Australian Government
Australian Customs and Border Protection Service

INVESTIGATION INTO THE ALLEGED DUMPING OF ZINC COATED (GALVANISED) STEEL AND ALUMINIUM ZINC COATED STEEL EXPORTED FROM THE PEOPLE'S REPUBLIC OF CHINA, THE REPUBLIC OF KOREA AND TAIWAN

EXPORTER VISIT REPORT

ANGANG STEEL COMPANY LIMITED

THIS REPORT AND THE VIEWS OR RECOMMENDATIONS CONTAINED THEREIN WILL BE REVIEWED BY THE CASE MANAGEMENT TEAM AND MAY NOT REFLECT THE FINAL POSITION OF CUSTOMS AND BORDER PROTECTION

February 2013

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2 BACKGROUND

2.1 Applications

Dumping

On 3 August 2012, applications[1] were lodged on behalf of BlueScope Steel Limited (BlueScope) requesting that the Minister for Home Affairs (the Minister) publish dumping duty notices in respect of:

- zinc coated (galvanised) steel exported to Australia from the People's Republic of China (China), the Republic of Korea (Korea) and Taiwan; and
- aluminium zinc coated steel exported to Australia from China, Korea and Taiwan.

BlueScope alleged that the Australian industry has suffered material injury caused by galvanised steel and aluminium zinc coated steel (the goods) being exported to Australia from China, Korea and Taiwan at dumped prices.

On 17 August 2012[2] and 27 August 2012 additional information and data were received in respect of the applications. As a result, the Australian Customs and Border Protection Service (Customs and Border Protection) restarted the 20 day period for considering the applications.

On 5 September 2012, following consideration of the applications, the Chief Executive Officer of Customs and Border Protection decided not to reject the applications and initiated investigations into the alleged dumping of galvanised steel and aluminium zinc coated steel exported from China, Korea and Taiwan. Public notifications of initiation of the investigations were published in *The Australian* on 5 September 2012. Australian Customs Dumping Notice No. 2012/40 provides further details of the investigations and is available at www.customs.gov.au.

Subsidies

On 18 October 2012, applications[3] were lodged on behalf of BlueScope Steel Limited (BlueScope) requesting that the Minister for Home Affairs (the Minister) publish countervailing duty notices in respect of:

- zinc coated (galvanised) steel exported to Australia from China; and
- aluminium zinc coated steel exported to Australia from China.

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[1] *Application for Dumping Duties for Galvanised Steel exported from China, Korea and Taiwan* (Galvanised Steel Application) received on 3 August 2012; and *Application for Dumping Duties for Aluminium Zinc Coated Steel exported from China, Korea* and *Taiwan* (Aluminium Zinc Coated Steel Dumping Duty Application) received on 3 August 2012.

[2] Additional information relating to minor issues was also provided on 20 and 21 August 2012.

[3] *Application for Countervailing Duties for Galvanised Steel exported from China,* received on 18 October 2012; and *Application for Countervailing Duties for Aluminium Zinc Coated Steel exported from China* (Aluminium Zinc Coated Steel Countervailing Duty Application) received on 18 October 2012.

BlueScope alleged that that the Australian industry has suffered material injury caused by the cumulating effects of galvanised steel and aluminium zinc coated steel exported to Australia from China, Korea and Taiwan at dumped prices, and from China at subsidised prices.

On 2 November 2012, additional information and data were received in respect of the applications. As a result, the Australian Customs and Border Protection Service (Customs and Border Protection) restarted the 20 day period for considering the applications.

On 22 November 2012, following consideration of the applications, the Chief Executive Officer of Customs and Border Protection decided not to reject the applications and to initiate investigations into the alleged subsidisation of galvanised steel and aluminium zinc coated steel exported from China. Public notifications of initiation of the investigations were published in *The Australian* on 26 November 2012. Australian Customs Dumping Notice No. 2012/56 provides further details of the investigations and is available at www.customs.gov.au.

2.2 Background to meeting

Following initiation of the investigations, a search of Customs and Border Protection's import database indicated that Angang Steel Company Limited (ANSTEEL) exported galvanised steel and aluminium zinc coated steel from China to Australia in the period 1 July 2011 to 30 June 2012 (the investigation period).

Customs and Border Protection notified ANSTEEL of the initiation of the investigations and sought its cooperation with the investigations and provided an exporter questionnaire in respect of aluminium zinc coated steel and galvanised steel for the company to complete. The company completed the exporter questionnaire, and a non-confidential version of the questionnaire response is available on the public record.

2.3 Events after date of visit

On 6 February 2013, Customs and Border Protection gave notice that preliminary affirmative determinations (PADs) have been made that there appears to be sufficient grounds for the publication of dumping duty notices in respect of:

- galvanised steel exported to Australia from China, Korea and Taiwan; and
- aluminium zinc coated steel exported to Australia from China, Korea and Taiwan.

In reaching these preliminary decisions, Customs and Border Protection was satisfied that dumped goods appear to have caused material injury to the Australian industry producing like goods.

The decision to make PADs was based on the information available at the time of making the PADs. The preliminary findings, including dumping margins, may change between the time of the publication of the PADs and the publication of the statements of essential facts in respect of both investigations.

At the time of making the PADs, Customs and Border Protection further determined that securities should be required and taken under section 42 of the *Customs Act 1901*[4] in respect of interim dumping duty that may become payable in respect of certain goods from China, Korea and Taiwan, being satisfied that it is necessary to require and take securities in order to prevent material injury occurring to the Australian industry while the investigations continue.

Dumping securities will be taken in respect of any interim dumping duty that may become payable in respect of the goods entered for home consumption on or after 6 February 2013.

No PAD was made in respect of the alleged subsidisation of exports of galvanised or aluminium zinc coated steel from China.

Further details of the PADs are contained in Australian Customs Dumping Notice 2013/11 and the report, PAD 190. Both can be found on the electronic public record for the investigations.

Given the making of the PADs following the visit, this report serves both as an account of the verification conducted as well as providing details of the dumping margin calculated based on the preliminary determinations contained in PAD 190.

2.4 Purpose of visit

The purpose of the visit was to verify information contained in the exporter questionnaire response submitted by ANSTEEL.

The ANSTEEL exporter questionnaire responses consisted of background to its activities, exports sales data to Australia and other countries, domestic sales data, and cost to make and sell data. It also included response to the market situation and subsidy questionnaires. The exporter questionnaire response was supported by attachments. A non-confidential version of the exporter questionnaire response was placed on the public record.

Verified information obtained during the visit to ANSTEEL has been used to make preliminary assessments of:

- who is the exporter and who is the importer;
- export prices and normal values for galvanised steel and aluminium zinc coated steel manufactured by ANSTEEL;
- dumping margins; and
- countervailable subsidies and subsidy margins.

2.5 Visit

The visit for ANSTEEL took place at:

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[4] All references in this report to sections of legislation, unless otherwise specified, are to the *Customs Act 1901.*

PUBLIC RECORD

Exporter visit – Angang Steel Company Limited

Angang Group International Trade Corporation (Head Office)
322 South Zhonghua Road,
Anshan, Liaoning
CHINA

Telephone: + 86 412 6366 804
Fax: + 86 412 6319 703

The following persons were present at various stages of the visit:

Dates	22, 23, 24, 25 January 2013
ANSTEEL	Li Hongguang, Cost accountant Huang Fei, Domestic sales staff Li Xiucheng, Domestic sales accountant Yang Zhenyu, Domestic sales staff
Angang International	Sha Xiaochun, President Tan Guangyu, Deputy director of export sales Fu Yong, Export manager Pan Lei, Australian sales Sun Cuilian, Accountant
Angang HK	Ge Suying, Chief Financial Officer Liu Zhongqiang, Export sales manager
Dacheng Law Offices	Cai Kaiming, Senior Partner Marco Hu, Senior Associate Zhao Lin, Lawyer Zhao Gengpo, Lawyer
Customs & Border Protection	Geoff Gleeson, Director, Operations 3 An Chew, Supervisor, Operations 2 Cathy Cole, Supervisor, Operations 1

At the visit we provided a summary of the investigation process and timeframes as follows (highlighting that the following process and timeframes are for both the galvanised steel and aluminium zinc coated steel investigations):

- the investigation period for both investigations is 1 July 2011 to 30 June 2012;
- Customs and Border Protection will examine the Australian market from July 2007 for the purpose of analysing the condition of the Australian industry;
- a preliminary affirmative determinations (PADs) may be made no earlier than 5 November 2012 (Dumping) and 29 January 2013 (Subsidies) (after day 60

from the initiation date) (refer to section 2.2 above for details of the PAD for the dumping investigations);

- provisional measures may be imposed at the time of the PADs or at any time after the PADs have been made, but Customs and Border Protection would not make such a determination until it was satisfied that there appears to be, or that it appears there will be, sufficient grounds for the publication of a dumping duty notice and/or a countervailing duty notice;
- statements of essential facts (SEFs) for the investigations (dumping and subsidies) will be placed on the public record by 18 March 2013 [5];
- the SEFs will set out the material findings of fact on which Customs and Border Protection intends to base its recommendations to the Minister and will invite interested parties to respond, within 20 days, to the issues raised (submissions received in response to the SEF will be considered when compiling the report and recommendations to the Minister);
- Customs and Border Protection's report to the Minister is due by 30 April 2013;
- the Minister will have 30 days from the date of receipt of the final report to make a final decision; and
- certain interested parties have the right to seek a review to the Trade Measures Review Officer in relation to the Minister's final decision.

[5] The Minister has, under s. 269ZHI of the *Customs Act 1901*, extended the deadline for the publication of the SEFs for the dumping investigations. See Australian Customs Dumping Notice No. 2012/63 for further details about the extension.

3 COMPANY INFORMATION

3.1 Company background

ANSTEEL is a limited liability joint venture company, listed on the Hong Kong Stock Exchange and the Shenzhen Stock Exchange. Its primary shareholder (67.29%) is Anshan Iron and Steel Group Complex, which is wholly owned by Angang Holding. Angang Holding is wholly owned by the State-Owned Assets Supervision and Administration Commission (SASAC).

ANSTEEL's principal activities include production and sale of steel products such as hot rolled sheets, cold rolled sheets, galvanized steel sheets, colour coating plates, silicon steel, medium and thick plates, wire rods, heavy section and seamless steel pipes. ANSTEEL has two plants that produce galvanised steel and aluminium zinc coated steel, each with two galvanising lines, and the collective annual capacity is around 1.6 million tonnes.

Also involved in the export transaction for sales of the goods to Australia are the following affiliated parties:

- Angang Group International Trade Corporation (Angang International); and
- Angang Group Hong Kong Co., Ltd. (Angang HK).

Angang International is a wholly owned subsidiary of Anshan Iron and Steel Group Complex. Angang HK is a wholly owned subsidiary of Angang International.

ANSTEEL explained that Angang International acts as an agent in the sale of the goods to foreign markets including Australia and that Angang International issues the commercial invoice to Angang HK on ANSTEEL's behalf. ANSTEEL advised that there is no invoice between ANSTEEL and Angang International in relation to export sales.

ANSTEEL further explained that Angang International collects a commission from ANSTEEL in relation to export sales, in consideration of its dealings in arranging all the logistics and associated paper work. ANSTEEL advised that the arrangements for domestic sales are different as Angang International purchases the goods from ANSTEEL and resells them to independent customers. However, ANSTEEL also make domestic sales directly to independent parties.

In relation to the goods the subject of the investigations, the following table shows the proportion of the goods sold domestically and exported by ANSTEEL:

Goods	Domestic	Australia	Other exports
galvanised steel	[redacted]	[redacted]	[redacted]
aluminium zinc coated steel	[redacted]	[redacted]	[redacted]

ANSTEEL company brochures in relation to 'galvanised plate' and 'hot rolled strip' are at **non-confidential attachments GEN 1** and **GEN 2**.

3.2 Accounting

ANSTEEL's financial year is the calendar year, 1 January to 31 December.

ANSTEEL provided copies of the following documents in the exporter questionnaire response and at the verification meeting:

- ANSTEEL Chart of Accounts (**confidential attachment GEN 3**);
- ANSTEEL diagram of cost centres and production flow for process costing (see section 6.1.2 below);
- ANSTEEL's annual reports for 2010 and 2011; and
- ANSTEEL interim report for 6 months ending 30 June 2012.

ANSTEEL advised that the primary accounting information system is SAP, but other Enterprise Resource Planning (ERP) systems are used for compiling source data (eg. Sales, costs, inventory) that feed into SAP.

3.3 Related parties

ANSTEEL provided listings of subsidiaries of Anshan Iron and Steel Group Complex, and of Angang International, which are at **confidential attachment GEN 4**. Subsidiaries of ANSTEEL can be identified in its Annual Report.

We noted in the ANSTEEL domestic sales data that the proportion of galvanised steel and of aluminium zinc coated steel sold to related parties was [redacted]% and [redacted]% respectively for the investigation period. Of the related party sales for galvanised steel and aluminium zinc coated steel, the proportion sold to Angang International was [redacted]% and [redacted]% respectively.

We noted in the Angang International domestic sales data that the proportion of galvanised steel and of aluminium zinc coated steel sold to related parties was [redacted]% and [redacted]% respectively for the investigation period

ANSTEEL also advised that it makes the some raw materials purchases from related parties, as indicated in the following table:

Raw material	Related party (supplier)
Iron ore	[redacted]
Zinc and alloy	[redacted]
Limestone	[redacted]
Lime	[redacted]

In addition, we noted that a small proportion (<1%) of ANSTEEL's coking coal purchases in the investigation period were from Angang International.

4 GOODS UNDER CONSIDERATION AND LIKE GOODS

4.1 The goods the subject of the applications

4.1.1 Description

(i) Galvanised steel

The imported goods the subject of the Galvanised Steel Application are:

> *"flat rolled products of iron and non-alloy steel of a width less than 600mm and, equal to or greater than 600mm, plated or coated with zinc"*[6].

The goods the subject of this application (the goods) are generically called galvanised steel (referring to zinc coated steel). The application covers galvanised steel of any width. The application stated that trade and other names often used to describe galvanised steel include:

- "GALVABOND®" steel;
- "ZINCFORM®" steel;
- "GALVASPAN®" steel;
- "ZINCHITEN®" steel;
- "ZINCANNEAL"steel;
- "ZINCSEAL"steel;
- Galv;
- GI;
- Hot Dip Zinc coated steel;
- Hot Dip Zinc/iron alloy coated steel; and
- Galvanneal.

The application noted that the amount of zinc coating on the steel is described as its coating mass and is nominated in grams per meter squared (g/m2) with the prefix being Z (*Zinc*) or ZF (*Zinc converted to a Zinc/Iron alloy coating*). The applicant claims that the common coating masses used for zinc coating are: Z350, Z275, Z200, Z100, and for zinc/iron alloy coating are: ZF100, ZF80 and ZF30 or equivalents based on international standards and naming conventions.

