



Interim

Final

INSPECTION REPORT Nr IDD/S-09/922

BV Job nr: IDD/S-09/871

PROJECT: TPI For Sheet Pile	Ref:
BV Client:	P/o nr: (client to BV)
Manufacturer: Nanjing Grand Steel Piling Co., Ltd.	P/o nr: GP09111101 (client to Manufacturer)
Inspection requested by:	

SUPPLY / SUBJECT OF INSPECTION	ITEM / TAG Nr	QTY (pcs)
EN10249 Sheet Pile	N.A	346
EN10249 Corner Sheet Pile	N.A	2

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
Cold Formed sheet piling of non alloy steels	EN10249		EN	1996

<p>INSPECTIONS :</p> <p><u>Inspection place & Date or Period:</u> No. 9, Shiyang Road, Jiangning District, Nanjing, Jiangsu Province, China & Nov. 12th, 13th, 2009</p> <p><u>Stage of inspection :</u></p> <p><input type="checkbox"/> Before manufacturing <input type="checkbox"/> During manufacturing <input checked="" type="checkbox"/> Final <input type="checkbox"/> Packing</p> <p><u>Kind of inspection:</u></p> <p><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)</p> <p><u>Stamping :</u></p> <p><input checked="" type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/> </p>	<p><u>Results of inspection :</u> <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory</p> <p><u>Non Conformities Reports (NCR): N. A</u></p> <p>o NCR's issued during reported period : No</p> <p>o List of outstanding NCR's : No</p> <p><u>Main Conclusions & Remarks:</u> (for details see continuation sheet)</p> <p>Piles listed above were randomly inspected and tested, the results were acceptable.</p> <p>Refer to the inspection details as hereinafter.</p> <p><u>Next visit scheduled:</u> N/A</p>
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Description of the inspections carried out:

➤ **Introduction** (*Attendees, BV scope of work*)

Third Party Inspection for the sheet piles listed in page 1 was carried out by Mr. David Qiao, the inspector from Bureau Veritas Consulting (Shanghai) Company from Nov. 12th, 13th, 2009 at mill's plant, China.

Details were as follows:

Scope of Inspection

Visual Inspection 10% at random;

Quantity Check;

Dimensional Check 10% at random;

Samples taken as per heat no;

Documents Review.

➤ **Applicable Documents & Status of Approval** (*Type of documents reviewed & endorsed*)

The inspector reviewed the following documents during the inspection and found the results were acceptable:

- Raw material certificates
- Mechanical test and Chemical analysis reports

➤ **Manufacturing Progress Status**

The manufacturing for the sheet piles were completed and ready for third party inspection.

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

Surveillance with reference to ITP (*Each activity elaborated in detail*)

● **Visual Inspection**

The inspector did 10% visual inspection for the surface quality of the sheet piles. During the inspection, one surface dent was found from the corner pile, and then the supplier repaired it by welding and grinding. No other unacceptable defects were found. So the result was acceptable. Please refer the photos for more details. At the same time, the marking was also checked. One label showing the heat no. was found one each pile. So the result was acceptable. And the quantity was also counted by the inspector. The result was acceptable.

● **Dimension Check**


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The 10% dimension checking was performed on the sheet piles; the inspector measured the length, width, height and the sheet thickness. The inspection result are as follows:

Specification		EN10249 Sheet Pile	EN10249 Corner Sheet Pile
Length	Required	20000 ± 50mm	20000 ± 50mm
	Actual	20000mm	20000mm
Width	Required	697 ± 2% mm	697 ± 2% mm
	Actual	690-709 mm	705-711 mm
Height	Required	265 ± 6 mm	265 ± 6mm
	Actual	268-269 mm	260-268
Thickness	Required	9 ± 6% mm	9 ± 6% mm
	Actual	8.88-9.02 mm	8.89-9.05 mm
Straightness	Required	≤ 0.25%L	≤ 0.25%L
	Actual	25mm	25mm

The results were within the tolerance of the standard. So the results of dimension check were acceptable.

