





INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076

PROJECT: N/A	Ref: MDP/SH-13/076
BV Client: CHENGDU DERBO STEEL CO.,LTD	P/o nr: (client to BV)
Manufacturer: CHENGDU DERBO STEEL CO.,LTD	P/o nr: SPRO/PO/13/1013(1)
Inspection requested by: CHENGDU DERBO STEEL CO.,LTD	

SUPPLY / SUBJECT OF INSPECTION	ITEM / TAG Nr	INSPECTED QTY
API 5L SMLS PIPE 114.3*13.49mm PLS2, Gr.B, 3PE PROJECT: C.BN.CCS.DL.08.001.1231N-WELL TIE IN PROJECT	Pipe No from 001~212, For detail see packing list	212 PCS 2500.8 m

DOCUMENTS OF REFERENCE : See continuation sheet for additional documents: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Title	Reference n°	Rev.	Approved by	Date
Specification for Line Pipe	API 5L	45	API	2013
The Contract between Derbo and BV	ONS/S-Q130801	01	Derbo and BV	2013.08.01
Polyethylene coating for steel pipes and fittings	DIN 30670	1991		

INSPECTIONS :	Results of inspection : <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
<u>Inspection place & Date or Period:</u>	<u>Non Conformities Reports (NCR):</u>
Place(WSP): Pipe factory Xindian Town, Menchun County, Hebei Province	<input type="checkbox"/> NCR's issued during reported period : No
Coating factory Xuannan District, Yanshan County, Hebei Province	<input type="checkbox"/> List of outstanding NCR's : No
Date: Aug 08~ Aug 09, 2013	<u>Main Conclusions & Remarks:</u> (for details see continuation sheet)
<u>Stage of inspection :</u>	As client request, BV inspector performed the inspection for visual, dimension, material test, coating and so on. BV inspector also reviewed the mill certificate.
<input type="checkbox"/> Before manufacturing	The inspection result was acceptable according to relevant standards and contract requirement. For detail, please see below inspection report content.
<input type="checkbox"/> During manufacturing	<u>Next visit scheduled:</u>
<input checked="" type="checkbox"/> Final	No
<input type="checkbox"/> Packing	
<u>Type of inspection:</u>	
<input type="checkbox"/> Pre-inspection meeting	
<input checked="" type="checkbox"/> Witnessing tests	
<input checked="" type="checkbox"/> Final inspection	
<input checked="" type="checkbox"/> Document review	
<input type="checkbox"/> Expediting & vendor assessment	
<input type="checkbox"/> Packing	
(for details see continuation sheet)	
<u>Stamping :</u>	
<input checked="" type="checkbox"/> No <input type="checkbox"/>  <input type="checkbox"/> 	



INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076

Description of the inspections carried out:

➤ Introduction

As per request of **DERBO STEEL**, BV inspectors from BV China performed the third party inspection for above listed pipes at Mengcun County, Hebei Province, China. and Yanshan County, Hebei Province, China during Aug 08th ~ Aug 09th, 2013.

The inspection results were acceptable.

BV Scope of work:

Bureau Veritas inspector performed Third Party Inspection against the approved contract.

M-1 Visual and dimension inspection (10%)

M-2 Witness mechanical and chemical test

M-3 Outside coating inspection (10%, mainly include coating thickness, holiday test and peeling test)

M-4 Review MTC

Attended persons:

Mr. Wenbin Liu	BV China	Inspector
Mr. Yang Liu	Derbo Steel	QC

➤ Manufacturing Progress Status

All the pipes had been finished manufacturing and stored in coating mill outside yard before BV inspector arrived site.

For the packing list, see annex 01.

➤ Details of inspection activities carried out with respect to scope of work

M-1 Visual and dimension inspection (10%)

According to inspection requirement, total 22 pieces of pipe were selected for visual and dimension inspection. The pipes' No are 004, 199, 200, 201, 45, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 161, 174, 192, 110, 7, 116.

BV inspector checked the inner surface and pipe cutback area surface, include bevel quality, the surface quality is acceptable.

The pipe end protector have not installed for each pipe end before BV inspector left factory,



INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076

BV checked the pipe marking during this inspection, the marking content is DERBO STEEL API 5L GR.B PLS 2 SMLS 4"Xsch160X11.8M HEAT NO 1307209 2.7MM 3LPE COATED DIN30670 C.BN.CCS.DL.08.001.1231N WELL TIE IN PROJECT. The inspection result is acceptable.