(ii) Aluminium zinc coated steel

The imported goods the subject of the Aluminium Zinc Coated Steel Application are:

> "*flat rolled products of iron and non-alloy steel of a width equal to or greater than 600mm, plated or coated with aluminium-zinc alloys,* ***not painted*** *whether or not including resin coating*"[7].

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6 Galvanised Steel Application, page 10.

7 Aluminium Zinc Coated Steel Application, page 10.

The goods the subject of this application are generically called aluminium zinc coated steel. The application stated that trade and other names often used to describe aluminium zinc coated steel, include:

- ZINCALUME® steel;
- GALVALUME® steel;
- Aluzinc, Supalume, Superlume, ZAM, GALFAN;
- Zinc aluminium coated steel;
- Aluminium zinc coated steel;
- Alu-Zinc Steel sheet in Coils;
- Al/Zn; and
- Hot Dipped 55% Aluminium-Zinc Alloy coated steel sheet in coil.

The application noted that the amount of aluminium zinc coating on the steel is described as its coating mass and is nominated in g/m2 with the prefix being AZ (*Aluminium Zinc*). The applicant claims that the common coating masses used are: AZ200, AZ150, AZ100, and AZ70.

4.1.2 Product standards

The applications stated that:

> *"Typically each Australian and International Standard has a range of steel grades nominated as Commercial, Formable or Structural grades. The commercial/formable grades are those with mechanical properties suitable for general pressing and forming whereas the structural grades are those with guaranteed minimum properties that structural engineers utilize in the design of their final product designs"*[8].

(i) Australia

The applications state that the Australian and New Zealand Standard Industrial Classification Code applicable to galvanised steel and aluminium zinc coated steel is category 2711.

(ii) International

The applications state that there are a number of relevant International Standards for galvanised steel and aluminium zinc coated steel products (figures 1 and 2 refer) that cover a range of products through specific grade designations, including the recommended or guaranteed properties of each of these product grades.

8 Galvanised Steel Application, page 12.

International Standards	Product Grade Names
General and Commercial Grades	
AS/NZS 1397	G1, G2
ASTM A 653/A 653M	CS type A, B and C
EN10346	DX51D, DX52D
JIS 3302	SGCC, SGHC
Forming, Pressing & Drawing Grades	
AS/NZS 1397	G3
ASTM A 653/A 653M	FS, DS type A and B
EN10346	DX53D, DX54D
JIS 3302	SGCD, SGCDD,
Structural Grades	
AS/NZS 1397	G250, G300, G350, G450, G500, G550
ASTM A 653/A 653M	33 (230), 37 (255), 40 (275), 50 (340), 55 (380), 80 (550)
EN10346	S220GD, S250GD, S280GD, S320GD, S350GD, S550GD
JIS 3302	SGC340, SGC400, SGC440, SGC490, SGC570 SGH340, SGH400, SGH440, SGH490, SGH570

Figure 1: International Standards for galvanised steel[9]

International Standards	Product Grades
General and Commercial Grades	
AS/NZS 1397	G1, G2
ASTM A792	CS, type A, B and C
EN10346	DX51D, DX52D
JIS 3321	SGLCC
Forming, Pressing & Drawing Grades	
AS/NZS 1397	G3
ASTM A792	FS, DS
EN10346	DX53D, DX54D
JIS 3321	SGLCD, SGLCDD
Structural Grades	
AS/NZS 1397	G250, G300, G350, G450, G500, G550
ASTM A792	33 (230), 37 (255), 40 (275), 50 (340), 55 (380), 80 (550)
EN10346	S220GD, S250GD, S280GD, S320GD, S350GD, S550GD
JIS 3321	SGLC400, SGLC440, SGLC490, SGLC570

Figure 2: International Standards for aluminium zinc steel[10]

4.1.3 Tariff classifications

(i) Galvanised steel

The application states that galvanised steel is classified to tariff subheadings 7210.49.00 (and statistical codes 55, 56, 57 and 58) and 7212.30.00 (and statistical code 61) of Schedule 3 to the *Customs Tariff Act 1995* (Tariff Act). Based on the information provided in the application, Customs and Border Protection's Trade Policy Branch confirmed that galvanised steel is correctly classified to these tariff subheadings.

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9 Galvanised Steel Application, page 11.

10 Aluminium Zinc Coated Steel Application, page 11.

The general rate of duty is currently 5% for goods imported under these tariff subheadings. Imports from China are subject to the DCS duty rate which is free. Imports from Korea and Taiwan are subject to the DCT duty rate which is 5%.

There are several Tariff Concession Orders (TCOs) applicable to the relevant tariff classification subheading 7210.49.00, which covers galvanised steel (figure 2 refers).

TC No.	Description
TC 0939596	STEEL, COIL, hot dip zinc coated, complying with Japanese Industrial Standard JIS G 3302:2007, having ALL of the following: (a) yield strength NOT less than 275 N/mm2 and NOT greater than 380 N/mm2; (b) tensile strength NOT less than 440 N/mm2; (c) elongation NOT less than 29% and NOT greater than 41%; (d) coating mass NOT less than 45 g/m2 and NOT greater than 65 g/m2; (e) thickness NOT less than 1.14 mm and NOT greater than 1.26 mm; (f) width NOT less than 1590 mm and NOT greater than 1605 mm
TC 9612218	STEEL, flat rolled non alloy, hot dipped galvannealed, having ANY of the following: (a) differential coating mass on each side; (b) additional iron base alloy electroplated outer coatings; (c) width exceeding 1525 mm; (d) a minimum ultimate tensile strength of 340 MPa

Figure 3: TCOs applicable to tariff subheading 7210.49.00

Customs and Border Protection notes that the applications did not specify that TCOs in respect of the goods were applicable. Customs and Border Protection considers that the relevance of the TCOs to the goods the subject of the application for galvanised steel requires further investigation.

(ii) Aluminium zinc coated steel

The application states that aluminium zinc coated steel is classified to tariff subheading 7210.61.00 (and statistical codes 60, 61, and 62) of Schedule 3 to the Tariff Act. Based on the information provided in the application, Customs and Border Protection's Trade Policy Branch confirmed that the goods are correctly classified to this tariff subheading.

The general rate of duty is currently 5% for goods imported under this tariff subheading. Imports from China are subject to the DCS duty rate which is free. Imports from Korea and Taiwan are subject to the DCT duty rate which is 5%.

There are no TCOs applicable to the relevant tariff classification subheading for aluminium zinc coated steel.

4.2 Like goods

4.2.1 ANSTEEL's products

ANSTEEL stated that it produces and sells galvanised steel and aluminium zinc coated steel in a wide range of specifications, both for the domestic and export markets.

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Exporter visit – Angang Steel Company Limited

ANSTEEL used a product control number (PCN) to identify the key characteristics of each finished product. An example of a PCN is [redacted], where the alpha and numeric characters mean the following:

- [redacted] means produced by ANSTEEL ([redacted] means it is has been purchased)
- [redacted] is the product category, in this case aluminium zinc coated steel
- [redacted] is the steel grade ([redacted] means [redacted])
- [redacted] is the thickness code, in this case [redacted]
- [redacted] is the zinc weight code, in this case [redacted]
- [redacted] is the production line

To simplify identification of galvanised steel and aluminium zinc coated steel, ANSTEEL also provided a prefix to each PCN; GL for galvanised steel and AL for aluminium zinc coated steel.

We asked ANSTEEL to provide a table that explains how its 3 alpha-character code for steel grade correlates to generally accepted codes for steel grades. ANSTEEL provided such a correlation table, which is at **confidential attachment GEN 5**.

When asked about the factors that are most important for determining price, and for comparing export sales and domestic sales, ANSTEEL explained that the major considerations were:

- Zinc weight;
- thickness;
- standard; and
- surface treatments;

After further discussion about factors affecting price, we asked ANSTEEL to revise the export and domestic spreadsheets to include factors not originally listed, as follows:

- Width
- Whether or not passivated;
- Whether or not oiled;
- Normal spangling or no spangling; and
- surface quality

ANSTEEL provided a copy of its "Product manual of galvanised plate" (see non-confidential attachment GEN 1), which contains details of the various standards and properties of the products offered.

ANSTEEL advised that it does not sell downgrade galvanised steel or aluminium zinc coated steel, and that any non-prime products are returned to the furnace.

ANSTEEL explained that despite variations in grades, specifications and properties, the galvanised steel or aluminium zinc coated steel its produces and sells domestically are like to the goods sold to Australia. ANSTEEL explained that the

products are physically similar, undergo the same manufacturing process and are substitutable.

4.2.1.1 ANSTEEL's products - summary

In summary, we found that ANSTEEL produced a range of like goods to the galvanised steel and aluminium zinc coated steel exported to Australia. To enable a more appropriate comparison to the goods exported to Australia, we categorised the galvanised steel and aluminium zinc coated steel by the PCN.

4.2.2 Like goods – preliminary assessment

We consider that the galvanised steel and aluminium zinc coated steel produced and sold domestically by ANSTEEL have characteristics closely resembling those of the goods exported to Australia and are therefore "like goods" in terms of subsection 269T(1).

5 EXPORT SALES TO AUSTRALIA

5.1 General

5.1.1 Volumes and sales routes

ANSTEEL, through Angang International and Angang HK, exported the following volumes of galvanised steel and aluminium zinc coated steel to Australia during the investigation period:

Coated steel type	Quantity (MT)
Galvanised steel	[redacted]
Aluminium zinc coated steel	[redacted]

In ANSTEEL's exporter questionnaire response, it provided detailed export sales spreadsheets listing sales from Angang International to Angang HK of galvanised steel and aluminium zinc coated steel exported to Australia from China. During and after the visit, the spreadsheets were updated to include width, passivation, oiling, surface structure, surface quality level, revised inland freight and revised bank charges (**confidential attachment EXP 1**).

We also note that each transaction in the export sales spreadsheet refers to coils of a specific thickness.

In ANSTEEL's exporter questionnaire response, it also provided detailed export sales spreadsheets listing Angang HK's sales of galvanised steel and aluminium zinc coated steel exported to its Australian customer. The spreadsheet was updated during and again after the visit to include additional information on width, passivation, oiling, surface structure, surface quality level and revised bank charges (**confidential attachment EXP 2)**.The details of the sales and sales routes are described below.

5.1.2 Galvanised steel

During the investigation period, Angang International sold its galvanised steel through its wholly owned subsidiary, Angang HK, to the following customers in Australia: [redacted].

For exports to Australia, the terms of sale are determined by Angang International in negotiation with Angang HK and the Australian customer. Payment by the Australian customer is made to Angang HK who in turn pays Angang International.

The sales process can be described as follows:

- Australian customers make price inquiries with Angang HK via telephone or facsimile.
- Angang HK provides its prices, within a price range previously agreed upon between Angang International and Angang HK, and Angang HK and the customer negotiates before the terms of sale are settled upon.

- Upon agreement of the terms of sale, Angang HK prepares a sales contract with the customer based on the terms negotiated by Angang HK and the customer.
- Once the contract between Angang HK and the customer is signed, Angang HK will forward a copy of the contract to Angang International. The production information in this contract is translated into Chinese and entered as a production order into ANSTEEL's ERP system by Angang International.
- Concurrently, Angang International prepares a sales contract with Angang HK that mirrors the sales contract between Angang HK and the customer, except for price where Angang HK applies a margin.
- Upon completion of the sales contract ANSTEEL begins production of the goods.
- When production is complete, the goods are transported to the port for shipping directly to Australia.
- Angang International issues an invoice to Angang HK and Angang HK issues an invoice and packing list to the Australian customer.
- Payment terms are letter of credit (L/C) or telegraphic transfer (T/T) and payment is received after shipping. The Australian customer provides payment to Angang HK and Angang HK pays Angang International after deducting a commission.

5.1.3 Aluminium zinc coated steel

During the investigation period, Angang International's sales of aluminium zinc coated steel were made through its related trader, Angang HK, to [redacted].

The sales process for aluminium zinc coated steel is the same as that for galvanised steel described above.

5.1.4 Pricing

Angang International explained that its prices of galvanised steel and aluminium zinc coated steel exported to Australia were based on monthly price guidelines, negotiated with Angang HK, which took into account the domestic price, exchange rates and prices in the Australian market.

Price extras for export sales are based on the Angang International standard price extras list. Angang International provided us with copies of extras price lists which are at (**confidential attachment EXP 3**). The price extras list indicate price extras for the following categores:

- Thickness;
- Width;
- Steel grade;
- Zinc coating; and
- Surface quality.

Each of the Australian customers regularly orders the same type and quantity of product. There are no long term contracts and prices are negotiated on a transaction basis.

Angang International explained that it preferred to sell its galvanised steel and aluminium zinc coated steel on cost plus freight (CFR) terms. Angang International preferred to have control of the freight process up until arrival in Australia. Angang International noted that the terms for [redacted] were FOB as they already had a long term arrangement with a logistics company in China. The goods were delivered by rail for shipment to the Dalian port.

5.2 Verification of export sales up to audited financial statements

5.2.1 Angang International

We sought to verify the completeness and relevance of these spreadsheets up to audited financial statements. This was undertaken as part of the domestic sales upwards verification. For details, refer to section 7.5 below.

Having been able to reconcile ANSTEEL's galvanised steel and aluminium zinc coated steel Australian export sales spreadsheets up to audited financial statements, we are satisfied that the spreadsheets are complete and only contain relevant sales.

5.2.2 Angang HK

As Angang HK's spreadsheet also lists the invoice number, product code number (PCN) and weight for each transaction, we were able to match each transaction in the Angang HK spreadsheet to a transaction in the Angang International spreadsheet. For both galvanised steel and aluminium zinc coated steel, we were also able to match Angang International's export sales volume and value to Angang HK's export sales volume and value (after taking into account Angang HK's trading margin).

Having been satisfied with the completeness and relevance of Angang International's export sales spreadsheet, we were also satisfied that Angang HK's galvanised steel and aluminium zinc coated steel Australian export sales spreadsheets are complete and only contain relevant sales.

5.3 Verification of export sales down to source documents

5.3.1 Angang International

Prior to the visit, we selected eight galvanised steel and three aluminium zinc coated steel export sales from the detailed Australian export sales spreadsheet and requested that Angang International provide source documents in relation to each invoice.

For each selected invoice, Angang International provided copies of the following documents during the visit:

- Sales contract;
- Commercial invoice to Angang HK;
- Bill of lading;
- Proof of payment from Angang HK;
- Inland transport documents; and
- Settlement of Export Sales Revenue document.

We were able to match the sales information in the source documents to the data contained in the detailed sales spreadsheet. The source documents, including proof of payment of the selected sales, are at **confidential attachment EXP 4.**

5.3.2 Inland transport

During the verification visit, Angang International provided revised exports sales spreadsheets with corrections to the inland transport charges.