• **Samples Taken and Test in third party's lab**

- a) Chemical composition analysis: one piece per heat.
- b) Mechanical test
 - Tensile test: 1 piece per heat.
 - Cold bending test: 1 piece per heat

The inspector took all the samples in the mill's plant. And all the samples were marked by BV die stamp.

And the samples have been sent to the Third Party's lab for the chemical and mechanical test. And the result was acceptable according to EN10248. Please refer the attached Annex 2 Chemical and Mechanical test report.

- **Results of Inspection** (*incl. calibration status of equipment / instruments used for the inspection / testing*)

The calibration operation of the instruments used for the inspection/testing was satisfied and acceptable.

All testing results were found to be acceptable.

- **Problems pending / Areas of Concern**

N.A

- **Photos at site**



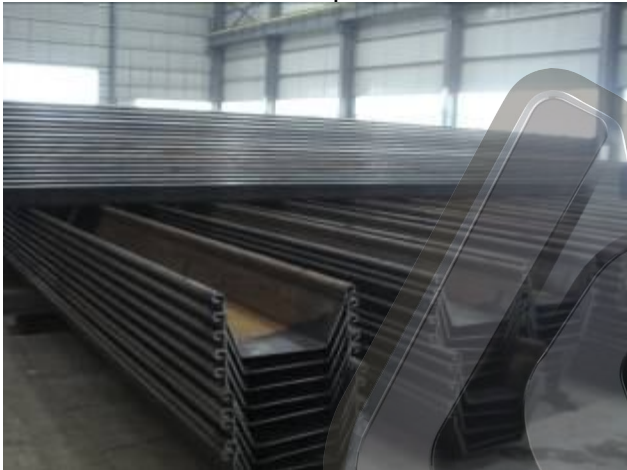
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Visual Inspection



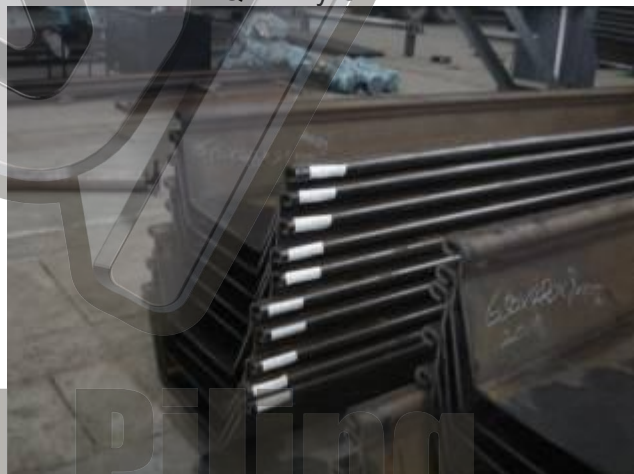
Visual Inspection



Marking Check



Quantity Check



Height Check



Height Check





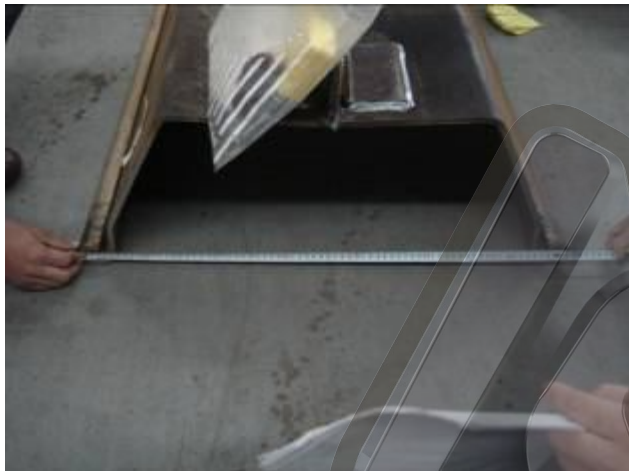
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Width check



