: Do not incinerate. Contact waste disposal company or local authority for advice.

Container Disposal: Pails without liner—see Product Disposal section above. Pails with plastic liner—pail may only be disposed of via standard waste disposal services, recycled or reused. Liner—see Product Disposal section above.

D.O.T.: Nonhazardous D.O.T. exception CA2004080025 **UN No.:** Nonhazardous **Air Transport (ICAO & IATA):** Nonhazardous
Sea Transport (IMO & IMDG): Nonhazardous **Road & Rail Transport (ADR/RID):** Nonhazardous

Labeling Information: None needed **EC Annex 1 Classification:** Not Applicable. **R Phrases:** R22—harmful if swallowed.
S Phrases: N/A, as known. **Ozone Depleting Chemicals:** N/A **TSCA:** All components are listed. **TSCA 12B Components:** None
WHMIS (Canada): Not controlled. **Canadian DSL:** All components listed. **40 CFR Part 372 (SARA Section 313):** This product contains in part raw material components subject to reporting. **SARA 311/312:** None **CERCLA:** Nonhazardous **RCRA Hazard Class:** Nonhazardous

SDS first issued. SDS data revised. **New Jersey Right To Know:** See Section II

Signature: 
 Prepared by: Donald A. Oldiges
 Date Issued: June 6, 2011

As of issue date, the information contained herein is accurate and reliable to the best of JET-LUBE'S knowledge. JET-LUBE® does not warrant or guarantee its accuracy or reliability and shall not be liable for any loss or damage arising out of the use thereof. It is the user's responsibility to satisfy itself that the information offered for its consideration is suitable for its particular use.

LEGEND	
I. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY	IX. PHYSICAL AND CHEMICAL PROPERTIES
II. COMPOSITION INFORMATION ON INGREDIENTS	X. STABILITY AND REACTIVITY
III. HAZARDS IDENTIFICATION	XI. TOXICOLOGICAL INFORMATION
IV. FIRST AID MEASURES	XII. ECOLOGICAL INFORMATION
V. FIRE FIGHTING MEASURES	XIII. WASTE DISPOSAL
VI. ACCIDENTAL RELEASE MEASURES	XIV. TRANSPORT INFORMATION
VII. HANDLING AND STORAGE	XV. REGULATORY INFORMATION
VIII. EXPOSURE CONTROL/PERSONAL PROTECTION	XVI. OTHER INFORMATION

HMS SYMBOL

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0
PPI	B

NFPA SYMBOL



Certification

Date: 3/14/2016

This is to certify that all of the dynamic calibration and periodic check of the Truscope A/S system were performed according to SOP I-610 by inspection personnell for the following order below.

Customer: *NOV Grant Prideco*

Work Order: *M7440191*

C/O: *10000776.5*

Quantity: *895 Joints*

Description: *4" 15.70# .380" CYX-105 II IU*

Veronica Guitron

For M. Pegues 03/14/16

Mark Pegues, Division Manager

NOV Tuboscope Middle East LLC
P.O. Box 129920, Abu Dhabi, United Arab Emirates
Telephone: (971-2) 6575600 Facsimile: (971-2) 5512316

Certificate of Conformity

CUSTOMER: GRANT PRIDECO L.P.

ORDER NUMBER: 2010244

WORK ORDER NUMBER: 91 - 7450902

FINAL CLIENT: N/A

MATERIAL DESCRIPTION:

Item No	Quantity	Description	FEET
1	867	DP 4" 15.70# CYX105-120 XT38 R-2 GRNT/PRIDE SEAMLESS	27,334.71

REF: Inspection Certificate 3.1 No: 7450902 Rev.0

Start: 3rd May 2016 Completed: 31st May 2016

NOV Tuboscope certifies the materials mentioned herein were coated internally with TK-34P coating system in accordance with NOV Tuboscope Standard Operating Procedure (SOP)

For and on behalf of
NOV Tuboscope Middle East LLC

Senior QA/QC
NOV Tuboscope
Abu Dhabi Coating Plant
Visakh Ravi

Visakh Ravi

Senior QA/QC

Abu Dhabi Coating Plant

AD-COC-2016-0064 Rev0

Inspection Certificate 3.1

Inspection Certificate 3.1 No.:7450902 Rev.0
 DIN EN 10204/3.1

Date: 31.May.16

Page 1

Customer:	GRANT PRIDECO L.P.
Address:	P.O. Box 1310 Navasota TX 77868
PO#	2010244
Work Order	91 - 7450902
Specification API/ASTM,DIN:	According to NOV Tuboscope Standard Operating Procedure (SOP) Latest Edition

Inspection Results:	
Abrasive:	Aluminium Oxide
Blast cleanliness:	SIS 055900/SA 3/ SSPC SP 5/ NACE1
Anchor pattern:	min. 25.4 µm - max. 76.2 µm Testex Tape
Coating - inside:	TK 34P
Coating - outside:	Varnish - Clear
Primer:	TK-8007
Curing temperature:	220 - 250° C
Film thickness:	6 mils to 12 mils
Visual Inspection:	without visual defects
Holiday Test:	N/A

Extent of Delivery

Item No	Quantity	Description	FEET
1	867	DP 4" 15.70# CYX105-120 XT38 R-2 GRNT/PRIDE SEAMLESS	27,334.71

AD-COC-2016-0064 Rev 0 Page 1 of 1

The Material has been manufactured in accordance with NOV Tuboscope "Standard Operating Procedure" Latest Edition

NOV Tuboscope

Senior QA/QC
 NOV Tuboscope
 Abu Dhabi Coating Plant
 Visakh Ravi

Signature

31/5/2016