As stated above, Angang International provided inland shipping documents for the selected invoices. Coils are transported from the factory to Dalian Port by the Shenyang Railway Bureau, an unrelated government Authority. Angang International provided copies of the railway dockets and the corresponding tax invoices issued by the Liaoning Local Taxation Authority.

The spreadsheet did not include an amount for inland freight for invoice number BP82400011273. Angang International advised that there was no freight charged to these coils due to it being a shipment of only 17.37 MT and the coils being merged into other train cars. Angang International further explained they did not have any records of being charged by the Shenyang Railway Bureau for this invoice and therefore no inland transport charges were recorded against this invoice. We considered this explanation reasonable.

We were able to reconcile the selected invoices from the amount shown on the export sales spreadsheet to the source documents.

5.3.3 Handling charges

Angang International stated that handling charges includes agent fees, port charges, fumigation charges, cargo support fees), container loading fees, document charges and tally fees. Handling services for export sales of galvanised steel and aluminium zinc coated steel to Australia are provided by [redacted], a related company.

Angang International provided source documents for one of the selected invoices, BP82400011340. The documents provided included dockets issued by the freight forwarding company, an ANSTEEL handling charges summary sheet, evidence of payment and a Settlement of Export Sales Revenue document (an internal document that shows export sales revenue for each invoice in USD and RMB, exchange rate, commission and handling expenses).

We were able to match the handling charges in the Settlement of Export Sales Revenue document to the handling charges in the export sales spreadsheet but we were unable to reconcile the dockets to the handling charges summary sheet.

Although we were able to reconcile a payment to [redacted] to the handling charges summary sheet which gives us reasonable confidence of the accuracy of the handling charges.

5.3.4 Exchange rates

Angang International stated that the exchange rates in the export sales spreadsheet are based on the published buying rate for the first day of each month released by Bank of China as the exchange rate for the sales made in that month.

We were able to match all the rates in the Angang International export sales spreadsheet to the rates published on the Bank of China website: http://www.boc.cn/sourcedb/lswhpj/index2.htm.

We noted that for each coil transaction, the exchange rates in the Angang HK export sales spreadsheet are identical to those in the Angang International export sales spreadsheet.

The rate also matched the exchange rate in the Angang International Settlement of Export Sales Revenue document, mentioned in 0 above.

5.3.5 Angang HK

Prior to the visit, we requested that Angang HK provide source documents in relation to those sales that were selected for Angang International's export sales verification.

For each selected invoice, Angang HK provided copies of the following documents during the visit:

- Sales contract
- Commercial invoice to the Australian customer;
- Packing list; and
- Proof of payment.

5.3.6 Bank charges

After the verification visit, Angang HK provided a revised exports sales spreadsheet with corrections to the bank charges.

Angang HK provided payment documents for each of the selected invoices that included banking charges. We were then able to match the sales information in the source documents to the data contained in the detailed Australian sales spreadsheet. The source documents, including proof of payment of the selected sales, are at confidential attachment EXP 4.

5.3.7 Conclusion

Having been able to reconcile Angang International's and Angang HK's galvanised steel and aluminium zinc coated steel export sales spreadsheets down to source documents, we are satisfied that the spreadsheets are accurate.

5.4 Date for comparison of export and domestic sales

Angang International advised that the date of sale as included in the export sales spreadsheet refers to the date of invoice. Angang International's invoice to Angang HK and Angang HK's invoice to the customer are issued on the same day. The invoices are issued a week or two prior to shipment.

Customs and Border Protection usually regards the invoice date as the date of sale (that is, the date that best represents when the material terms of the sale have been established) unless there is clear evidence to indicate that another date is appropriate. In this instance, this is what the company also proposes and we have accordingly used the invoice date as the date of sale.

5.5 The exporter

We consider ANSTEEL, Angang International and Angang HK to be one entity for the purpose of determining export price. While Angang International invoices and receives payment for the exports of galvanised steel and aluminium zinc coated steel from Angang HK, and Angang HK in turn invoices and receives payment from the Australian customer, we consider them to be one entity because:

- both companies are in the ANSTEEL Group and are controlled either directly or indirectly by ANSTEEL;
- Angang International makes sales through Angang HK for the purpose of accessing finance in Hong Kong; and
- the price paid to Angang HK by the Australia customer is the price negotiated between Angang HK and the customer following directions from Angang International.

We consider ANSTEEL to be the exporter of galvanised steel and aluminium zinc coated steel exported to Australia from China via affiliated traders Angang International and Angang HK. ANSTEEL:

- is the manufacturer of the goods and manufactured the goods to the specific order of the Australian customer;
- owned the goods at the time of export; and
- is the principal in the transaction located in the country of export from where the goods were shipped that gave up responsibility by knowingly placing the goods in the hands of a freight forwarder for delivery to Australia; and
- sent the goods for export to Australia and was aware of the identity of the Australian end customer of the goods.

Notwithstanding the above, we note that Angang International:

- is listed as the supplier on the bill of lading; and
- arranges and pays the inland freight.

We also note that Angang HK is listed as supplier on the commercial invoice to the importer in Australia.

5.6 The importers

We consider that for export sales of galvanised steel and aluminium zinc coated steel made via intermediaries Angang International and Angang HK, the Australian customers were the beneficial owners of the goods at the time of importation. The beneficial owner is considered to be the one who was entitled to all the benefits associated with ownership even though they may not be the legal owner of the goods. We noted that each of the Australian customers:

- negotiated with Angang HK directly;
- are considered by ANSTEEL, Angang International and Angang HK to be the end customers;
- are named as the consignee on the bills of lading; and
- arranges and pays marine insurance, Customs clearance, logistics, and storage of the goods after they're delivered to the Australian port.

We consider the Australian customers to be the importers.

5.7 Arms length

In respect of the sales to the Australian customers we found no evidence that:

- there is any consideration payable for or in respect of the goods other than their price; or
- the price is influenced by a commercial or other relationship between the buyer, or an associate of the buyer, and the seller, or an associate of the seller; or
- the buyer, will, subsequent to the purchase or sale, directly or indirectly, be reimbursed, be compensated or otherwise receive a benefit for, or in respect of, the whole or any part of the price.

We consider the export sales of galvanised steel and aluminium zinc coated steel to the Australian customers were arm's length transactions.

5.8 Export price – preliminary assessment

We are satisfied that:

- the goods have been exported to Australia otherwise than by the importer; and
- the purchases of the goods were arms length transactions.

However, we consider that the export price for these sales cannot be determined under s. 269TAB(1)(a) as the goods have not been purchased directly from the exporter, ANSTEEL, but through an intermediary of the exporter, Angang International and Angang HK.

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We therefore consider that the export price for these sales can be determined under s. 269TAB(1)(c) having regard to all the circumstances of the exportation. Specifically we consider it appropriate to ascertain the export price based on the price paid or payable for the goods by the importer.

The weighted average quarterly free-on-board (FOB) export price in USD is summarised in the table below:

	Sep 11	Dec 11	Mar 12	Jun 12	Grand Total
ALZn Coated Steel	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Galvanized Steel	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Details of the export price calculations and summary export prices are at **confidential appendix 1.**

6 COSTS TO MAKE & SELL

6.1 General

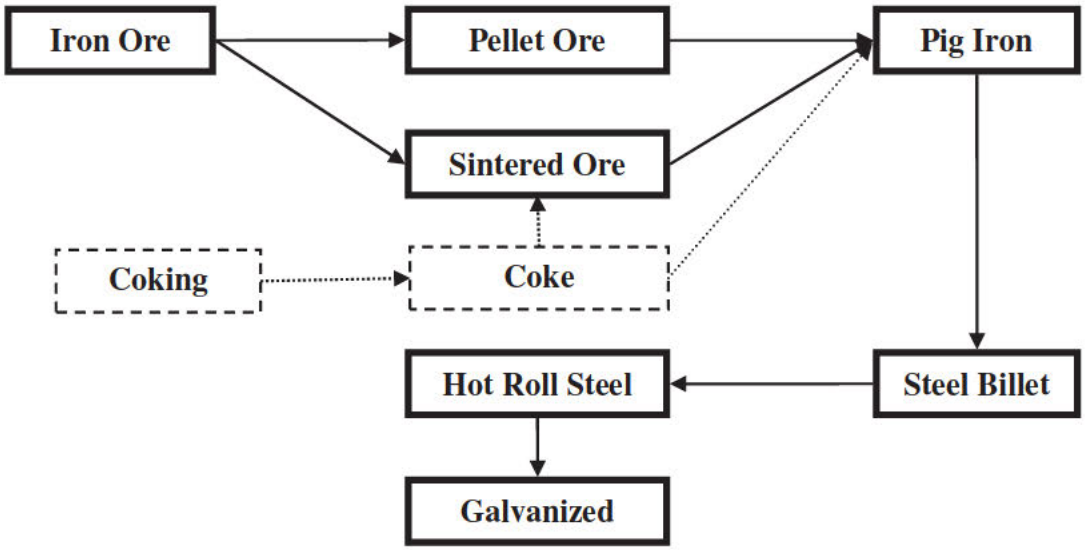
6.1.1 Spreadsheets submitted in the exporter questionnaire response

In the initial response to the anti-dumping exporter questionnaire, ANSTEEL provided cost to make and sell (CTMS) spreadsheets for domestic and Australian sales of galvanised steel and aluminium zinc coated steel. These spreadsheets provided monthly CTMS data at the goods level and a single row for the cost of hot rolled coil (HRC). Subsequently, ANSTEEL was requested to provide, inter alia, CTMS data separately for each model and a breakdown of the HRC costs.

In its supplementary exporter questionnaire response, ANSTEEL provided monthly CTMS data for each PCN and cost data for the following cost centres:

- HRC;
- Steel billet[11];
- Pig iron;
- Coke;
- Sintered ore; and
- Pellet ore.

ANSTEEL also provided the following diagram to illustrate the production process and how the cost centres are linked.



These updated CTMS spreadsheets are at **confidential attachment CTMS 1**.

[11] also known as steel slab

6.1.2 Reconciliation between cost centres

During the verification visit, ANSTEEL explained how it produced the CTMS spreadsheets that were submitted in the supplementary exporter questionnaire response and how the cost centres can be linked.

ANSTEEL explained that it produced the monthly cost to make (CTM) data by calculating a weighted average unit cost for each PCN over the investigation period from monthly cost data extracted from SAP (**confidential attachment CTMS 2**), then multiplying it by the monthly sales quantity to obtain a total CTM amount. ANSTEEL stated that it undertook this weighted average approach to overcome the issue where there were no cost data for sales of some PCNs in a particular month.

We explained that our preference is to use actual monthly cost data to capture fluctuations in raw material costs over the investigation period. We also explained that for the purpose of undertaking an ordinary course of trade test or ascertaining a constructed normal value, we would use the preceding month's cost data if there were no production of the PCN in that particular month.

Therefore, we advised ANSTEEL that the SAP report of the monthly CTM for each PCN will better meet our requirements than the spreadsheets that it submitted. For each PCN, this report shows the consumption and costs breakdown into the following items:

Total CTM for PCN
Raw material subtotal
HRC
Zinc ingot
scrap steel offset
Processing fee subtotal
Auxiliary material
Energy
Direct labour
Manufacturing overheads

We then selected HRC costs for the focus of our verification as it accounted for the significant majority of the cost to make galvanised steel and aluminium zinc coated steel. We did not select any other raw materials or processing fees for verification as we consider that these items were insubstantial to the overall costs.

During the visit, we selected PCN [redacted] for the month of December 2011 (the PCN with the highest volume for export sales to Australia) and asked ANSTEEL to use this PCN to demonstrate how the SAP report linked with the other spreadsheets down to iron ore and coking coal purchases. For this PCN, we note that HRC made up [redacted]% of the cost of the goods in December 2011.

ANSTEEL provided us with a more detailed monthly CTM data from SAP that shows the breakdown of the cost to a lower level (**confidential attachment CTMS 3**). From this breakdown, we were able to see that two different models of HRC were fed into the production of PCN [redacted]. ANSTEEL then provided us with another

SAP report for the December 2011 'thinning' cost centre for these two HRC models (**confidential attachment CTMS 4**) and we attempted to match the unit prices of the two HRC feedstock (in confidential attachment CTMS 3) to the unit costs of the HRC after the thinning process (in confidential attachment CTMS 4). While one model matched exactly, there was a variance of less than 1% for the other model. ANSTEEL explained that the cost of the HRC feedstock is an average weighted cost and the variance is due to coil from the previous month being used. We consider that this is a reasonable explanation.

We then attempted to reconcile the price for each HRC used in the 'thinning' cost centre (confidential attachment CTMS 4) to the HRS cost spreadsheet provided in the supplementary exporter questionnaire (confidential attachment CTMS 1). We note that there were three different HRS models that fed into the two 'thinned' coils. One of the HRS models matched exactly, another HRS model had a variance of less than 1%, and the third model had a variance of 2.5%. For the third model, we note that the price of the feedstock is between the November 2011 and December 2011 costs for that HRS model, which is consistent with ANSTEEL's explanation regarding the use of previous month's stock in its cost calculations.

Using the same methodology as above, we were then able to reconcile, for the selected models, the HRS cost spreadsheets to the steel billet spreadsheets, then from the steel billet spreadsheets to pig iron spreadsheets, then finally from the pig iron spreadsheet to the sintered ore and pellet ore spreadsheets.

Once we were satisfied that all the cost spreadsheets reconcile, we then sought to verify the major raw materials down to source documents, specifically iron ore, coking coal and any purchases of coke. This verification is discussed in section 6.3 below.

6.1.3 Allocation of processing costs

As outlined above, the processing cost amount for the galvanised steel and aluminium zinc coated steel cost centre includes auxiliary material, energy, direct labour and manufacturing overheads. The cost spreadsheets for the other cost centres also follow the same structure.

We sought to determine whether ANSTEEL's SAP system allocates these processing costs reasonably to different products down the production line. ANSTEEL advised that the steel billet full cost of production from SAP includes all raw materials and processing costs up to that stage of the production process.

We analysed the processing costs for various steel billet PCNs for December 2011 and found that, as a proportion of total cost, processing costs for various PCNs ranged from [redacted]% to [redacted]% and of that, manufacturing overheads ranged from [redacted]% to [redacted]% (**confidential attachment CTMS 5**). We also undertook a similar analysis of HRC costs and found that processing costs ranged from [redacted]% to [redacted]% and of that, manufacturing overheads ranged from [redacted]% to [redacted]% (**confidential attachment CTMS 6**).

ANSTEEL stated that processing costs are influenced by variations in raw materials costs and processing method, but can also be influenced by exceptional

circumstances. It explained that there are some abnormal situations when the processing cost ratio is extremely high or low.

