MANUFACTURER: TIANJIN PIPE (GROUP) CORPORATION
ADD: JINTANG ROAD DONGLI DISTRICT, TIANJIN, CHINA
TEL: 86-22-24801073
FAX: 86-22-24801291

QR-11-8.2.4-3

QUALITY CERTIFICATE

Licence No.:

NO.: 14123052

1	Contract No.	TPCO-14805E	L/C No.		O.D.×W.T.	7IN 23.00LB/FT (177.80mm×8.05mm)	Packing	IN LOOSE
	Order	Esso Exploration and Production Chad, Inc.	Product	CASING	Steel grade	N80Q	Total pieces	820
	P.O. No.	4501074469/20-NOV-2014	Port of desti.		Manu. method	HOT ROLLING SEAMLESS	Total metres	
	Standard	API SPEC 5CT 9th	Type of thread	BC	Length range	11-13M	Total Tons	356.765

	Heat No.	Lot No.	Quantity Pieces	Meters	Bundles	Tons	Delivery condition	Sample No.	Tensile test(MPa) 1*	Tem. ℃	T.S.	Type	Y.S.	Elong. %	Shrink %	2*	Tem. ℃	Size	Impact test(J) AK1	Shear %	AK2	Shear %	AK3	Shear %	AVE	Shear %
2	047229	81	150			64.971	Q+T	81-001-1	A	22	821	Rt0.5	703	26.0		A	0	10*5	66	100	61	100	57	100	61	100
	047229	82	130			56.381	Q+T	82-001-2	A	22	758	Rt0.5	645	25.0		A	0	10*5	68	100	69	100	76	100	71	100
	047230	81	38			16.636	Q+T	81-001-1	A	22	824	Rt0.5	716	24.0		A	0	10*5	57	100	55	100	54	100	55	100
	Total		318			137.988		Note:	A:strip,L,bo=25.4mm Lo=50mm										A:V8/L							

	Heat No.	Lot No.	Sample No.	MAX	Hardness test (inside) 1	2	3	AVE	Hardness test (middle) 1	2	3	AVE	Hardness test (outside) 1	2	3	AVE	A Thin	A Thick	B Thin	B Thick	C Thin	C Thick	D Thin	D Thick	Grain size	Structure
3	047229	81	81-001-1														0.5	0	0	0	0	0	0.5	0	8.5	
	047229	82	82-001-2														0.5	0	0	0	0	0	0.5	0	8.5	
	047230	81	81-001-1														0.5	0	0	0	0	0	0.5	0	8.5	

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	Heat No. / Material		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	Al	V	Pb	Sn	As	Sb	Bi	Drift ϕ(mm)	NDE	Hydro. Test
4	047229	L	0.31	0.23	1.24	0.011	0.005	0.03	0.08	0.02	0.05	0.011	0.01	0.0001	0.0026	0.0055	0.0011	0.0009	159.00	EMI+UT	5800PSI/8S
	30Mn5	P	0.30	0.24	1.24	0.011	0.004	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0053	0.0062	<0.002	<0.001		F3+U3	
		P	0.32	0.24	1.24	0.011	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0052	0.0063	<0.002	<0.001			
	047229	L	0.31	0.23	1.24	0.011	0.005	0.03	0.08	0.02	0.05	0.011	0.01	0.0001	0.0026	0.0055	0.0011	0.0009	159.00	EMI+UT	5800PSI/8S
	30Mn5	P	0.30	0.24	1.24	0.011	0.004	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0053	0.0062	<0.002	<0.001		F3+U3	
		P	0.32	0.24	1.24	0.011	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0052	0.0063	<0.002	<0.001			
	047230	L	0.29	0.24	1.27	0.011	0.003	0.04	0.05	0.01	0.07	0.016	0.01	0.0001	0.0034	0.0058	0.0017	0.0008	159.12	EMI+UT	5800PSI/8S
	30Mn5	P	0.31	0.24	1.26	0.012	0.005	0.03	0.09	0.02	0.05	0.013	<0.01	<0.001	0.0058	0.0066	<0.002	<0.001		F3+U3	
		P	0.31	0.24	1.26	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0058	0.0065	<0.002	<0.001			

5	NDE (100%)	Visual and dimension	Hydro. Test	Pipe end NDE	Drift	Collapse test	SSC	HIC
	G	G	G	G	G			

We hereby state that all pipes are manufactured and inspected according to above standards and order。

Seal for certification:

Note:

No.