BV inspector checked the pipe OD, wall thickness, bevel angle, root face and length. Each pipe length is 11.8m except the pipe for material test sampling. The length of the sampling pipe is 11.0m checked by manufacturer after BV inspector left factory. The inspection result is acceptable. Table of dimension is as follows:

STANDARD		ACTUAL	
THICKNESS	OD	THICKNESS	OD
13.49	114.3	13.10-13.55	114.1-114.9

The visual and dimension inspection result is acceptable.

M-2 Witness mechanical and chemical test

According to the product list which was provide by factory, the 212 pieces of pipe are one heat no and lot no, the Heat no is 1307209, the lot no is B1307-70-1.

Test sample was cut from pre-reserved pipe by factory, the pipe no is 084. BV inspector witnessed the sampling process, and then the sample was sent to mills laboratory for specimen manufacturing.

BV inspector witnessed mechanical test and chemical test, the test process and test result is acceptable according to API 5L. Before the test, BV inspector reviewed the test equipment certificate, the review result is acceptable.

The mechanical and chemical test inspection result is acceptable.

Chemical test

HEATNO.	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V
1307209	0.21	0.22	0.50	0.014	0.009	0.049	0.041	0.023	0.0005	0.0019

Mechanical test

HEAT NO.	TS (Mpa)	YS (Mpa)	EL %	Impacting (J) Energy(Transverse)
1307209	551	418	34	135

M-3 Outside coating inspection(10%, mainly include coating thickness, holiday

According to inspection requirement, total 22 pieces of pipe were selected for visual and dimension inspection. The pipes' No are 004, 199, 200, 201, 45, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 161, 174, 192, 110, 7, 116.

Before the inspection, BV inspector reviewed the equipment certificates of thickness gauge, holiday detector, the review result is acceptable.

BV inspector witnessed coating layer thickness check, holiday test, cut back length and coating

INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076

visual quality for these pipes, the inspection result is acceptable according to standard requirement.

The peeling test was performed on sampling pipe(pipe no:084), the test result is acceptable.

The inspection of coating is acceptable.

M-4 Review MTC

The MTC of bare pipe and coating were provided for reviewing by Derbo, the certificates no is DB13105 and DB13106.

The review result of MTC is acceptable.

