



18 January 2012

Quality Documentation Package

Customer: Command Energy Services Ltd

Purchase Order Number: 00007162

4 1/2" Heavy Weight Drill Pipe NC46 R3 Welded, Tool Joint OD: 6 3/8"
Tool Joint ID: 2 13/16", Box Tong Length: 24" Pin Tong
Length: 24", Centre Wear Pad OD: 5", Centre Wear Pad
Length: 26", Boreback Box, Standard Pin, Length Tolerance: 43 FT +6/-0"
Shoulder To Shoulder, Manufactured To API Spec 7-1, With 20"
Tungsten-Smooth Hardband-Flush.

Jiangsu Shuguang Huayang Drilling Tool Co., Ltd.
(Shuguang Group)

[Http://www.shuguang.com](http://www.shuguang.com)



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Customer: Command Energy Services Ltd

Purchase Order#: 00007162

Description:

4 1/2" Heavy Weight Drill Pipe NC46 R3 Welded Tool Joint OD:8 3/8" Tool Joint ID:2 13/16",Box Tong Length:24" Pin Tong Length:24",Centre Wear Pad OD:5", Centre Wear Pad Length:26",Boreback Box,Standard Pin,Length Tolerance:43 FT +6/-0" Shoulder To Shoulder,Manufactured To API Spec 7-1,With 20" Tungsten-Smooth Hardband-Flush.



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7-1-0585 Certificate of Conformance

ANSI/API SPEC 7-1 Specification for Rotary Drill Stem Elements
JSH Project Specification
JSH Purchase Specification For HWDP

Purchase Order Number: 00007162

This hereby certifies that JSH has met or exceeded the manufacturing and quality requirements of the above referenced specification(s) in Manufacturing the following below described material for:

Command Energy Services Ltd

40 **Joints**

4 1/2" Heavy Weight Drill Pipe NC46 R3 Welded, Tool Joint OD:6 3/8" Tool Joint ID:2 13/16", Box Tong Length:24" Pin Tong Length:24", Centre Wear Pad OD:5", Centre Wear Pad Length:26", Boreback Box, Standard Pin, Length Tolerance:43 FT +6/-0" Shoulder To Shoulder, Manufactured To API Spec 7-1, With 20" Tungsten-Smooth Hardband-Flush.

Dian Shanlong

JSH Representative



Customer: Command Energy Services Ltd

Date: 18 January 2012

Purchase Order#: 00007162

Description:

4 1/2" Heavy Weight Drill Pipe NC46 R3 Welded, Tool Joint OD:6 3/8" Tool Joint ID:2 13/16", Box Tong Length:24" Pin Tong Length:24", Centre Wear Pad OD:5", Centre Wear Pad Length:26", Boreback Box, Standard Pin, Length Tolerance:43 FT +6/-0" Shoulder To Shoulder, Manufactured To API Spec 7-1, With 20" Tungsten-Smooth Hardband-Flush.

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Certificate of Hardband

Customer: Command Energy Services Ltd

Material Description: Tungsten-Smooth

This is to certify that Above Hardband has been applied on the following and in strict compliance with the Applicable JSH Operating Procedure for the Hardband Operation, Latest Revision. The issuance of this certificate indicates that the Hardband Operation was completed.

Purchase Order Number: 00007162

Dian Shanlong

JSH Representative



Customer: Command Energy Services Ltd

Date: 18 January 2012



Description:

4 1/2" Heavy Weight Drill Pipe NC46 R3 Welded, Tool Joint OD: 6 3/8" Tool Joint ID: 2 13/16", Box Tong Length: 24" Pin Tong Length: 24", Centre Wear Pad OD: 5", Centre Wear Pad Length: 26", Boreback Box, Standard Pin, Length Tolerance: 43 FT +6/-0" Shoulder To Shoulder, Manufactured To API Spec 7-1, With 20" Tungsten-Smooth Hardband-Flush.

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Certificate of Testing for Heavy Weight Pipe

Mechanical Test Data

Mill	Type	Heat No.	C	Mn	P	S	Si	Cu	Ni	Cr		
Minghe	Material	1110281	0.400	1.670	0.012	0.006	0.280	0.170	0.130	0.080		

Mechanical Test Data

Specimen	Position	Size	Heat No.	Tensile Mpa	Yield Mpa	Elong%	
Tube	1	0.5"	1110281	720	480	32	

We certify that these tests were conducted according to JSH Purchase Specification and that the data contained herein is true and correct.