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Date: 2015-2-11

Remark:desti.=destination;tem.=temperature;speci.= specification;Manu.=Manufacture;G=Good;Hydro.=hydraulic

(FOR EXPORT ONLY)

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QR-11-8.2.4-3

QUALITY CERTIFICATE

Licence No.:

NO.: 14123052

1	Contract No.	TPCO-14805E	L/C No.		O.D.×W.T.	7IN 23.00LB/FT (177.80mm×8.05mm)	Packing	IN LOOSE
	Order	Esso Exploration and Production Chad, Inc.	Product	CASING	Steel grade	N80Q	Total pieces	820
	P.O. No.	4501074469 20-Nov-2014	Port of desti.		Manu. method	HOT ROLLING SEAMLESS	Total metres	
	Standard	API SPEC 5CT 9th	Type of thread	BC	Length range	11-13M	Total Tons	356.765

	Heat No.	Lot No.	Quantity Pieces	Meters	Bundles	Tons	Delivery condition	Sample No.	Tensile test(MPa) 1*	Tem. ℃	T.S.	Type	Y.S.	Elong. %	Shrink %	2*	Tem. ℃	Size	Impact test(J) AK1	Shear %	AK2	Shear %	AK3	Shear %	AVE	Shear %
2	047230	82	186			81.069	Q+T	82-001-2	A	21	793	Rt0.5	679	24.0		A	0	10*5	65	100	59	100	61	100	62	100
	047231	81	198			86.244	Q+T	81-001-1	A	23	755	Rt0.5	638	23.0		A	0	10*5	68	100	70	100	69	100	69	100
	047231	82	118			51.464	Q+T	82-001-2	A	23	775	Rt0.5	656	22.0		A	0	10*5	76	100	74	100	72	100	74	100
	Total		502			218.777		Note:	A:strip,L,bo=25.4mm Lo=50mm										A:V8/L							

	Heat No.	Lot No.	Sample No.	MAX	Hardness test (inside) 1	2	3	AVE	Hardness test (middle) 1	2	3	AVE	Hardness test (outside) 1	2	3	AVE	A Thin	A Thick	B Thin	B Thick	C Thin	C Thick	D Thin	D Thick	Grain size	Structure
3	047230	82	82-001-2														0.5	0	0	0	0	0	0.5	0	8.5	
	047231	81	81-001-1														0.5	0	0	0	0	0	0.5	0	8.5	
	047231	82	82-001-2														0.5	0	0	0	0	0	0.5	0	8.5	

NBC WITNESSED REVIEWED C-4174 DATE: 2014-02-09 SIGNATURE

	Heat No. / Material		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	Al	V	Pb	Sn	As	Sb	Bi	Drift ϕ(mm)	NDE	Hydro. Test
4	047230	L	0.29	0.24	1.27	0.011	0.003	0.04	0.05	0.01	0.07	0.016	0.01	0.0001	0.0034	0.0058	0.0017	0.0008	159.12	EMI+UT	5800PSi/8S
	30Mn5	P	0.31	0.24	1.26	0.012	0.005	0.03	0.09	0.02	0.05	0.013	<0.01	<0.001	0.0058	0.0066	<0.002	<0.001		F3+U3	
		P	0.31	0.24	1.26	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0058	0.0065	<0.002	<0.001			
	047231	L	0.29	0.24	1.27	0.011	0.003	0.03	0.05	0.01	0.05	0.018	0.01	0.0001	0.0030	0.0054	0.0014	0.0009	159.10	EMI+UT	5800PSI/8S
	30Mn5	P	0.32	0.25	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0056	0.0066	<0.002	<0.001		F3+U3	
		P	0.32	0.24	1.25	0.013	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0055	0.0066	<0.002	<0.001			
	047231	L	0.29	0.24	1.27	0.011	0.003	0.03	0.05	0.01	0.05	0.018	0.01	0.0001	0.0030	0.0054	0.0014	0.0009	159.00	EMI+UT	5800PSI/8S
	30Mn5	P	0.32	0.25	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0056	0.0066	<0.002	<0.001		F3+U3	
		P	0.32	0.24	1.25	0.013	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0055	0.0066	<0.002	<0.001			

5	NDE (100%)	Visual and dimension	Hydro. Test	Pipe end NDE	Drift	Collapse test	SSC	HIC
	G	G	G	G	G			

We hereby state that all pipes are manufactured and inspected according to above standards and order。

Seal for certification:

Note:

No.