We note that there are only a small number of PCNs on the lower and upper percentage ranges and these PCNs also have relatively low production volumes. For steel billet, almost 95% by production volume has processing costs of between [redacted]% and [redacted]% in December 2011. In relation to HRC, over 90% has processing costs of [redacted]% or [redacted]%. We considered that this analysis indicated that the full cost of production for steel billet, and for HRC, used within SAP as the basis for constructing the input costs for HRC and the goods respectively, were calculated on a reasonable basis.

We also requested, and ANSTEEL provided, the bill of materials for the following PCNs showing the standard allocations (**confidential attachment CTMS 7**), which we were able to match to the cost spreadsheets:

- Galvanised Steel A47A00BKJ3436
- HRC A47D00BKJ4227
- Steel billet A21C00B782013

We consider that the allocation of processing costs in ANSTEEL's SAP system is reasonable.

6.2 Verification of production costs to audited financial statements

We sought to verify the completeness and relevance of the cost spreadsheets by asking ANSTEEL to demonstrate how the cost spreadsheets reconciled up to financial statements.

ANSTEEL provided us with a cost reconciliation spreadsheet (**confidential attachment CTMS 8**) that shows, for each month, the following calculation:

	cost of galvanised steel and aluminium zinc coated steel
plus	cost of other products
plus	stock at the beginning of the month
minus	stock at the end of the month
minus	elimination entry and other adjustments
equals	cost of main operations

We then selected December 2011 for further verification. Firstly, we were able to match the cost of the goods shown in the reconciliation spreadsheet (confidential attachment CTMS 8) to the December 2011 cost spreadsheet (confidential attachment CTMS 3). We then sought to verify the cost of the other products. ANSTEEL provided us with a report from SAP showing a breakdown of all costs incurred by company in December 2011 (**confidential attachment CTMS 9**) and we were able to match the total costs of all products in December 2011 shown in this report (confidential attachment CTMS 9) to the total cost to make amount (i.e. sum of the cost of the goods plus other products) shown in the cost reconciliation spreadsheet (confidential attachment CTMS 8).

We then sought to verify the December 2011 inventory movement costs shown on the cost reconciliation spreadsheet (confidential attachment CTMS 8) and ANSTEEL provided us a December 2011 inventory movement summary report from SAP (**confidential attachment CTMS 10**) which matches the amounts in the reconciliation spreadsheet (confidential attachment CTMS 8).

We asked ANSTEEL to provide details of the nature of the elimination entry and other adjustments. ANSTEEL stated that these adjustments can be made for numerous reasons. For example, ANSTEEL explained, the December 2011 adjustments were for the elimination of unrealised internal profits, write-off of provisions for the impairment of inventories and other adjustments (**confidential attachment CTMS 11**). We noted that the adjustments for March 2012 were unusually high at 15% and asked ANSTEEL to provide details of these adjustments. ANSTEEL to provided us with the breakdown of the adjustments, which includes write-off of provisions for the impairment of inventories, reconciliation entries of internal transactions of materials and freight, and elimination entries. ANSTEEL also provided us with SAP screenshots to support these adjustments (**confidential attachment CTMS 12**). We note that the overall net adjustments for the investigation period equates to 2% of the costs.

Finally, ANSTEEL provided us with a copy of its December 2011 income statement (**confidential attachment CTMS 13**) and we were able to match the total cost of main operations from the reconciliation spreadsheet (confidential attachment 8) to the income statement (confidential attachment CTMS 13). We were also able to match the total cost of main operations for the investigation period shown in the reconciliation spreadsheet (confidential attachment 8) to the income statement provided in the exporter questionnaire response (**confidential attachment CTMS 14**), which reconciles to the financial statements in the 2011 Annual report and 2012 interim Annual report.

6.3 Verification of production costs to source documents

As discussed in section 6.1.2 above, we selected iron ore, coking coal and coke for further verification down to source documents.

6.3.1 Iron ore

As part of the market situation questionnaire response, ANSTEEL provided listings of iron ore purchases (**confidential attachment CTMS 15**). We compared the unit price of the iron ore feedstock in the pellet ore and sintered ore cost spreadsheets (confidential attachment CTMS 1) to the unit prices shown in the iron ore purchase listing (confidential attachment CTMS 15) for December 2011 and found the prices comparable (**confidential attachment CTMS 16**).

During the investigation period, ANSTEEL purchased iron ore sourced from Australia, Brazil and China, with Chinese iron ore accounting for [redacted]% of purchases by quantity.

We noted that the iron ore purchase listing (confidential attachment CTMS 15) was monthly summaries of iron ore purchases by supplier and source country. We advised ANSTEEL that we needed to drill down to sales invoices and select

purchases of iron ore from Australia and China in December 2011 for further verification. ANSTEEL provided us with detailed listings of purchases (**confidential attachment CTMS 17**) for the selected purchases, which reconciles to the iron ore summary spreadsheet (confidential attachment CTMS 15). ANSTEEL then provided us with the source documents for two Australian and one Chinese iron ore transactions (**confidential attachment CTMS 18**) which reconciled to the detailed iron ore purchases spreadsheet (confidential attachment CTMS 17).

In relation to the Australian iron ore purchases, ANSTEEL advised that purchases are made through Angang International and Angang HK. ANSTEEL provided invoices between ANSTEEL and Angang International, Angang International and Angang HK, and Angang HK and the Australian supplier in the source document package (confidential attachment CTMS 18).

In relation to the Chinese iron ore purchases, [redacted]% of purchases over the investigation period were supplied by [redacted], a related company. An analysis of the prices indicate that [redacted] (**confidential attachment CTMS 19**). [redacted] [price comparison of domestic and overseas iron ore purchases]

ANSTEEL argued that [redacted] [argument concerning the iron ore purchase price difference]. In addition, ANTEEL's supplementary exporter questionnaire included a spreadsheet of the cost of iron ore production by [redacted], to demonstrate the arm's length nature of the prices and indicating a profit margin of [redacted]% (**confidential attachment CTMS 20**). Although ANSTEEL offered, we did not seek verification of these costs.

6.3.2 Coke and coking coal

In its supplementary EQR, ANSTEEL provided a spreadsheet listing its coking coal and coke purchases over the investigation period (**confidential attachment CTMS 21**). ANSTEEL explained that even though it produces coke, it would supplement its production of coke with purchases at times when it has insufficient production of coke.

During the investigation period, ANSTEEL purchased coking coal sourced from Australia, Canada and China, with Chinese coking coal accounting for [redacted]% of purchases by quantity. In addition, all purchases of coke were sourced in China.

We first sought to reconcile the coke cost spreadsheet to the pig iron and sintered ore cost spreadsheets for December 2011 and found variances of between 0% and 1.5% (**Confidential attachment CTMS 22**). We consider these variances reasonable taking into account that previous month's coke feedstock may be used.

We then compared the price of coke purchased by ANSTEEL to the cost to manufacture it reflected in its costs spreadsheets and found the purchase prices to be [redacted] [price comparison of purchased and manufactured material]. By comparing the highest cost coke in December 2011 to the price of the coke

purchased in the closet month, the purchased coke was [redacted] [price comparison of purchased and manufactured material]. However, we note that purchased coke accounted for [redacted]% of the coke consumed by ANSTEEL during the investigation period and therefore do not consider this issue to be significant.

Similar to iron ore, the coking coal and coke purchase listing (confidential attachment CTMS 21) provided by ANSTEEL contained monthly summaries of coking coal and coke purchases by supplier and source country. We selected purchases of coking coal in December 2011 from [redacted], a domestic supplier, and Angang International which supplied coking coal from Canada for further verification. We also selected purchases of coke from [redacted] in September 2011 for further verification.

ANSTEEL provided us with detailed listings of coking coal and coke purchases (**confidential attachment CTMS 23**) for the selected purchases, which reconciles to the coking coal and coke summary spreadsheet (confidential attachment CTMS 21). We then selected one transaction from each supplier and asked for, and ANSTEEL provided, the VAT invoices for those selected invoices (**confidential attachment CTMS 24**) which reconciled to the detailed iron ore purchases spreadsheet (confidential attachment CTMS 23).

In relation to the selected purchase of coking coal from Canada, ANSTEEL also provided the relevant coking coal invoice from the Canadian supplier to Angang International (**confidential attachment CTMS 25**). We were able to reconcile the amounts noting a margin of approximately [redacted]% to Angang International.

6.4 Selling, general and administrative expenses

ANSTEEL explained that for the CTMS spreadsheet it submitted in the EQR, it calculated selling, general and administrative (SG&A) expenses based on its monthly income statements. However, we advised ANSTEEL that our preference is to calculate an SG&A as a proportion of revenue over the entire investigation period and ANSTEEL stated that it was comfortable with that approach. Therefore, we applied the SG&A based on the income statement provided in the EQR (confidential attachment CTMS 14) to the CTM to reach a CTMS for each PCN.

We also requested a breakdown of the SG&A amounts however ANSTEEL was unable to provide SG&A to that detail. Nonetheless we are satisfied that SG&A calculated from its income statement is an audited statement and therefore contains all relevant expenses.

We note that in addition to ANSTEEL's income statement, ANSTEEL also provided income statements for Angang International (**confidential attachment CTMS 26**) and Angang HK (**confidential attachment CTMS 27**)

The treatment of SG&A for these related companies are discussed in the adjustments chapter (section 9 below).

6.5 Costs to make and sell – preliminary assessment

We verified ANSTEEL's cost to make and sell galvanised steel and aluminium zinc coated steel to source documents and to audited financial statements. As a result, we are satisfied that the information provided is accurate, relevant and complete.

We consider that these costs to make and sell are suitable for:

- determining a constructed normal value under section 269TAC(2)(c); and
- assessing ordinary course of trade under section 269TAAD.

The calculation of unit costs to make and sell for galvanised steel and aluminium zinc coated steel from ANSTEEL is contained in **confidential appendix 2**.

7 DOMESTIC SALES

7.1 General

ANSTEEL estimated that its market share in China for sales of galvanised steel and aluminium zinc coated steel is around 10%. It understands that Baosteel accounts for the biggest market share in China, but is uncertain about the quantum.

ANSTEEL advised that almost all of its domestic sales are made in relation to specific customer orders, and that while sales from stock can occur, these are very uncommon and would be sales of 'overrun' production.

ANSTEEL explained that it issues a price list that is revised monthly, and that all domestic sales to all customers are made at this price. The price list shows a matrix of price variations according to the grade and thickness of the products. In relation to the degree of zinc coating, it shows that a base price applies to coatings of 140-180gsm and coatings of less or greater amount incur price extras. This zinc coating table is further differentiated into products of less than 0.6mm and products of 0.6mm and greater.

Further variations of product specification also incurred price 'extras', and these comprised:

- extra (50 RMB/T) over normal packaging for inclusion of a box
- extra (200 RMB/T) for products of a width <1000mm;
- extra amount subject to negotiation for special HRC;
- extra (30 RMB/T) over non-spangle and skinpass which have no extras
- extra for surface quality FB (50 RMB/T) and FC (150 RMB/T) over FA;
- extra for finger print resistance (100 RMB/T);
- extra for passivation (50 RMB/T);
- extras for grades not already mentioned in the grade/thickness matrix (variable amounts) over DX51D+Z;
- extras for standard (variable amounts) over Q/ASB 392-2006.

Copies of the 12 price extras lists for the investigation period are at **confidential attachment DOM 1**.

Given the factors that potentially affect price, we asked ANSTEEL to provide a new domestic sales listing with further details, including width, whether or not passivated, whether or not finger print resistant, whether or not oiled, surface structure (eg normal spangle), and surface quality (eg. FA or FB). We also asked for related party transactions to be identified. ANSTEEL provided this revised spreadsheet which is at **confidential attachment DOM 2**.

ANSTEEL explained that when it produces any non-prime or downgrade products, these are recycled and not sold into domestic or export markets.

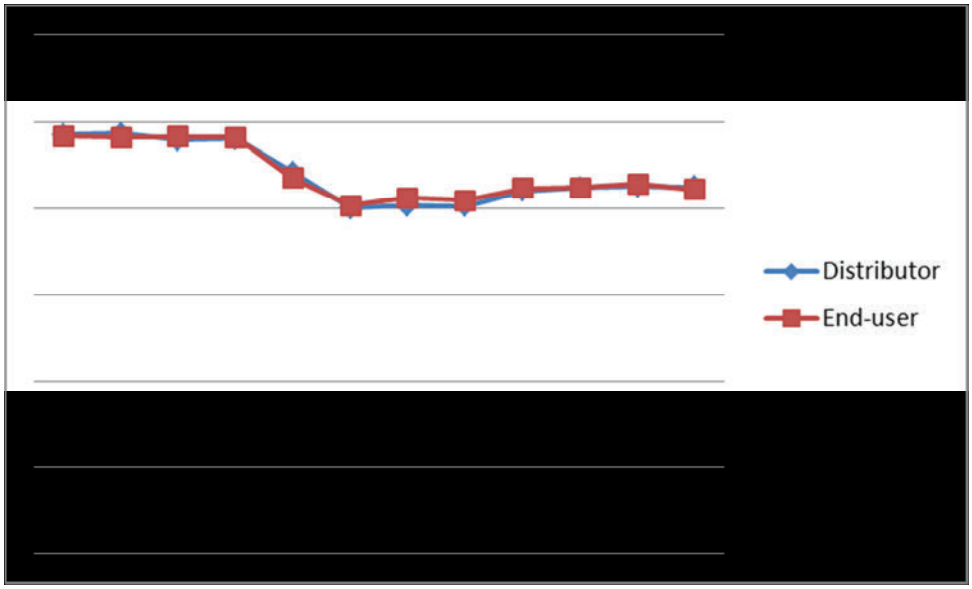
ANSTEEL advised that its channel to market can include a significant volume of sales through Angang International because most of the Angang International domestic sales are to distributors and resellers, while most of the ANSTEEL sales

are to end-users. ANSTEEL explained that the Angang International sales are not based on a commission and applies a margin independently.

7.2 Levels of trade

In its response to the exporter questionnaire, ANSTEEL identified two levels of trade for its domestic customers; distributors and end-users. The ANSTEEL domestic sales data identified the level of trade for all individual transactions.

ANSTEEL stated that domestic selling prices do not vary by channel to market. The following chart shows the monthly price variations for domestic sales of PCN [redacted], which accounted for 17% of all domestic sales of galvanised steel (the highest volume selling PCN for galvanised steel).



A similar comparison of prices for PCN [redacted] (the highest volume selling PCN for aluminium zinc coated steel), which accounted for 6% of all domestic sales of aluminium zinc coated steel also showed that different levels of trade do not appear to drive different selling prices.

We consider that the evidence supports ANSTEEL's claim that the levels of trade did not have an effect on prices for domestic sales of galvanised steel and aluminium zinc coated steel in the investigation period.