Dian Phantong

JSH Representative



Customer: Command Energy Services Ltd

Purchase Order#: 00007162

Date: 18 January 2012

Description:

4 1/2" Heavy Weight Drill Pipe NC46 R3 Welded, Tool Joint OD: 6 3/8" Tool Joint ID: 2 13/16", Box Tong Length: 24" Pin Tong Length: 24", Centre Wear Pad OD: 5", Centre Wear Pad Length: 26", Boreback Box, Standard Pin, Length Tolerance: 43 FT +6/-0" Shoulder To Shoulder, Manufactured To API Spec 7-1, With 20" Tungsten-Smooth Hardband-Flush.

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Certificate of Testing for Tool Joints

Mill Chemistry

	Type	Heat No.	C	Mn	P	S	Si	Cu	Cr	Mo		
	Product	11703342	0.460	1.040	0.012	0.002	0.260	0.100	1.110	0.270		

Mechanical Test Data

Specimen	Position	Size	Heat No.	Tensile Mpa	Yield Mpa	Elong%	BHN
Tool Joint	1	0.5"	11703342	1061	926	16	307

Longitudinal Charpy-V Notch Impact Data(Joules)

Size(mm)	Temp(°C)	Heat No.	Position	A	B	C	Avg	Shear
10x10	-20	11703342	1	82	79	80	80	

All properties meet the requirements of API Specification 7-1 ,Latest Edition,and JSH Purchase Specification,and that the data contained herein is true and correct.

Dian Shantong

JSH Representative



Customer: Command Energy Services Ltd

Date: 18 January 2012

Purchase Order#: 00007162



Description:

4 1/2" Heavy Weight Drill Pipe NC46 R3 Welded, Tool Joint OD:6 3/8" Tool Joint ID:2 13/16", Box Tong Length:24" Pin Tong Length:24", Centre Wear Pad OD:5", Centre Wear Pad Length:26", Boreback Box, Standard Pin, Length Tolerance:43 FT +6/-0" Shoulder To Shoulder, Manufactured To API Spec 7-1, With 20" Tungsten-Smooth Hardband-Flush.

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Certificate of Testing for Weld Area

Mechanical Test Data

Specimen	Position	Size	Tensile (Mpa)	Yield (Mpa)	Elong%	RA%	Remark
B1200010	1	0.5"	835	589	22	64	

180 Degree Bend Test and Microstructure Verification

	Side Bend1	Side Bend2	Microstructure Verified	Remark
All Test Sample	Passed	Passed	OK	

Longitudinal Charpy-V Notch Impct Data(Joules)

Size(mm)	Temp(°C)	Position	A	B	C	Avg	Remark
10X10	-20	1	46	57	56	53	

Throughwall Hardness HRC

Production Number		Pipe Average			Tool Joint Average			
	Pos. No	OD	MD	ID	OD	MD	ID	
40	B1200010	16.5	20.5	17.5	29.5	29.5	28.5	

All properties meet the requirements of JSH Specifications. I certify that these tests were conducted in accordance with applicable specification and that the data contained herein is true and correct.

Dian Shantong

JSH Representative



Customer: Command Energy Services Ltd

Purchase Order#: 00007162

Date: 18 January 2012



Description:

4 1/2" Heavy Weight Drill Pipe NC46 R3 Welded, Tool Joint OD: 6 3/8" Tool Joint ID: 2 13/16", Box Tong Length: 24" Pin Tong Length: 24", Centre Wear Pad OD: 5", Centre Wear Pad Length: 26", Boreback Box, Standard Pin, Length Tolerance: 43 FT +6/-0" Shoulder To Shoulder, Manufactured To API Spec 7-1, With 20" Tungsten-Smooth Hardband-Flush.

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Total Length
1,727.20

Total Weight
69,680.21

Total Joints
40

SERIALIZATION LOG

Work order:00007162

Date:2012-1-18

Customer: Command Energy Services Ltd.

Product Description: 4 1/2" HWDP,NC46,TJ OD:6 3/8" TJ ID:2 13/16"