Page (2)

Date: 2015-2-11

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FAX: 86-22-24801291

QR-11-8.2.4-3

QUALITY CERTIFICATE

Licence No.:

NO.: 14123053

1

Contract No.	TPCO-14805E	L/C No.		O.D.×W.T.	7IN 23.00LB/FT (177.80mm×8.05mm)	Packing	IN LOOSE
Order	Esso Exploration and Production Chad, Inc.	Product	CASING	Steel grade	N80Q	Total pieces	744
P.O. No.	4501074469/20-NOV-2014	Port of desti.		Manu. method	HOT ROLLING SEAMLESS	Total metres	
Standard	API SPEC 5CT 9th	Type of thread	BC	Length range	11-13M	Total Tons	324.124

2

Heat No.	Lot No.	Quantity Pieces	Meters	Bundles	Tons	Delivery condition	Sample No.	Tensile test(MPa) 1*	Tem. ℃	T.S.	Type	Y.S.	Elong. %	Shrink %	2*	Tem. ℃	Size	Impact test(J) AK1	Shear %	AK2	Shear %	AK3	Shear %	AVE	Shear %
047232	81	198			86.598	Q+T	81-001-1	A	23	794	Rt0.5	695	22.0		A	0	10*5	68	100	72	100	65	100	68	100
047232	82	57			24.878	Q+T	82-001-2	A	23	732	Rt0.5	613	22.0		A	0	10*5	67	100	69	100	73	100	70	100
047233	81	178			77.208	Q+T	81-001-1	A	23	809	Rt0.5	691	20.0		A	0	10*5	68	100	69	100	67	100	68	100
Total		433			188.684		Note:	A:strip,L,bo=25.4mm Lo=50mm										A:V8/L							

3

Heat No.	Lot No.	Sample No.	Hardness test (inside) MAX	1	2	3	AVE	Hardness test (middle) 1	2	3	AVE	Hardness test (outside) 1	2	3	AVE	A Thin	A Thick	B Thin	B Thick	C Thin	C Thick	D Thin	D Thick	Grain size	Structure
047232	81	81-001-1														0.5	0	0	0	0	0	0.5	0	8.5	
047232	82	82-001-2														0.5	0	0	0	0	0	0.5	0	8.5	
047233	81	81-001-1														0.5	0	0	0	0	0	0.5	0	8.5	

INSPECTION WITNESSED REVIEWED C-4174 DATE: 2015-02-09 SIGNATURE Gao Tongfei

4

Heat No. / Material		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	Al	V	Pb	Sn	As	Sb	Bi	Drift ϕ(mm)	NDE	Hydro. Test
047232	L	0.28	0.24	1.27	0.013	0.006	0.04	0.04	0.02	0.07	0.014	0.01	0.0001	0.0037	0.0062	0.0016	0.0009	159.12	EMI+UT	5800PSI/8S
30Mn5	P	0.31	0.25	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0056	0.0065	<0.002	<0.001		F3+U3	
	P	0.32	0.24	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0055	0.0064	<0.002	<0.001			
047232	L	0.28	0.24	1.27	0.013	0.006	0.04	0.04	0.02	0.07	0.014	0.01	0.0001	0.0037	0.0062	0.0016	0.0009	159.12	EMI+UT	5800PSI/8S
30Mn5	P	0.31	0.25	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0056	0.0065	<0.002	<0.001		F3+U3	
	P	0.32	0.24	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0055	0.0064	<0.002	<0.001			
047233	L	0.31	0.23	1.25	0.014	0.003	0.03	0.05	0.01	0.05	0.012	0.01	0.0001	0.0027	0.0055	0.0012	0.0008	159.00	EMI+UT	5800PSi/8S
30Mn5	P	0.31	0.24	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.013	<0.01	<0.001	0.0056	0.0066	<0.002	<0.001		F3+U3	
	P	0.30	0.24	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0054	0.0065	<0.002	<0.001			

5

NDE (100%)	Visual and dimension	Hydro. Test	Pipe end NDE	Drift	Collapse test	SSC	HIC
G	G	G	G	G			

We hereby state that all pipes are manufactured and inspected according to above standards and order。

Seal for certification:

Note:

No.