➤ **Results of Inspection**

Acceptable

➤ **Problems pending**

➤ **Photos on site.**



Pipe storage status

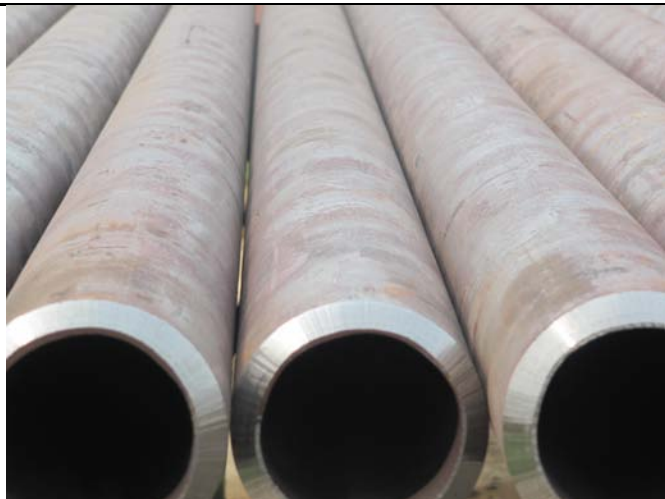


Pipe making



INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076



Pipe end bevel



Visual Check



Bevel angle check



Root face check



OD check



OD check



INSPECTION REPORT N° : MDP/SH-13/076-001

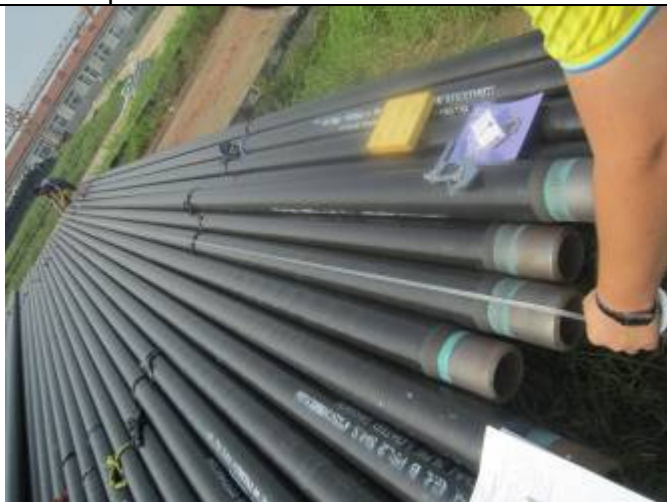
BV Job nr: MDP/SH-13/076



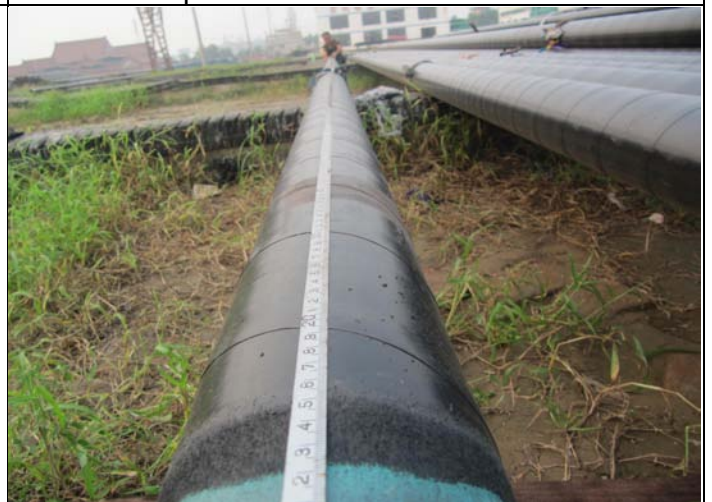
Pipe wall thickness check



Pipe wall thickness check



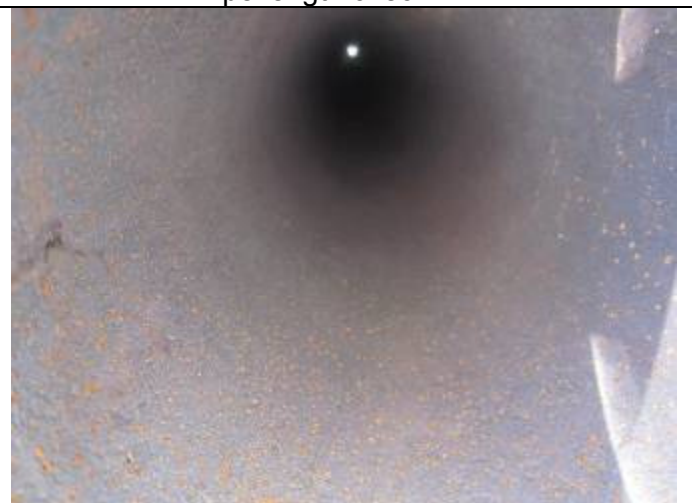
Pipe length check



Pipe length check



Pipe end surface quality



Pipe inner surface quality



BUREAU
VERITAS

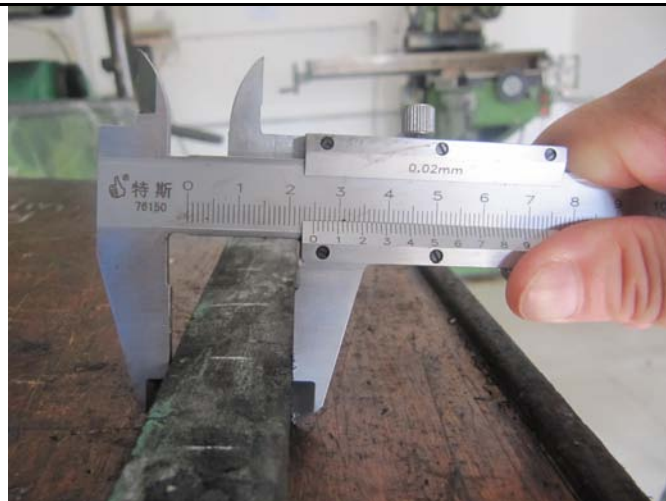
Interim
 Final

INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076



Sample



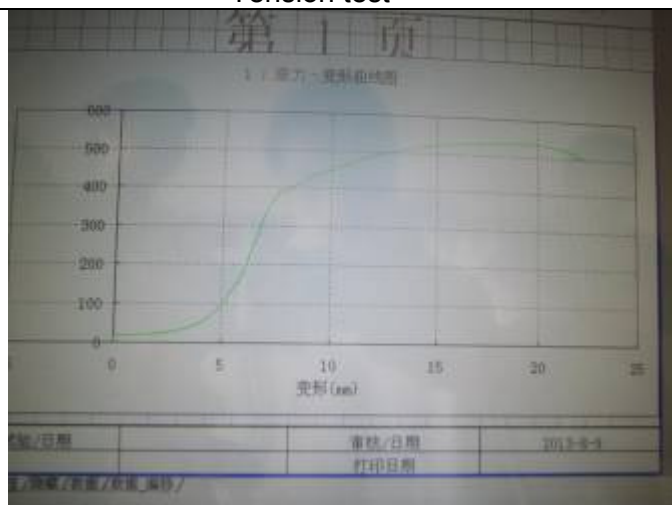
Specimen dimension check



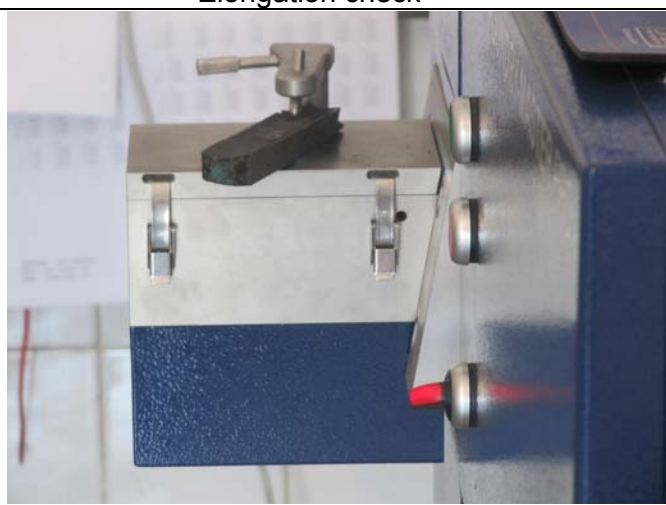
Tension test



Elongation check



Tension test graph display



Chemical analysis test



INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076



Impact Test



Certificate of chemical analysis equipment



Certificate of holiday detector



Holiday Test



Holiday test



Coating layer thickness check



BUREAU VERITAS

Interim
 Final

INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076



Coating layer thickness check



Cut back length check



Peeling test



Peeling test

成都德波钢铁有限公司 CHENGDU DERBO STEEL CO.,LTD
Address: Room No.1025 Meilang Plaza Tianfu Avenue Chengdu City China Post Code 611300 Tel:+86-28-85223949 Fax:+86-28-85249639

产品质量证明
MILL TEST CERTIFICATE EN15204 3.1