Pipe SN.	Pipe Heat no.	Pin SN.	Pin Heat no.	Box SN.	Box Heat no.	Length(FT)	Weight(LB)	OD	ID	BD	VT	U.T.Mag
H5284	1110281	11AA00037	11703342	11AB00020	11703342	43.21	1741.95	✓	✓	✓	✓	✓
H5285	1110281	11AA00009	11703342	11AB00038	11703342	43.24	1766.21	✓	✓	✓	✓	✓
H5286	1110281	11AA00001	11703342	11AB00044	11703342	43.18	1739.75	✓	✓	✓	✓	✓
H5287	1110281	11AA00007	11703342	11AB00032	11703342	43.24	1746.36	✓	✓	✓	✓	✓
H5288	1110281	11AA00015	11703342	11AB00036	11703342	43.24	1741.95	✓	✓	✓	✓	✓
H5289	1110281	11AA00019	11703342	11AB00030	11703342	43.27	1746.36	✓	✓	✓	✓	✓
H5290	1110281	11AA00035	11703342	11AB00008	11703342	43.21	1744.16	✓	✓	✓	✓	✓
H5292	1110281	11AA00049	11703342	11AB00052	11703342	43.21	1741.95	✓	✓	✓	✓	✓
H5293	1110281	11AA00069	11703342	11AB00046	11703342	43.21	1741.95	✓	✓	✓	✓	✓
H5294	1110281	11AA00005	11703342	11AB00026	11703342	43.18	1739.75	✓	✓	✓	✓	✓
H5295	1110281	11AA00051	11703342	11AB00060	11703342	43.18	1739.75	✓	✓	✓	✓	✓
H5296	1110281	11AA00025	11703342	11AB00040	11703342	43.08	1741.95	✓	✓	✓	✓	✓
H5297	1110281	11AA00021	11703342	11AB00024	11703342	43.08	1739.75	✓	✓	✓	✓	✓
H5298	1110281	11AA00045	11703342	11AB00042	11703342	43.11	1737.54	✓	✓	✓	✓	✓
H5300	1110281	11AA00003	11703342	11AB00082	11703342	43.21	1737.54	✓	✓	✓	✓	✓
H5301	1110281	11AA00043	11703342	11AB00074	11703342	43.11	1746.36	✓	✓	✓	✓	✓
H5302	1110281	11AA00027	11703342	11AB00066	11703342	43.21	1741.95	✓	✓	✓	✓	✓
H5303	1110281	11AA00013	11703342	11AB00072	11703342	43.21	1739.75	✓	✓	✓	✓	✓
H5304	1110281	11AA00023	11703342	11AB00070	11703342	43.11	1735.34	✓	✓	✓	✓	✓
H5305	1110281	11AA00047	11703342	11AB00028	11703342	43.11	1737.54	✓	✓	✓	✓	✓
H5306	1110281	11AA00033	11703342	11AB00016	11703342	43.21	1744.16	✓	✓	✓	✓	✓
H5307	1110281	11AA00039	11703342	11AB00068	11703342	43.11	1735.34	✓	✓	✓	✓	✓
H5308	1110281	11AA00031	11703342	11AB00018	11703342	43.11	1739.75	✓	✓	✓	✓	✓
H5309	1110281	11AA00075	11703342	11AB00080	11703342	43.18	1746.36	✓	✓	✓	✓	✓
H5310	1110281	11AA00017	11703342	11AB00058	11703342	43.21	1741.95	✓	✓	✓	✓	✓
H5311	1110281	11AA00073	11703342	11AB00004	11703342	43.21	1746.36	✓	✓	✓	✓	✓
H5312	1110281	11AA00067	11703342	11AB00048	11703342	43.21	1748.57	✓	✓	✓	✓	✓
H5313	1110281	11AA00079	11703342	11AB00002	11703342	43.11	1737.54	✓	✓	✓	✓	✓
H5314	1110281	11AA00029	11703342	11AB00022	11703342	43.11	1737.54	✓	✓	✓	✓	✓
H5315	1110281	11AA00055	11703342	11AB00078	11703342	43.14	1730.93	✓	✓	✓	✓	✓
H5316	1110281	11AA00053	11703342	11AB00062	11703342	43.21	1739.75	✓	✓	✓	✓	✓
H5317	1110281	11AA00065	11703342	11AB00012	11703342	43.21	1744.16	✓	✓	✓	✓	✓
H5318	1110281	11AA00063	11703342	11AB00014	11703342	43.24	1746.36	✓	✓	✓	✓	✓
H5319	1110281	11AA00071	11703342	11AB00050	11703342	43.08	1733.13	✓	✓	✓	✓	✓
H5320	1110281	11AA00077	11703342	11AB00064	11703342	43.21	1746.36	✓	✓	✓	✓	✓
H5321	1110281	11AA00059	11703342	11AB00056	11703342	43.21	1744.16	✓	✓	✓	✓	✓
H5322	1110281	11AA00081	11703342	11AB00034	11703342	43.24	1744.16	✓	✓	✓	✓	✓
H5323	1110281	11AA00011	11703342	11AB00010	11703342	43.21	1737.54	✓	✓	✓	✓	✓
H5324	1110281	11AA00061	11703342	11AB00054	11703342	43.21	1739.75	✓	✓	✓	✓	✓
H5325	1110281	11AA00041	11703342	11AB00076	11703342	43.21	1748.57	✓	✓	✓	✓	✓