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Date: 2015-2-11

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QR-11-8.2.4-3

QUALITY CERTIFICATE

Licence No.:

NO.: 14123053

1

Contract No.	TPCO-14805E	L/C No.		O.D.×W.T.	7IN 23.00LB/FT (177.80mm×8.05mm)	Packing	IN LOOSE
Order	Esso Exploration and Production Chad, Inc.	Product	CASING	Steel grade	N80Q	Total pieces	744
P.O. No.	4501074469 / 20-NOV-2014	Port of desti.		Manu. method	HOT ROLLING SEAMLESS	Total metres	
Standard	API SPEC 5CT 9th	Type of thread	BC	Length range	11-13M	Total Tons	324.124

2

Heat No.	Lot No.	Quantity Pieces	Meters	Bundles	Tons	Delivery condition	Sample No.	Tensile test(MPa) 1*	Tem. ℃	T.S.	Type	Y.S.	Elong. %	Shrink %	2*	Tem. ℃	Size	Impact test(J) AK1	Shear %	AK2	Shear %	AK3	Shear %	AVE	Shear %
047233	82	67			29.200	Q+T	82-001-2	A	23	770	Rt0.5	643	22.0		A	0	10*5	61	100	64	100	62	100	62	100
047234	81	198			86.457	Q+T	81-001-1	A	23	823	Rt0.5	714	20.0		A	0	10*5	67	100	66	100	65	100	66	100
047234	82	46			19.783	Q+T	82-001-2	A	23	792	Rt0.5	679	22.0		A	0	10*5	68	100	66	100	65	100	66	100
Total		311			135.440																				

Note: A:strip,L,bo=25.4mm Lo=50mm A:V8/L

3

Heat No.	Lot No.	Sample No.	Hardness test (inside) MAX	1	2	3	AVE	Hardness test (middle) 1	2	3	AVE	Hardness test (outside) 1	2	3	AVE	A Thin	A Thick	B Thin	B Thick	C Thin	C Thick	D Thin	D Thick	Grain size	Structure
047233	82	82-001-2														0.5	0	0	0	0	0	0.5	0	8.5	
047234	81	81-001-1														0.5	0	0	0	0	0	0.5	0	8.5	
047234	82	82-001-2														0.5	0	0	0	0	0	0.5	0	8.5	

NDE WITNESSED ✓ REVIEWED [ ] C-4174 DATE: 2015-01-08 SIGNATURE Gao Tanpei

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Heat No. / Material		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	Al	V	Pb	Sn	As	Sb	Bi	Drift ϕ(mm)	NDE	Hydro. Test
047233	L	0.31	0.23	1.25	0.014	0.003	0.03	0.05	0.01	0.05	0.012	0.01	0.0001	0.0027	0.0055	0.0012	0.0008	159.12	EMI+UT	5800PSi/8S
30Mn5	P	0.31	0.24	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.013	<0.01	<0.001	0.0056	0.0066	<0.002	<0.001		F3+U3	
	P	0.30	0.24	1.25	0.012	0.005	0.03	0.09	0.02	0.05	0.012	<0.01	<0.001	0.0054	0.0065	<0.002	<0.001			
047234	L	0.30	0.23	1.24	0.013	0.002	0.03	0.06	0.00	0.04	0.011	0.01	0.0001	0.0022	0.0051	0.0011	0.0008	158.92	EMI+UT	5800PSI/8S
30Mn5	P	0.31	0.23	1.22	0.012	0.002	0.03	0.06	0.01	0.04	0.010	<0.01	<0.001	0.0051	0.0058	<0.002	<0.001		F3+U3	
	P	0.30	0.23	1.25	0.013	0.002	0.03	0.06	0.01	0.04	0.010	<0.01	<0.001	0.0051	0.0061	<0.002	<0.001			
047234	L	0.30	0.23	1.24	0.013	0.002	0.03	0.06	0.00	0.04	0.011	0.01	0.0001	0.0022	0.0051	0.0011	0.0008	158.92	EMI+UT	5800PSI/8S
30Mn5	P	0.31	0.23	1.22	0.012	0.002	0.03	0.06	0.01	0.04	0.010	<0.01	<0.001	0.0051	0.0058	<0.002	<0.001		F3+U3	
	P	0.30	0.23	1.25	0.013	0.002	0.03	0.06	0.01	0.04	0.010	<0.01	<0.001	0.0051	0.0061	<0.002	<0.001			