7.3 Sales to related parties

The domestic sales spreadsheet showed that the proportions of ANSTEEL domestic sales of galvanised steel and aluminium zinc coated steel sold to related parties in the investigation period were [redacted]% and [redacted]% respectively. Of these related party sales, in excess of [redacted]% were to Angang International in relation to both galvanised steel and aluminium zinc coated steel.

ANSTEEL advised that it does not sell at different prices to parties that are related. We noted in the ANSTEEL Annual Report of 2011 (page 80), in relation to the "sale of products…to related parties" that the price is based on "The selling price offered

by the Company to the independent third parties." At page 185 of the 2011 Annual Report, in relation to related party transactions, is states that "The selling prices are not higher than the average prices charged to independent customers for the preceding month." Also, on page 264 of the annual report, it states "The Group sold finished goods and scrap materials to Angang Holding Group mainly at selling prices based on the prices charged to independent customers."

We compared the weighted average selling prices of galvanised steel and aluminium zinc coated steel domestic sales between ANSTEEL and independent customers with prices to related customers.

We noted in the case of galvanised steel that, when using all domestic sales over the investigation period, monthly selling prices to related parties ranged from zero to 6.2% lower than prices to independent parties. The weighted average difference for the investigation period was 4.4%.

We noted in the case of aluminium zinc coated steel that, when using all domestic sales over the investigation period, monthly selling prices to related parties ranged from 5.3% and 14.9% lower than prices to independent parties. The weighted average difference for the investigation period was 11.9%.

Having regard to the ANSTEEL pricing policies, and the actual price differences observed between ANSTEEL selling prices to independent and to related parties, we consider that the price for goods sold to related parties has been influenced by the relationship between ANSTEEL and those related customers. Accordingly, we consider that the sales of galvanised steel and of aluminium zinc coated steel from ANSTEEL to its related customers are not arm's length transactions.

7.4 Domestic sales process, pricing, terms and payment

7.4.1 General

ANSTEEL explained that the sales process for domestic sales of galvanised steel and aluminium zinc coated steel is as follows:

- price is in accordance with the monthly price list (although we noted that prices in the spreadsheets often did not accord with the price list);
- customers place orders by telephone or facsimile;
- a sales contract is issued to confirm the order;
- the sales contract also acts as the production order as the details are input to the production system
- production of the goods commences (noting that all production is to specific customer order, not for stock)
- once production is finished, delivery is arranged based on the delivery terms negotiated; and
- a tax invoice is issued.

7.4.2 Delivery terms

The domestic sales spreadsheet showed delivery terms for each transaction. We noted in the case of galvanised steel that approximately 79% of domestic sales were ex-factory and the remainder were delivered into store. In the case of aluminium zinc coated steel 100% of domestic sales were ex-factory.

7.4.3 Payment terms

The domestic sales spreadsheet showed payment terms for each transaction. We noted that most (94%) domestic sales were "payment in advance". Most of the remaining sales, which were at 30 or 60 days credit terms, were to related parties.

7.4.4 Rebates, discounts and commissions

ANSTEEL explained that no rebates or discounts were available in relation to its domestic sales, and that the invoice amount was the final amount paid or payable. ANSTEEL also explained that no commissions were applicable to domestic sales.

7.5 Verification of domestic sales up to the audited financial statements

We asked ANSTEEL to demonstrate how the domestic and export sales data provided in the submission could be reconciled to audited financial statements.

ANSTEEL provided a reconciliation chart for the investigation period that was prepared for this purpose. It showed how the volume and value figures for the aggregate of galvanised steel and aluminium zinc coated steel domestic and export sales (which matched the detailed sales spreadsheets provided) could be traced to ERP data that showed sales data dissected into "subject merchandise" and "non-subject merchandise". The total value for these two categories for the full investigation period was traced back to the audited financial statements revenue figure for the full year 2011, allowing for a six-month realignment of revenue figures (also based on ERP sales data) to match the audited financial year and calendar year of 2011. Audited financial statements were not yet available for the financial year 2012.

To check whether the subject merchandise category had been reasonably defined for this purpose we asked for data from the SAP system to support the total volume and value amounts for the investigation period. ANSTEEL provided extracts from an SAP report that showed export and domestic sales for galvanised steel and aluminium zinc coated steel in volume and value that matched the data already provided.

A copy of the reconciliation chart and the SAP extracts is at **confidential attachment DOM 3**.

We concluded that the domestic sales spreadsheet provided by ANSTEEL contained a complete and relevant list of domestic sales of like goods for the investigation period.

7.6 Verification of domestic sales down to source documents

Prior to the visit, we selected 8 galvanised steel and 6 aluminium zinc coated steel domestic sales from the detailed domestic sales spreadsheet and requested that ANSTEEL provide source documents in relation to each invoice.

For each selected invoice, ANSTEEL provided copies of the following documents during the visit:

- Sales contract (which is also used as the production order);
- Commercial invoice;
- Proof of payment (in the form of a bank receipt);
- Evidence of inland freight charges

We noted the payment evidence showed amounts that did not correspond with the invoice values. ANSTEEL explained that this was because independent customers were treated as operating on an 'open account' system whereby sufficient funds had to be deposited in the ANSTEEL account to cover any order value before invoicing and delivery of the goods for that order was commenced. This was said to give effect to the payment in advance terms. We selected one domestic customer, [redacted], and ANSTEEL provided the accounts receivable ledgers for those customers over the investigation period that demonstrates that the account was always in credit (**confidential attachment Dom 4 HW 29**).

We noted that payments from Angang International were made at times that were reasonably consistent with the 30 day credit terms. The payment amounts were always greater than the invoice values, consistent with ANSTEEL's explanation that the payments were for many invoices including the selected invoice. However, ANSTEEL could not demonstrate exactly which invoices were included in the payment and it could not demonstrate the value of the selected invoice was the amount ultimately paid by Angang International. Therefore, we cannot be satisfied that the credit terms quoted in the domestic sales spreadsheet are reasonably accurate.

In the case of selected sales to the related party Angang International, ANSTEEL also provided copies of the commercial invoices and sales contracts in relation to the independent purchaser.

We matched the sales information in the source documents to the data contained in the detailed sales spreadsheet. The source documents, including proof of payment, of the selected sales are at **confidential attachments 5**.

We concluded that the domestic sales spreadsheet provided by ANSTEEL contained a reasonably accurate list of domestic sales of like goods for the investigation period so far as it related to sales to independent parties. We were left with some uncertainty as to the amounts paid to ANSTEEL for domestic sales to its related party Angang International and are therefore not confident the domestic sales spreadsheet is accurate so far as price paid for those sales is concerned.

7.6.1 Inland transport

Of those selected transactions where the terms were 'delivered' we asked for evidence of the inland freight charges. ANSTEEL provided copies of invoices and schedules of freight charges. We noted the charges included components for freight, railway construction fund, electrification fee, and stamp duty. We also noted that ANSTEEL had removed VAT of 7% from the freight and railways construction fund components to calculate the cost of freight excluding VAT. The evidence matched the amounts reported in the detailed domestic sales spreadsheet.

7.7 Arms length

In respect of ANSTEEL's domestic sales of galvanised steel and aluminium zinc coated steel sales to unrelated parties, we found no evidence that:

- there is any consideration payable for or in respect of the goods other than their price; or
- the price is influenced by a commercial or other relationship between the buyer, or an associate of the buyer, and the seller, or an associate of the seller;
- the buyer, or an associate of the buyer, will, subsequent to the purchase or sale, directly or indirectly, be reimbursed, be compensated, or otherwise receive a benefit for, or in respect of the whole or any part of the price.

We therefore consider ANSTEEL's domestic sales of galvanised steel and aluminium zinc coated steel to unrelated parties are arm's length transactions.

However, we consider that the price for goods sold to related parties has been influenced by the relationship between ANSTEEL and those related customers. Accordingly, we consider that the sales of galvanised steel and of aluminium zinc coated steel from ANSTEEL to its related customers are not arm's length transactions.

7.8 Ordinary course of trade

As stated in section 2.3 above, following the visit, the delegate made PADs in relation to dumping of galvanised steel and aluminium zinc coated steel. The delegate has preliminarily determined that a market situation exists in relation to sales of galvanised steel and aluminium zinc coated steel in China and normal values should be based on constructed costs and an amount for profit. However, we have undertaken an ordinary course of trade (OCOT) test for the purpose of calculating a profit.

In order to test whether the domestic sales are in the OCOT, we first tested the profitability of each transaction individually by comparing the unit selling price to the corresponding quarterly weighted average CTMS for each model based on the PCN. For those sales found to be sold at a loss, we then tested its recoverability by comparing the unit selling price to the weighted average CTMS of the relevant PCN over the whole of the investigation period.

We undertook this test for each PCN individually and where the volume of unrecoverable sales exceeds 20%, the unrecoverable sales for those PCNs were deemed not to be made in the OCOT. Of the 167 different PCNs of galvanised steel, 143 models had unrecoverable sales exceeding 20%. For the aluminium zinc coated steel, 23 PCNs out of 24 PCNs had unrecoverable sales exceeding 20%.

7.9 Domestic sales – preliminary assessment

Following the visit, PADs were issued (refer section 2.3 above) and Customs and Border Protection has preliminarily determined that a market situation exists in relation to sales of galvanised and aluminium zinc coated steel in China. Because of this domestic selling prices are not suitable for the purpose of establishing normal value. Normal values have been established based on s. 269TAC(2)(c) using constructed costs and an amount for profit. Notwithstanding this treatment, the above section sets out the verification conducted in relation to selling prices, and the results of the ordinary course of trade test that was used to determine an appropriate amount of profit.

8 THIRD COUNTRY SALES

In its exporter questionnaire response, ANSTEEL provided a summary its galvanised steel and aluminium zinc coated steel export sales to third countries.

As we considered that we were in possession of enough verified information from the submission and our visit to calculate normal values for galvanised steel and aluminium zinc coated steel using domestic sales or a construction method, we did not undertake detailed verification of the third country data.

9 ADJUSTMENTS

9.1 General

To ensure that the normal value was comparable to the Australian export price, the following adjustments were made.

9.2 Packaging

During our tour of ANSTEEL's production facility, we inspected the packaging of both the goods sold domestically and for export and found that the packaging were identical for both domestic and export sales. Therefore, no adjustments were made for packaging as we found that there were no differences in packaging between domestic and export sales of galvanised steel and aluminium zinc coated steel.

9.3 Domestic inland freight

We note that some domestic sales of aluminium zinc and galvanised steel are delivered. Therefore, we made a downward adjustment based on the weighted average domestic inland freight costs over the investigation period for galvanised steel and aluminium zinc coated steel separately.

We note that the constructed normal value may include a mixture of domestic and export delivery expenses, however, as stated in section 6.4 above, ANSTEEL did not provide us with a breakdown of SG&A expenses to enable us to isolate delivery costs in the SG&A figures provided.

9.4 Export inland freight

We have made an upwards adjustment for export inland freight using the weighted average export inland freight costs over the investigation period for galvanised steel and aluminium zinc coated steel separately.

We note that delivery expenses may be included in ANSTEEL's SG&A expenses, however, as stated in section 6.4 above, ANSTEEL did not provide us with a breakdown of SG&A expenses to enable us to isolate delivery costs in the SG&A figures provided.

9.5 Export handling charges

We have made an upwards adjustment for export handling charges using the weighted average export handling charges over the investigation period for galvanised steel and aluminium zinc coated steel separately.

We note that similar to export inland transport, export handling charges may be included in ANSTEEL's SG&A expenses, however, as stated in section 6.4 above, ANSTEEL did not provide us with a breakdown of SG&A expenses to enable us to isolate export handling charges in the SG&A figures.

9.6 Angang International's and Angang HK's SG&A

As galvanised steel and aluminium zinc coated steel exported to Australia are sold through Angang International and Angang HK, we consider an upward adjustment for Angang International's and Angang HK's SG&A in the normal value calculation is required to ensure fair comparison to export price. We calculated SG&A expenses based on Angang International's and Angang HK's income statements (see section 6.4 above). This SG&A adjustment is in lieu of Angang International's commission and Angang HK's bank charges.

9.7 Un-refundable value-added tax

ANSTEEL incurs an un-refundable value-added tax (VAT) expense on export sales to Australia of 4%, being the difference between the VAT amount of 17% less 13% VAT refund on export sales of galvanised steel and aluminium zinc coated steel. Therefore, we applied an upwards adjustment of 4% to the normal value for direct export sales to Australia.

9.8 Credit terms

As discussed in section 7.6 above, we could not be satisfied that the domestic sales credit terms accurately reflected the actual payment received by ANSTEEL from its domestic customers. Therefore we did not make a downwards adjustment for domestic credit terms.

In addition, the payment terms for all export sales are at L/C or T/T. Therefore an upwards adjustment for export credit terms were not required.

9.9 Width

As outlined in section 7.1 above, the domestic price extras show an additional charge of RMB 200 per MT for coils with a width of less than 1 metre. We noted that for some PCNs, there were transactions for coils that were greater than 1 metre in width and others with less than 1 metre in width for the same PCN. Therefore, we made an upwards adjustment of RMB 200 per MT for transactions where the width is less than 1 metre.

9.10 Surface treatment

The domestic price extras show an additional charge of RMB 100 per MT for coils with fingerprint resistance surface treatment and RMB 50 per MT for coils with a passivation surface treatment. We noted that for some PCNs, there were transactions for coils that had different surface treatments for the same PCN. Therefore, we made an upwards adjustment of RMB 100 per MT for transactions with fingerprint resistance surface treatment and RMB 50 per MT for transactions with a passivation surface treatment.

9.11 Normal Spangle

As outlined in section 7.1 above, the domestic price extras show an additional charge of RMB 30 per MT for coils with normal spangle. We noted that for some PCNs, there were transactions for coils that had normal spangle and no spangle for the same PCN. Therefore, we made an upwards adjustment of RMB 30 per MT for transactions with normal spangle.

9.12 Surface quality

As outlined in section 7.1 above, the domestic price extras show an additional charge of RMB 50 per MT for coils with a "FB" surface quality. We noted that for some PCNs, there were transactions for coil with different surface qualities for the same PCN. Therefore, we made an upwards adjustment of RMB 50 per MT for transactions with a "FB" surface quality.