Product Name: 产品名称: Hot Rolled Stainless Steel Pipe Standard: 产品标准: APL 5L PSL 2 Contract No. 合同号: SPBQIP013/1013(1) Certificate No. 证书编号: DB13105

S.No.	品名	炉号	规格	重量	数量	重量(公斤)
1	Steel Grade	Heat No.	Size	PCS	BUNDLES	Weight(KG)
1	Cr-B	1307209	B1307-70-1	212	21	83860

序号	化学成分 Chemical Composition										机械性能 Mechanical Properties			
	%										Tensile Strength	Yield Strength	Elongation	
1	0.21	0.22	0.00	0.014	0.009	0.049	0.041	0.023	0.0095	0.0019	0.31	551	418	54

Inspector: Jesse Sun Issuer: Leon Li Date of Issue: 2013.08.06

Steel pipe MTC

成都德波钢铁有限公司
Chengdu Derbo Steel Co.,Ltd
Address: Room No.1025 Meilang Plaza Tianfu Avenue Chengdu City China Post Code 611300 Tel:+86-28-85223949 Fax:+86-28-85249639

ANTISEPTIC REPORT

PO No.: SPPO/PO/13/1013(1)
Size: 4" -SCH160-11800mm
Quantity: 212 PCS
Standard: DIN 30670
Type: Reinforced
Certificate No.: DB13105

Items	The function targets	Result
Antiseptic Thickness	≥2.70mm	Pass
Electric Spark Test	25KV	No flaw,Pass
Intensity of peeling off (N/cm)	20℃±5℃	≥100
	50℃±5℃	≥70
Cathode Disbonding	≤8	Pass
ASTM GB 65℃ 48h(mm)	≤8	Pass
Impact Intensity (J/mm)	≥8	Pass
Resisting Bend (2.5°)	No Crack in Polyethylene	No Crack in PE
End Length	150mm	Pass

Conclusion: All the antiseptic pipe are according to the standard of DIN 30670 and have met the requirement of the standard.
2013-08-06

Coating MTC

Industry & Facilities Division



BUREAU
VERITAS

Page 10/10

Interim
 Final

INSPECTION REPORT N° : MDP/SH-13/076-001

BV Job nr: MDP/SH-13/076

ANNEXES Yes No
Annex 01-packing list

Inspected by:

Name: Wenbin Liu,

Signature:

Date of issue: Aug 09, 2013

Inspection centre: BV Shanghai



Checked by:

Name: Anjiao Li

Signature:

Distribution: CLIENT MANUFACTURER