5

NDE (100%)	Visual and dimension	Hydro. Test	Pipe end NDE	Drift	Collapse test	SSC	HIC
G	G	G	G	G			

We hereby state that all pipes are manufactured and inspected according to above standards and order。

Seal for certification:

Note:

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Page (2)

Date: 2015-2-11

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FAX: 86-22-24801291

QR-11-8.2.4-3

QUALITY CERTIFICATE

Licence No.:

NO.: 14123054

Contract No.	TPCO-14805E	L/C No.		O.D.×W.T.	7IN 23.00LB/FT (177.80mm×8.05mm)	Packing	IN LOOSE
Order	Esso Exploration and Production Chad, Inc.	Product	CASING	Steel grade	N80Q	Total pieces	295
P.O. No.	4501074469 20-Nov-2014	Port of desti.		Manu. method	HOT ROLLING SEAMLESS	Total metres	
Standard	API SPEC 5CT(9th)	Type of thread	BC	Length range	12.00-13.00M	Total Tons	129.265

2

Heat No.	Lot No.	Quantity Pieces	Meters	Bundles	Tons	Delivery condition	Sample No.	Tensile test(MPa) 1*	Tem. ℃	T.S.	Type	Y.S.	Elong. %	Shrink %	2*	Tem. ℃	Size	Impact test(J) AK1	Shear %	AK2	Shear %	AK3	Shear %	AVE	Shear %
047235	81	97			42.524	Q+T	81-001-1	A	23	813	Rt0.5	717	22.0		A	0	10*5	71	100	65	100	68	100	68	100
047235	82	198			86.741	Q+T	82-001-2	A	22	794	Rt0.5	677	25.0		A	0	10*5	63	100	66	100	67	100	65	100
Total		295			129.265		Note:	A:strip,L,bo=25.4mm Lo=50mm										A:V8/L							

3

Heat No.	Lot No.	Sample No.	Hardness test (inside) MAX	1	2	3	AVE	Hardness test (middle) 1	2	3	AVE	Hardness test (outside) 1	2	3	AVE	A Thin	A Thick	B Thin	B Thick	C Thin	C Thick	D Thin	D Thick	Grain size	Structure
047235	81	81-001-1														1.0	0	0	0	0	0	0.5	0	8.5	
047235	82	82-001-2														1.0	0	0	0	0	0	0.5	0	8.5	

WITNESSED REVIEWED C-4174 DATE: 2015-02-09 SIGNATURE Gao Tianfei

4

Heat No. / Material		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	Al	V	Pb	Sn	As	Sb	Bi	Drift ϕ(mm)	NDE	Hydro. Test
047235	L	0.28	0.24	1.25	0.016	0.003	0.03	0.09	0.01	0.04	0.011	0.01	0.0001	0.0024	0.0049	0.0009	0.0007	159.00	EMI+UT	5800PSI/8S
30Mn5	P	0.31	0.24	1.28	0.012	0.002	0.03	0.06	0.01	0.04	0.011	<0.01	<0.001	0.0055	0.0067	<0.002	<0.001		F3+U3	
	P	0.30	0.23	1.23	0.012	0.002	0.03	0.06	0.01	0.04	0.010	<0.01	<0.001	0.0051	0.0060	<0.002	<0.001			
047235	L	0.28	0.24	1.25	0.016	0.003	0.03	0.09	0.01	0.04	0.011	0.01	0.0001	0.0024	0.0049	0.0009	0.0007	159.00	EMI+UT	5800PSI/8S
30Mn5	P	0.31	0.24	1.28	0.012	0.002	0.03	0.06	0.01	0.04	0.011	<0.01	<0.001	0.0055	0.0067	<0.002	<0.001		F3+U3	
	P	0.30	0.23	1.23	0.012	0.002	0.03	0.06	0.01	0.04	0.010	<0.01	<0.001	0.0051	0.0060	<0.002	<0.001			
	L																			
	P																			
	P																			

5

NDE (100%)	Visual and dimension	Hydro. Test	Pipe end NDE	Drift	Collapse test	SSC	HIC
G	G	G	G	G			

We hereby state that all pipes are manufactured and inspected according to above standards and order。

Seal for certification:

Note:

No.