9.13 Adjustments – Conclusion

We are satisfied that there is sufficient and reliable information to justify the following adjustments, in accordance with s. 269TAC (9), and we consider these adjustments are necessary to ensure a fair comparison of normal values and export prices:

Domestic inland freight	**Deduct** a weighted average cost of domestic inland freight.
Export inland freight	**Add** a cost of export inland freight.
Export handling charges	**Add** a weighted average cost of export handling charges
Angang International's and Angang HK's SG&A	**Add** an amount for Angang International's and Angang HK's SG&A.
Unrefundable VAT	**Add** the unrefundable VAT amount of 4%.
Width	**Add** RMB 200 per MT for transactions with a width of less than 1 metre.
Surface Treatment	**Add** RMB 100 per MT for transactions with fingerprint resistance surface treatment and RMB 50 per MT for transactions with a passivation surface treatment
Normal Spangle	**Add** RMB 30 per MT for transactions with normal spangle

Surface quality	**Add** RMB 50 per MT for transactions with a “FB” surface quality

10 NORMAL VALUE

As stated in section 2.3 above, following the visit, the delegate made PADs in relation to dumping of galvanised steel and aluminium zinc coated steel. The delegate has preliminarily determined that a market situation exists in relation to sales of galvanised steel and aluminium zinc coated steel in China and normal values should be based on constructed costs and an amount for profit.

The delegate also considers the cost of HRC reflected in Chinese exporters' records does not reflect a competitive market cost due to the various influences of the Government of China on the steel industry in China. PAD 190 contains details about the benchmark used to determine HRC costs for exporters in China. Applying this benchmark results in an uplift to ANSTEEL's cost of HRC during the investigation period.

Normal values have been constructed using the cost to make galvanised steel and aluminium zinc coated steel exported to Australia plus SG&A on the assumption that the goods, instead of being exported, were sold domestically[12]. A rate of profit has been added using data related to the production and arm's length sales of like goods in the ordinary course of trade[13].

In using costs to make and sell as the basis for normal values, we consider that certain adjustments, in accordance with s. 269TAC(9), are necessary to ensure fair comparison of normal values with export prices as outlined in section 9 above.

A summary of normal value calculations is at **confidential appendix 4**.

[12] s. 269TAC(2)(c)

[13] Regulation 181A(2) of the *Customs Regulations 1926*

11 DUMPING MARGIN – PRELIMINARY ASSESSMENT

In calculating the dumping margin we compared each export transaction with the corresponding quarterly normal value for the corresponding model of galvanised steel and aluminium zinc coated steel. The weighted average product dumping margin for galvanised steel and aluminium zinc coated steel is 19.3% and 4.9% respectively. A summary of dumping margin calculations is at **confidential appendix 5**.

12 PARTICULAR MARKET SITUATION

12.1 General

The Australian industry claims that a 'particular market situation' exists in respect of galvanised steel and aluminium zinc coated steel from China due to government influence on both the prices of the goods and the major raw material inputs including HRC, iron ore, coal, and cold-rolled steel used in the manufacture of the goods.

ANSTEEL submitted a response to the Particular Market Situation questionnaire, which includes, inter alia, a spreadsheet listing its main raw material purchases, during the investigation period (confidential attachment CTMS 18). As an integrated manufacture, ANSTEEL's main feedstock is iron ore. We undertook a verification of the iron ore purchase spreadsheet as part of the cost verification (see section 6.3.1 above for details).

In addition, we requested, and ANSTEEL provided, a detailed sales listing of its domestic HRC listing (**confidential attachment MS 1**). This was for the purpose of analysing whether its sales of HRC to ANSC-TKS Galvanizing Co., Ltd, a related company, were arm's length transactions, however it could also be relevant for analysing market situation and has been provided to the case team.

ANSTEEL disputes the claim that there is a particular market situation in the Chinese steel industry. It claims that there is no government control on production levels, selling prices or any other aspects of the manufacture or supply of steel or any steel products. It also claims that the Government of China does not have the ability to exercise any controls over Anshan Iron and Steel Group Complex, or any other company in the Angang Group, nor does Anshan Iron and Steel Group Complex exercise any government functions.

We noted that the response to the particular market situation questionnaire refers to its Article of Association. ANSTEEL provided us with a copy of its Article of Association and Angang Holding's Article of Association at **confidential attachment MS 2**. ANSTEEL also provided us with a copy of its most recent board meeting minutes at **non-confidential attachment MS 3**.

12.2 Government of China Five-Year Plans

We asked ANSTEEL whether it was aware of the Government of China's 12th Five-Year Plan of Iron and Steel Industry and the Blueprint for Steel Industry Adjustment and Revitalization. It stated that it is aware of these documents, but only through the media. ANSTEEL explained that as a manufacture of steel products, it is in its interest to pay attention and to be aware these documents, although it claims that the document has little effect on its business decisions. It claims that it does not, nor any other company under the Anshan Iron and Steel Group Complex, implement any of the policies outlined in the Government of China's five-year plans, the National Steel Policy, or the Revitalization Plan for the steel industry.

We noticed that page 18 of ANSTEEL's annual report has a reference to 'the "12th five-year" strategic development plan of Angang'. ANSTEEL stated that it does not

have a five-year plan. ANSTEEL initially did not have any details of the document referred in its annual report, however after some enquires with its parent company, it was able to provide us with Angang Holding's five-year strategic development plan (**confidential attachment MS 4**).

12.3 State-Owned Assets Supervision and Administration Commission

ANSTEEL claims that SASAC is simply a shareholder of Angang Holdings and does not play any direct role in any of the companies within the Angang group.

We enquired whether certain business decisions require approval by SASAC and ANSTEEL advised that that is the case, for example foreign investments. We asked whether there have been any such foreign investments and ANSTEEL advised that Anshan Iron and Steel Group Complex currently have a 50-50 joint venture in an Australian mine, Karara Mining Ltd. ANSTEEL claimed that neither the Government of China nor SASAC played any role in encouraging or arranging this or any other acquisitions or joint ventures. We then asked if it was aware of the Government of China 'Go out' or 'Going Global' policy. ANSTEEL claims that it was not aware of such policies.

12.4 Steel industry consolidation

We presented ANSTEEL with several media reports of merger activities by Angang Group. In particular, we enquired about merges with Pangang, Benxi and Sanming Steel. Angang claimed that it had no information regarding the merger with Benxi or Sanming Steel. In regards to the merger with Pangang, it provided us with an announcement made to the Hong Kong Stock Exchange (HKSE) regarding the merger (**non-confidential attachment MS 5**) and a statement from a Chinese law firm on an anti-trust assessment of the merger (**non-confidential attachment MS 6**). ANSTEEL claims that this merger has no impact on its business in relation to its production of steel and steel products.

We noted that the HKSE announcement states that "Angang Holding has received a notice from the State-owned Assets Supervision and Administration Commission of the State Council ("SASAC") which states that SASAC has agreed to the joint restructuring of Angang Holding and Pangang Group Company Limited." ANSTEEL claims that there was no notice prior to this announcement that SASAC was assessing the merger, nor were there announcements that Angang and Pangang were considering merging.

We asked whether the Government of China and/or SASAC has played any role in encouraging or arranging the merger with Pangang or any other mergers. ANSTEEL claimed that except for approvals required by law, such as environmental influence assessments, the Government of China does not have any role in encouraging or arranging merger activities.

In addition, ANSTEEL states that it has not closed steel production facilities or reduced capacity in the past 5 years.

12.5 Export restrictions of HRC

We discussed with ANSTEEL the European Union's recent preliminary findings that there are export restrictions in China of HRC leading to depressed HRC prices. ANSTEEL strongly refutes this claim. It argues that there are no restrictions on its exports of HRC. It states that there are no export quotas or export tax on export of HRC. However, there are no VAT rebates applicable to HRC exports, unlike galvanised and aluminium zinc coated steel where there is a rebate of 13%. ANSTEEL explained that only special types of HRC, such as those with alloys, have VAT refunds of 13%. ANSTEEL provided us with a copy of the tariff schedule for HRC at **non-confidential attachment MS 7**.

ANSTEEL states that most of its HRC is sold domestically with only 5-10% exported. It explained that in the past it exported greater volumes of HRC until a major Korean customer, Hyundai, started manufacturing its own HRC. ANSTEEL added that most of its exports of HRC have alloys added and thus are eligible for a VAT rebate when exported.

ANSTEEL notes that export duties apply to steel slab and billets but it does not sell steel slabs or billets.

In relation to coke, ANSTEEL claims that it does not sell domestically or export coke. It states that it consumes all of its coke production, and as discussed in section 6.3.2 above, it supplements its production of coke with purchases of coke.

13 Subsidies

During the visit, we undertook a verification of ANSTEEL's response to the subsidy exporter questionnaire. We have identified additional cash payments provided by the Government of China in its Annual Report and have sought further information from ANSTEEL regarding these payments. At the time of drafting this report, we were analysing the information provided and gathering more information from ANSTEEL. We will make an addendum to this report in due course.

14 LIST OF APPENDICES AND ATTACHMENTS

Appendix 1	Export price
Appendix 2	Cost to make and sell
Appendix 3	Domestic sales and OCOT
Appendix 4	Normal values
Appendix 5	Dumping margin
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Non-confidential attachment GEN 2	Product manual of hot rolled strip
Confidential attachment GEN 3	Chart of accounts
Confidential attachment GEN 4	Related subsidiaries
Confidential attachment GEN 5	Steel grade table
Confidential attachment EXP 1	Angang International export sales spreadsheet
Confidential attachment EXP 2	Angang HK export sales spreadsheet
Confidential attachment EXP 3	Export price extras list
Confidential attachment EXP 4	Export sales source documents
Confidential attachment CTMS 1	Updated CTMS spreadsheets
Confidential attachment CTMS 2	SAP cost reports
Confidential attachment CTMS 3	Detailed cost report
Confidential attachment CTMS 4	Reconciliation of cost between GAL and HRC
Confidential attachment CTMS 5	Steel billet processing cost analysis
Confidential attachment CTMS 6	HRC processing cost analysis
Confidential attachment CTMS 7	Bill of materials
Confidential attachment CTMS 8	Cost reconciliation spreadsheet
Confidential attachment CTMS 9	December 2011 SAP cost report
Confidential attachment CTMS 10	December 2011 inventory movement

PUBLIC RECORD

Exporter visit – Angang Steel Company Limited

	summary report
Confidential attachment CTMS 11	December 2011 adjustments
Confidential attachment CTMS 12	March 2012 adjustments
Confidential attachment CTMS 13	December 2011 income statement
Confidential attachment CTMS 14	Income statement for investigation period
Confidential attachment CTMS 15	Iron ore purchases summary
Confidential attachment CTMS 16	Iron ore comparison
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Confidential attachment MS 1	Domestic HRC sales listing

PUBLIC RECORD

Exporter visit – Angang Steel Company Limited

Confidential attachment MS 2	Articles of association
Non-confidential attachment MS 3	ANSTEEL's board meeting minutes
Confidential attachment MS 4	Angang Holding five year plan
Non-confidential attachment MS 5	Pangang merger announcement
Non-confidential attachment MS 6	Statement from a Chinese law firm on an anti-trust assessment of the merger
Non-confidential attachment MS 7	HRC tariff schedule

ANSTEEL

Non-confidential attachment GEN 1

Product manual of galvanized plate
镀锌产品手册

www.ansteel.com.cn

鞍钢股份有限公司
ANGANG STEEL COMPANY LIMITED

ANSTEEL

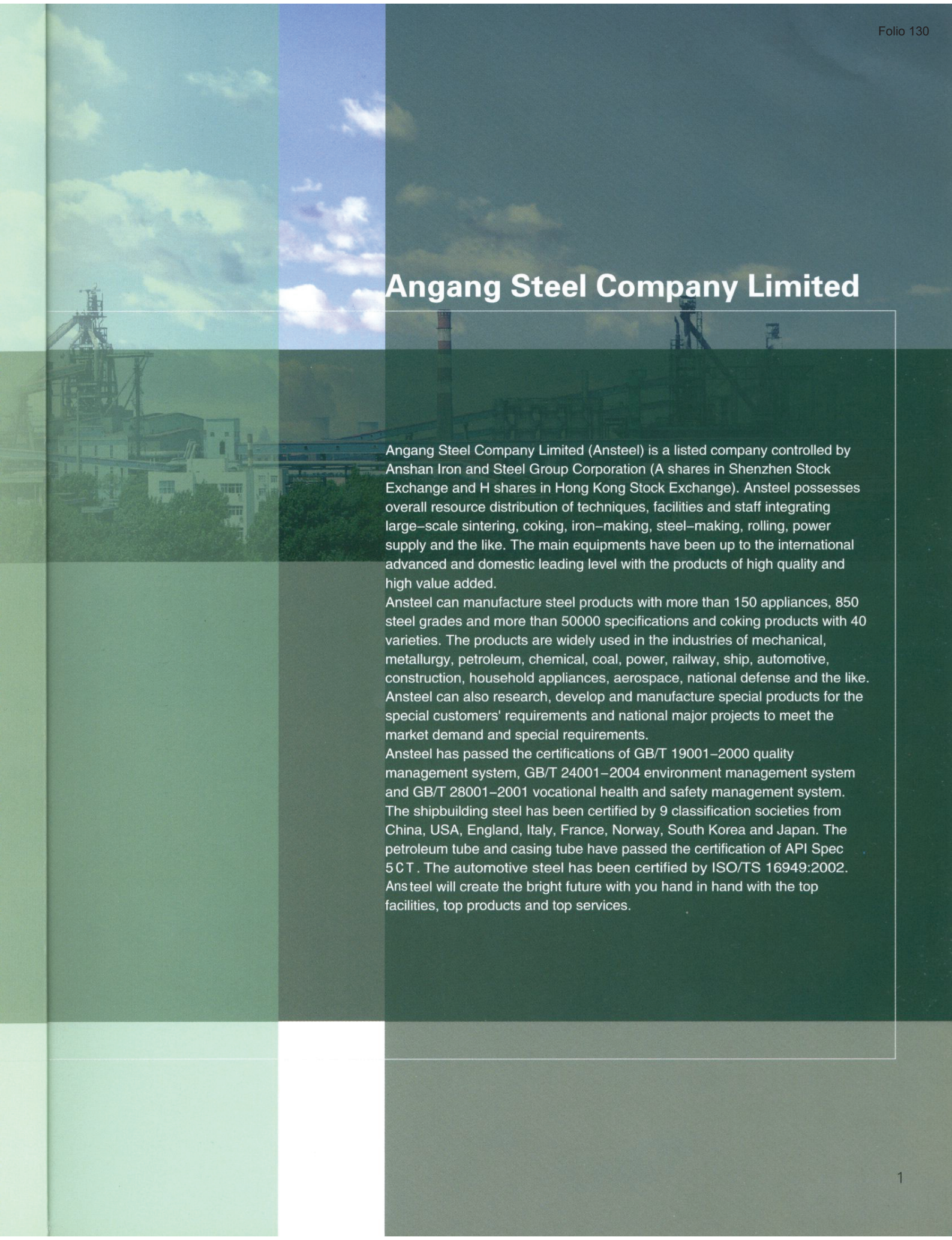
鞍钢股份有限公司

鞍钢股份有限公司是鞍山钢铁集团公司的控股上市子公司（深圳证交所A股、香港联交所H股）。公司具有大型烧结、焦化、炼铁、炼钢、轧钢、动力等技术、装备与人员的综合资源配置。公司主体装备达到国际先进和国内领先水平，能够生产高质量、高附加值的产品。

公司目前能够生产150种用途、850个牌号、50000个规格的钢铁产品和近40种焦化产品，广泛应用于机械、冶金、石油、化工、煤炭、电力、铁路、船舶、汽车、建筑、家电、航空、国防等行业，还可以根据顾客的特殊要求和国家重点工程项目研制、开发、生产特种产品，满足市场需求和顾客的特性需要。

公司先后获得GB/T 19001–2000质量管理体系认证、GB/T 24001–2004环境管理体系认证、GB/T 28001–2001职业健康安全管理体系认证。造船用钢通过中、美、德、英、意、法、挪、韩、日九国船级社认证，石油油管、套管通过美国API Spec 5CT认证，汽车用钢产品通过ISO/TS 16949:2002认证。

公司将以一流的装备、一流的产品、一流的服务与您携手共创美好的未来！



Angang Steel Company Limited

Angang Steel Company Limited (Ansteel) is a listed company controlled by Anshan Iron and Steel Group Corporation (A shares in Shenzhen Stock Exchange and H shares in Hong Kong Stock Exchange). Ansteel possesses overall resource distribution of techniques, facilities and staff integrating large–scale sintering, coking, iron–making, steel–making, rolling, power supply and the like. The main equipments have been up to the international advanced and domestic leading level with the products of high quality and high value added.