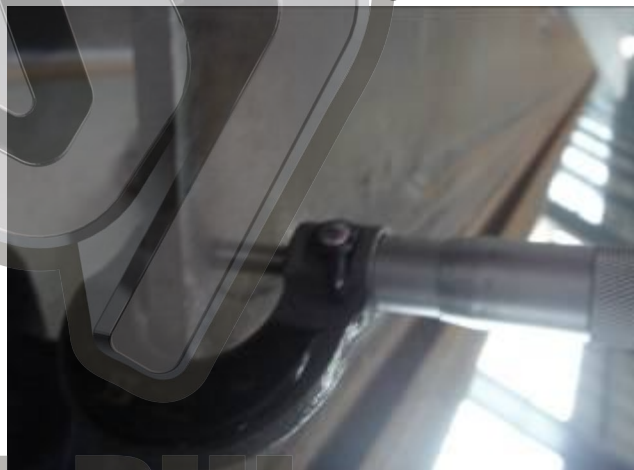
Width check



Length check



Wall Thickness Check



ANNEXES Yes (Total number of pages:2) No

Inspected by:

Name: **David Qiao**

Signature:

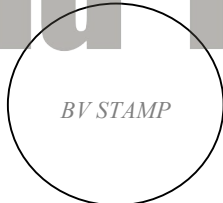
Date of issue: Nov. 20th, 2009

Inspection centre: BV SHANGHAI

Checked by:

Name: **Wei Yue**

Signature:



Distribution: CLIENT BV SHA FILE 1 copy


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ANNEXES 1 Pipe batch-quantity-certificate no

Pipes Sepcification	Heat No.	Quantity (Pcs)	Certificate No.
<i>EN10249 Sheet Pile</i>	134710	55	BGTMI0811250006100
			BGTMI0811250006400
			BGTMI0811270005000
	134916	55	BGTMI0811250003600
			BGTMI0811250006100
			BGTMI0811250006400
	134706	44	BGTMI0811280004500
			BGTMI0811250003800
	134709	44	BGTMI0811250006100
			BGTMI0811250006400
	134707	22	BGTMI0811250006100
			BGTMI0811270005000
	134917	88	BGTMI0811270005000
	134920	11	BGTMI0811270005000
134711	27	BGTMI0811250003800	
		BGTMI0811250006100	
		BGTMI0811250004100	
<i>EN10249 Corner Sheet Pile</i>	134711	2	

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Annex 2 Chemical and Mechanical Test Report

Grade & Size/mm	Heat No	C	S	P	Si	Mn	Ni	Cr	Cu	Mo	V	Al	CE
	Required	≤0.27	≤0.050	≤0.050	≤0.60	≤1.70							
S390GP & 1120*9	134710	0.13	0.006	0.016	0.20	0.79	0.005	0.011	0.010	0.001	0.002	0.042	0.27
	134916	0.13	0.006	0.013	0.20	0.85	0.007	0.010	0.009	0.001	0.002	0.042	0.28
	134706	0.10	0.007	0.013	0.21	0.87	0.006	0.010	0.010	0.001	0.002	0.032	0.25
	134709	0.10	0.008	0.020	0.20	0.82	0.010	0.020	0.009	0.001	0.003	0.047	0.24
	134707	0.10	0.007	0.019	0.20	0.78	0.006	0.010	0.009	0.001	0.003	0.047	0.23
	134917	0.11	0.005	0.013	0.21	0.83	0.005	0.011	0.008	0.001	0.002	0.041	0.25
	134920	0.12	0.007	0.013	0.20	0.84	0.006	0.010	0.008	0.001	0.002	0.044	0.26
	134711	0.10	0.007	0.019	0.21	0.82	0.006	0.010	0.009	0.001	0.003	0.047	0.24
Mechanical Test													
	Heat No.	Yield Strength R _{eH} (N/mm ²)	Tensile Strength R _m (N/mm ²)	Elongation (%)	Bend test (180°, d=2a)α								
S390GP 1120*9	Required	≥390	≥490	≥20									
	134710	470	560	30.5	Acceptable								
	134916	430	530	26.5	Acceptable								
	134706	410	525	31.5	Acceptable								
	134709	405	515	34.0	Acceptable								
	134707	410	510	30.5	Acceptable								
	134917	430	530	29.0	Acceptable								
	134920	425	535	30.0	Acceptable								
134711	425	520	28.0	Acceptable									

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