Page (1)

Date: 2015-2-11

Remark:desti.=destination;tem.=temperature;speci.= specification;Manu.=Manufacture;G=Good;Hydro.=hydraulic

(FOR EXPORT ONLY)

MANUFACTURER: TIANJIN PIPE (GROUP) CORPORATION
ADD: JINTANG ROAD DONGLI DISTRICT, TIANJIN, CHINA
TEL: 86-22-24801073
FAX: 86-22-24801291

QR-11-8.2.4-3

QUALITY CERTIFICATE

Licence No.:

NO.: 15012965

Contract No.	TPCO-14805E	L/C No.		O.D.×W.T.	7IN 23.00LB/FT (177.80mm×8.05mm)	Packing	IN LOOSE
Order	Esso Exploration and Production Chad, Inc.	Product	CASING	Steel grade	N80Q	Total pieces	90
P.O. No.	4501074469 / 20-Nov-2014	Port of desti.		Manu. method	HOT ROLLING SEAMLESS	Total metres	
Standard	API SPEC 5CT 9th	Type of thread	BC	Length range	12.00-13.00M	Total Tons	39.487

1

2

Heat No.	Lot No.	Quantity Pieces	Meters	Bundles	Tons	Delivery condition	Sample No.	Tensile test(MPa) 1*	Tem. ℃	T.S.	Type	Y.S.	Elong. %	Shrink %	2*	Tem. ℃	Size	Impact test(J) AK1	Shear %	AK2	Shear %	AK3	Shear %	AVE	Shear %
141069	81	90			39.487	Q+T	81-001-1	A	23	788	Rt0.5	684	21.0		A	0	10*5	75	100	70	100	69	100	71	100
Total		90			39.487																				

Note: A:strip,L,bo=25.4mm Lo=50mm A:V8/L

3

Heat No.	Lot No.	Sample No.	Hardness test (inside) MAX	1	2	3	AVE	Hardness test (middle) 1	2	3	AVE	Hardness test (outside) 1	2	3	AVE	A Thin	A Thick	B Thin	B Thick	C Thin	C Thick	D Thin	D Thick	Grain size	Structure
141069	81	81-001-1														0.5	0	0	0	0	0	0.5	0	8.5	

4

Chemical composition % (L: Ladle analysis P:Product analysis)

Heat No. / Material		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	Al	V	Pb	Sn	As	Sb	Bi	Drift ϕ(mm)	NDE	Hydro. Test
141069	L	0.29	0.22	1.25	0.012	0.003	0.04	0.08	0.03	0.07	0.011	0.01	0.0001	0.0042	0.0069	0.0013	0.0008	158.94	EMI+UT	5800PSI/8S
30Mn5	P	0.29	0.23	1.24	0.012	0.002	0.04	0.08	0.03	0.08	0.013	0.01	<0.001	0.0067	0.0085	<0.002	<0.001		F3+U3	
	P	0.29	0.23	1.24	0.012	0.002	0.04	0.08	0.03	0.08	0.012	0.01	<0.001	0.0067	0.0084	<0.002	<0.001			
	L																			
	P																			
	P																			
	L																			
	P																			
	P																			

NDE WITNESSED ✓ REVIEWED C-4174 DATE: 2015-02-09 SIGNATURE Guo Tengfei

5

NDE (100%)	Visual and dimension	Hydro. Test	Pipe end NDE	Drift	Collapse test	SSC	HIC
G	G	G	G	G			

We hereby state that all pipes are manufactured and inspected according to above standards and order。

Seal for certification:

Note:

No.

Page (1)

Date: 2015-1-30

Remark:desti.=destination;tem.=temperature;speci.= specification;Manu.=Manufacture;G=Good;Hydro.=hydraulic

(FOR EXPORT ONLY)