Ansteel can manufacture steel products with more than 150 appliances, 850 steel grades and more than 50000 specifications and coking products with 40 varieties. The products are widely used in the industries of mechanical, metallurgy, petroleum, chemical, coal, power, railway, ship, automotive, construction, household appliances, aerospace, national defense and the like. Ansteel can also research, develop and manufacture special products for the special customers' requirements and national major projects to meet the market demand and special requirements.

Ansteel has passed the certifications of GB/T 19001–2000 quality management system, GB/T 24001–2004 environment management system and GB/T 28001–2001 vocational health and safety management system. The shipbuilding steel has been certified by 9 classification societies from China, USA, England, Italy, France, Norway, South Korea and Japan. The petroleum tube and casing tube have passed the certification of API Spec 5CT. The automotive steel has been certified by ISO/TS 16949:2002. Ansteel will create the bright future with you hand in hand with the top facilities, top products and top services.

ANSTEEL

「产品概述」
Introduction of products

鞍钢股份有限公司有四条镀锌线，年生产能力达160万吨，关键技术和设备从英、美、德、法国引进，采用世界先进的连续退火技术、锌层控制工艺、在线光整工艺，整体装备达到世界先进水平。

鞍钢股份有限公司镀锌线可生产正常锌花、光整锌花和无锌花产品，板卷厚度为0.30–2.5mm；宽度为750 – 1550mm，锌层重量为40 – 350g/m²（双面），钢卷重量5 – 30t。表面后处理为光整、钝化（环保钝化）、涂油、耐指纹。产品性能和表面质量稳定，耐腐蚀性能良好，广泛应用于家电制造、建筑结构等领域。如果您所需产品的品种、规格、特殊要求在本公司样本中未覆盖，请告知本公司，本公司将予以及时答复。

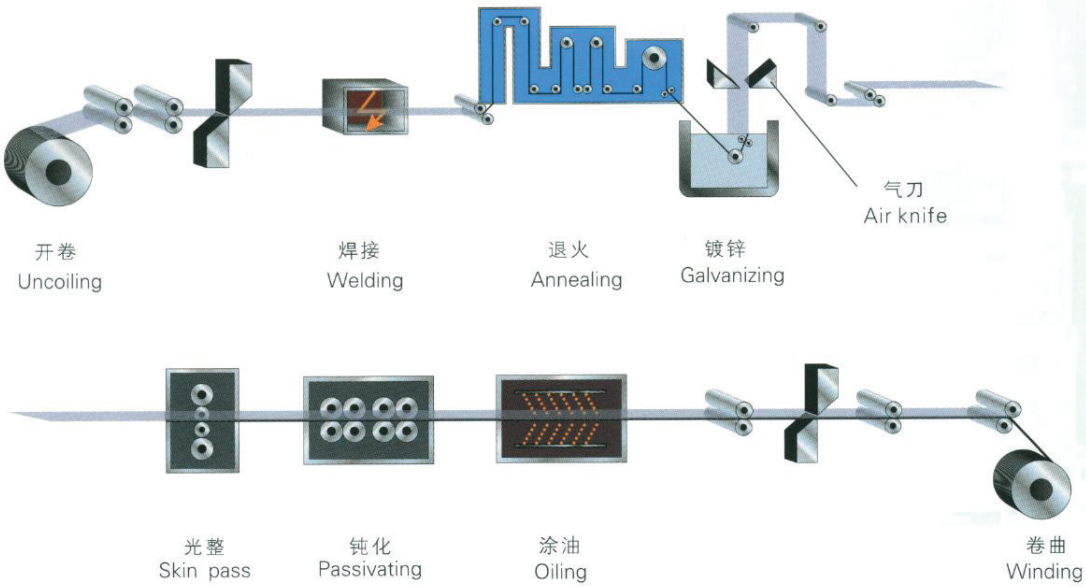
Ansteel possesses 4 galvanizing lines with annual output capacity of 1.6 million ton. The key techniques and equipments are introduced from England, USA, German and France adopting the technology of the advanced continuous annealing, technique of controlling zinc coating and on–line skin pass. The whole set of facilities have been up to the world advanced level.

Ansteel can manufacture the products with normal spangle, skin–passed spangle and non–spangle. The thickness of the coil is 0.30–2.5mm. The width is 750 – 1550mm. The weight of zinc coating is 40 – 350g/m² (including both sides). The weight of the coil is 5 – 30t. The aftertreatments of the surface are skin pass, passivation (environmentally friendly), oiling and fingerprint resistance. The products have stable performance and surface quality and excellent resistance to atmosphere corrosion. The products are widely used in the fields of household appliances, construction and the like. If the varieties, specifications and special requirements of products are not covered in the manual, please feel free to contact us. Ansteel will reply you as soon as possible.

目录 Contents

ANSTEEL

生产流程
Production Flow



主要装备及工艺特点
Main equipments and technical characteristics

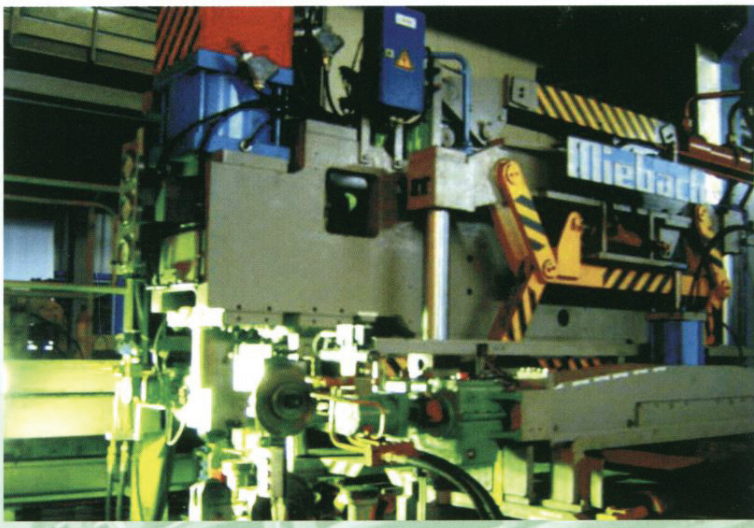
清洗机组
Cleaning machine

美国EF公司的连续立式退火炉：

立式炉型可以无过烧，无斑点，无划痕，炉况稳定性好，炉内设热张力辊和控制辊，便于调节张力使带钢沿着正确的轨迹前进，以获得好的板形和镀层质量。

Vertical continuous annealing furnace from USA EF:

The vertical furnace can realize the functions of no over-burning, no spots and no scratch. The furnace condition has good stability. The hot tension roller and control roller are designed in the furnace to make the strip moving forward in the right direction and get good shape and good quality of zinc coating.



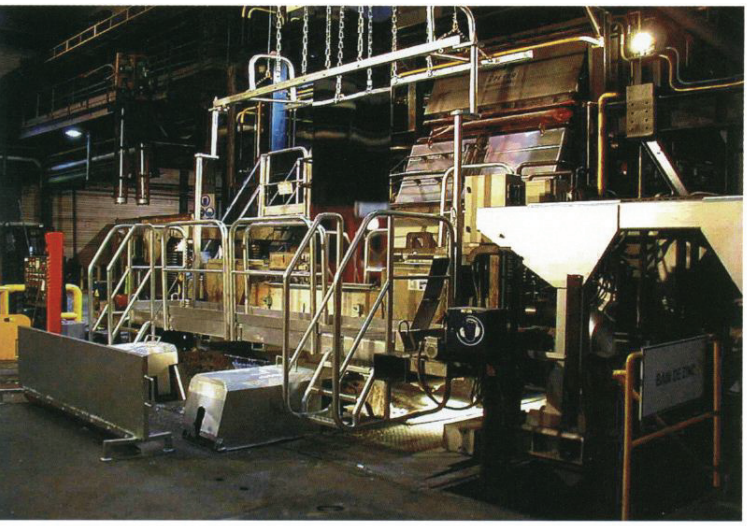
德国Miebach 公司的窄搭接电阻焊机：

带有前后自动对中功能，实现全自动焊接，并有冲孔装置，实现全线焊缝跟踪功能。

Resistance welder with narrow lap from German Miebach:

The welder has the function of automatic centering from front to rear that can realize the full-automatic welding. The welder has the punching facilities that can realize the function of welding tracking on the whole line.

主要装备及工艺特点
Main equipments and technical characteristics



德国FOEN公司的气刀
Air knife from German FOEN

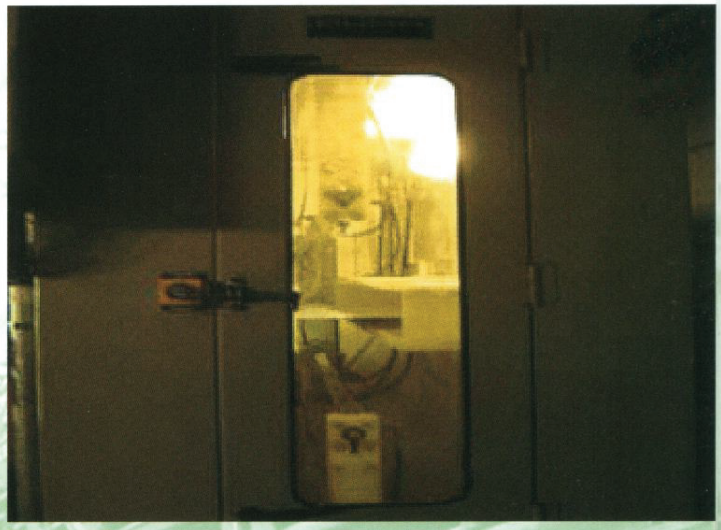
英国AJAX公司的陶瓷感应锌锅：每个锌锅带有升降装置和横移轨道，用于改变锌锅中锌液成分以生产不同镀层产品。

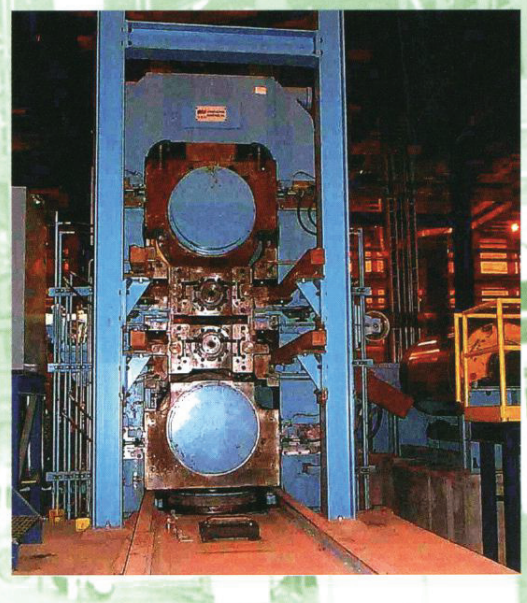
Ceramic induction zinc pot from England AJAX: Every zinc pot has hoisting device and traversing track that can produce products with different coating by changing liquid zinc composition in the zinc pot.

主要装备及工艺特点
Main equipments and technical characteristics

法国CLECIM公司的光整机：具有四辊式机架，配有弯辊和湿光整操作系统，能有效控制板形和机械性能，并能实现在线自动换辊，轧制参数及延伸率可实现闭环控制。

Skin pass machine from French CLECIM: This machine has 4–roller stand with the operation system of roll bending and wet skin pass that can efficiently control the shape and the mechanical properties and can realize the automatic on–line roller changing and the closed–loop control of the rolling parameters and elongation.





德国DUMA公司的静电涂油机：油膜均匀，精度高。

Electrostatic oiling machine from German DUMA: The machine has uniform oil film and high precision.

标准与性能
Standard and properties

钢种及牌号 Steel grade

牌号 Steel grade	锌层重量代号 Code of zinc coating weight	执行标准 Executive standard	主要用途 Main application
DX51D+Z（St02Z）	Z60–Z350	Q/ASB 385	普通用 Normal
DX52D+Z（St03Z）			冲压用 Drawing
DX53D+Z（St04Z）			深冲压用 Deep drawing
S220GD+Z、S250GD+Z S280GD+Z、S320GD+Z S350GD+Z、S550GD+Z			结构用 Construction
SGCC	Z60–Z350	Q/ASB 387	普通用 Normal
SGCD1			冲压用 Drawing
SGCD2、SGCD3			深冲压用 Deep drawing
SGC340、SGC400、SGC440、 SGC490、SGC570			结构用 Construction
CS A、CS B、CS C	Z60–Z350 （公制metric system） G20–G115 （英制English system）	Q/ASB 10	普通用 Normal
FS A、FS B			冲压用 Drawing
DDSA、DDSC			深冲压用 Deep drawing
SS33(230)、SS37(255)、SS40(275) SS50(340)、SS80(550)			结构用 Construction

标准与性能
Standard and properties

镀层种类、表面结构、后处理方式
Variety, surface structure and after-treatment mode of zinc coating

项目 Item	类别 Type
镀层种类 Variety of zinc coating	纯锌 Pure zinc
表面结构 Surface structure	正常锌花 Normal spangle
	无锌花 No spangle
	光整锌花 Skin-passed spangle
后处理方式 After-treatment mode	类别普通钝化 Normal passivation
	环保钝化 Environmental passivation
	耐指纹 Fingerprint resistance
	涂油 Oiling
	钝化+涂油 Passivating and oiling
表面质量等级 Surface quality level	普通级fa Normal level
	较高级fb High level
	高级fc Higher level

标准与性能
Standard and properties

牌号和化学成分 Steel grade and chemical composition

Q/ASB 385

牌号 Steel grade	化学成分[a]，%，不大于 Chemical composition %，not greater than					
	C	Si	Mn	P	S	Ti[b]
DX51D+Z（St02Z） DX52D+Z（St03Z） DX53D+Z（St04Z）	0.12	0.50	0.60	0.10	0.03	0.30
S220GD+Z、S250GD+Z S280GD+Z、S320GD+Z S350GD+Z、S550GD+Z	0.20	0.60	1.70	0.10	0.035	–

a 表中 “–” 为不要求。
–in the table means no requirements.

b 可以添加Nb代替部分Ti，此时Nb和Ti的总含量≤0.30%。
Nb can be added to substitute parts of Ti and at the time the total content of Nb and Ti is equal to or less than 0.30%.

成品钢板和钢带的化学成分允许偏差应符合GB/T 222的规定
The permissible deviation of the chemical composition of the finished sheet and strip should be up to the regulation of GB/T 222.

Q/ASB 387

牌号 Steel grade	化学成分%，不大于 Chemical composition%，no greater than			
	C	Mn	P	S
SGCC	0.15	0.80	0.05	0.030
SGCD 1	0.12	0.60	0.04	0.030
SGCD 2	0.10	0.45	0.03	0.030
SGCD 3	0.08	0.45	0.03	0.030
SGC340	0.25	1.70	0.20	0.035
SGC400	0.25	1.70	0.20	0.035
SGC440	0.25	2.00	0.20	0.035
SGC490	0.30	2.00	0.20	0.035
SGC570	0.30	2.50	0.20	0.035

成品钢板和钢带的化学成分允许偏差应符合GB/T 222的规定
The permissible deviation of the chemical composition of the finished sheet and strip should be up to the regulation of GB/T 222.

标准与性能
Standard and properties

牌号和化学成分 Steel grade and chemical composition

Q/ASB 10

牌号 Steel grade	化学成分[a]，% Chemical composition，%							
	C	Mn	P	S	Als	Ti[b]	Nb[b]	残余元素 Residual elements
	不大于 Not greater than				不小于 Not less than	不大于 Not greater than		
CS A	0.10	0.60	0.030	0.035	–	0.025	0.008	
CS B	0.02~ 0.15	0.60	0.030	0.035	–	0.025	0.008	
CS C	0.08	0.60	0.100	0.035	–	0.025	0.008	
FS A	0.10	0.50	0.020	0.035	–	0.025	0.008	Cr≤0.15
FS B	0.02~0.10	0.50	0.020	0.030	–	0.025	0.008	Ni≤0.20
DDS A	0.06	0.50	0.020	0.025	0.01	0.025	0.008	Cu≤0.20
DDS C	0.02	0.50	0.020~0.100	0.025	0.01	0.150	0.008	Mo≤0.06
SS33(230)	0.20	1.35	0.040	0.040	–	0.025	0.008	V[b]≤0.008
SS37(255)	0.20	1.35	0.100	0.040	–	0.025	0.008	
SS40(275)	0.25	1.35	0.100	0.040	–	0.025	0.008	
SS50(340)	0.25	1.35	0.200	0.040	–	0.025	0.008	
SS80(550)	0.20	1.35	0.040	0.040	–	0.025	0.015	

a 表中"–"为不要求，但应提供分析结果。
– in the chart means no requirements but the analysis result should be provided.

b 当C%≤ 0.02%时，允许添加V、Nb、Ti等化学元素，其V、Nb含量均不大于0.1 0%，Ti含量不大于0.15%。
The chemical elements of V, Nb and Ti are permitted to be added while the content of C is not greater than 0.02%. Among them, the contents of V and Nb are separately not greater than 0.10% and the content of Ti is not greater than 0.15%.

成品钢板和钢带的化学成分允许偏差应符合GB/T 222的规定
The permissible deviation of the chemical composition of the finished sheet and strip should be up to the regulation of GB/T 222.

标准与性能
Standard and properties

钢板和钢带的力学性能和工艺性能
Mechanical properties and processing properties of sheet and strip
Q/ASB 385

牌号 Steel grade	拉伸试验[a] Tensile test			n_{90}	r_{90}
	下屈服强度[b] Lower yield strength R_{eL} MPa	抗拉强度 Tensile strength R_m MPa	断后伸长率,% Breaking elongation (L_0=80mm,b=20mm)		
			不小于 Not less than		
DX51D+Z(St02Z)	–	270~550	22		
DX52D+Z (St03Z)	140~300	270~420	26		
DX53D+Z (St04Z)	120~260	270~380	30		
S220GD+Z	≥220	≥300	20		
S250GD+Z	≥250	≥330	19		
S280GD+Z	≥280	≥360	18		
S320GD+Z	≥320	≥390	17		
S350GD+Z	≥350	≥420	16		
S550GD+Z	≥550	≥560	–		

a 拉伸试样取横向。
The tensile sample is taken horizontally.
b 当没有明显的屈服时，屈服强度取$R_{p0.2}$。
The yield strength is $R_{p0.2}$ without obvious yield.

标准与性能
Standard and properties

钢板和钢带的力学性能和工艺性能
Mechanical properties and processing properties of sheet and strip
Q/ASB 387

牌号 Steel grade	拉伸试验[a] Tensile test		
	下屈服强度[b] R_{eL},MPa Lower yield strength	抗拉强度R_m,MPa Tensile strength	断后伸长率,% Breaking elongation (L_0=50mm,b=20mm)
	不小于 Not less than		
SGCC	205	270	–
SGCD1	–	270	38
SGCD2	–	270	40
SGCD3	–	270	42
SGC340	245	340	20
SGC400	295	400	18
SGC440	335	440	18
SGC490	365	490	16
SGC570	560	570	–

a 拉伸试样取横向。
The tensile sample is taken horizontally.
b 当没有明显的屈服时，屈服强度取$R_{p0.2}$。
The yield strength is $R_{p0.2}$without obvious yield.

标准与性能
Standard and properties

钢板和钢带的力学性能和工艺性能
Mechanical properties and processing properties of sheet and strip
Q/ASB 10

牌号 Steelgrade	拉伸试验[a] Tensile test					n_{90}	r_{90}
	下屈服强度[b], R_{eL} Lower yield strength		抗拉强度R_m Tensile strength		断后伸长率,% Breaking elongation L_0=50mm,b=12.5mm (L_0=2in,b=0.5in)		
	MPa	KSI	MPa	KSI	不小于 Not less than		
CS A	170~380	25~55	–	–	20	–	–
CS B	205~380	30~55	–	–	20	–	–
CS C	170~410	25~60	–	–	15	–	–
FS A、FS B	170~310	25~45	–	–	26	0.17	1.0
DDS A	140~240	20~35	–	–	32	0.19	1.4
DDS C	170~280	25~40			32	0.17	1.2
SS33(230)	≥230	33	≥310	45	20	–	–
SS37(255)	≥255	37	≥360	52	18	–	–
SS40(275)	≥275	40	≥380	55	16	–	–
SS50(340)	≥340	50	≥450	65	12	–	–
SS80(550)	≥550	80	≥570	82	–	–	–

a 拉伸试样取横向。
The tensile sample is taken horizontally.
b 当没有明显的屈服时，屈服强度取$R_{p0.2}$。
The yield strength is $R_{p0.2}$ without obvious yield.

标准与性能
Standard and properties

钢板和钢带的力学性能和工艺性能
Mechanical properties and processing properties of sheet and strip

工艺性能 Processing properties

牌号 Steel grade			弯心直径mm Pin diameter (b≥100mm,4in),
DX51D+Z(St02Z)、DX52D+Z(St03Z)、DX53D+Z(St04Z)	SGCC、SGCD1、SGCD2、 SGCD3	CS A、CS B、CS C、FS A、FS B、DDS A、DDS C	0
S220GD+Z S250GD+Z	SGC340	SS33(230)	1a
S280GD+Z	SGC400	SS37(255) SS40(275)	2a
S320GD+Z S350GD+Z	SGC440 SGC490		3a
S550GD+Z	SGC570	SS50(340) SS80(340)	–

标准与性能
Standard and properties

尺寸、外形允许偏差(Q/ASB 392)
Permissible deviation of dimension and outline

1、厚度允许偏差
Permissible deviation of thickness

1.1钢板和钢带厚度允许偏差应符合表中的规定
Permissible deviation of thickness of sheet and strip should be up to the regulation of table.

单位：毫米unit: mm

公称厚度 Nominal thickness	普通精度 PT.A Normal precision			高级精度 PT. B High precision			高级精度 PT. C High precision		
	公称宽度 Nominal width			公称宽度 Nominal width			公称宽度 Nominal width		
	≤1200	>1200~1500	>1500	≤1200	>1200~1500	>1500	≤1200	>1200~1500	>1500
0.30~0.40	±0.05	±0.05	–	±0.03	±0.04	–	±0.05	±0.05	±0.05
>0.40~0.60	±0.06	±0.06	±0.07	±0.04	±0.05	±0.06	±0.05	±0.05	±0.05
>0.60~0.80	±0.07	±0.07	±0.07	±0.05	±0.06	±0.06	±0.05	±0.05	±0.05
>0.80~1.00	±0.07	±0.08	±0.09	±0.06	±0.07	±0.07	±0.05	±0.05	±0.05
>1.00~1.20	±0.08	±0.09	±0.10	±0.07	±0.08	±0.08	±0.05	±0.05	±0.05
>1.20~1.60	±0.10	±0.11	±0.12	±0.08	±0.09	±0.09	±0.05	±0.05	±0.05
>1.60~2.00	±0.12	±0.13	±0.14	±0.09	±0.10	±0.10	±0.08	±0.08	±0.08
>2.00~2.50	±0.14	±0.15	±0.16	±0.11	±0.12	±0.12	±0.15	±0.15	±0.18

按标准JIS G 3302及QAS/B 387订货的产品，订货厚度为基板厚度，公称厚度为订货厚度加上表中镀层等效厚度（双面之和）。

To the products ordered according to the standard of JIS G 3302 and QAS/B 387, the ordered thickness is the thickness of base sheet and the nominal thickness is the thickness of the ordered thickness plus the equivalent thickness of zinc coating in chart (the sum thickness of two sides)

标准与性能
Standard and properties

尺寸、外形允许偏差(Q/ASB 392)
Permissible deviation of dimension and outline

镀层等效厚度（双面之和）
Equivalent thickness of zinc coating (the sum thickness of two sides)

锌层代号 Code of zinc coating	Z80	Z90	Z100	Z120	Z140	Z150	Z160
等效锌层厚度，mm Equivalent thickness of zinc coating	0.011	0.013	0.014	0.017	0.02	0.021	0.022
锌层代号 Code of zinc coating	Z180	Z200	Z220	Z225	Z250	Z270	Z275
等效锌层厚度，mm Equivalent thickness of zinc coating	0.025	0.028	0.031	0.031	0.035	0.039	0.039

宽度允许偏差 Permissible deviation of thickness

单位：毫米unit: mm

公称宽度 Nominal width	宽度允许偏差 Permissible deviation of width	
	普通精度 PW.A Normal precision	高级精度 PW.B High precision
≤1200	+5	+2
>1200～1500	+6	+2
>1500	+7	+3

产品包装
Product packing

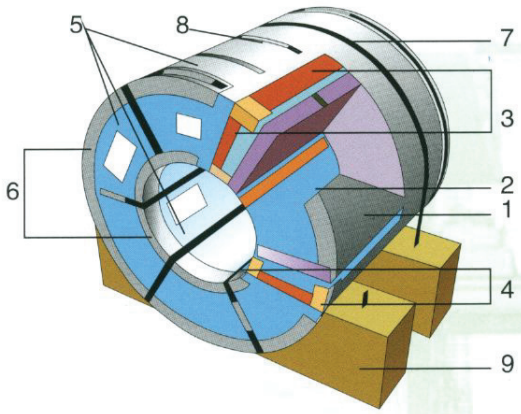
镀锌钢带标准包装方式
Standard packing mode of galvanized strip

根据产品和运输方式等分为不同包装方式，示意图如下。标识采用粘贴标签的方式。标签分为生产小标签和发货大标签两种，生产小标签粘贴在内径和外径，发货大标签粘贴在内径和断面。

There are different packing modes for different products and different transportation. The outline drawing is as follows. The marking method is to stick the labels. There are 2 kinds of labels of the small production label and big delivery labels. The small production labels are stick to the inner and outer diameters. The big delivery labels are stick to the inner diameters and the sections.

1、镀锌钢带
2、工业包装膜
3、瓦楞纸外护板端护板
4、内外纸护角
5、内外端钢护板
6、内外钢护角
7、钢捆带
8、锁扣垫片
9、草支垫

1. Galvanized strip
2. Industrial packing film
3. End back plate of the outer back plate of corrugated paper
4. Back angle of the inner and outer paper
5. Steel back plates at the inner and outer end
6. Steel back angle inside and outside
7. Steel bundles
8. Locker shim
9. Straw support pan



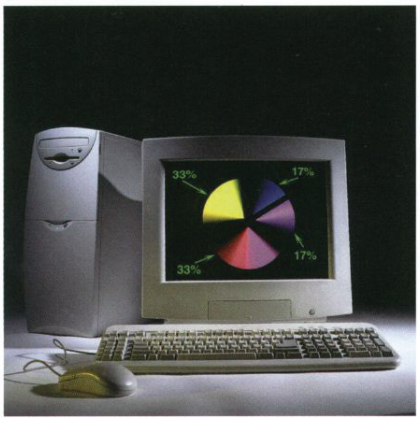
产品标签
Product label

热镀锌钢卷产品标识（普通钝化）
Product label of hot dip galvanized coil (normal passivation)

热镀锌钢卷产品标识（耐指纹、环保钝化）
Prouduct label of hot dip galvanized coil (fingerprint resistance and environmental passivation)

产品应用
Product application

产品广泛应用于家电、建筑、IT等行业。
The products are widely applied in the industries of household appliances, construction, IT and the like.



保证体系
Guarantee system

北京国金恒信管理体系认证有限公司
（中国冶金工业质量体系认证中心）
质量管理体系认证证书

鞍钢股份有限公司

GB/T19001-2000—ISO9001:2000

热轧钢板（带）系列；热轧中厚板系列；热轧型钢、重轨和钢坯系列；热轧线材系列；冷轧薄钢板（带）系列；冷轧硅钢系列；连续热镀锌钢板（带）系列；彩色涂层钢板（带）系列；无缝钢管系列；焦化产品系列和能源动力产品系列的设计、开发、生产和服务。

北京国金恒信管理体系认证有限公司
（中国冶金工业质量体系认证中心）
职业健康安全管理体系认证证书

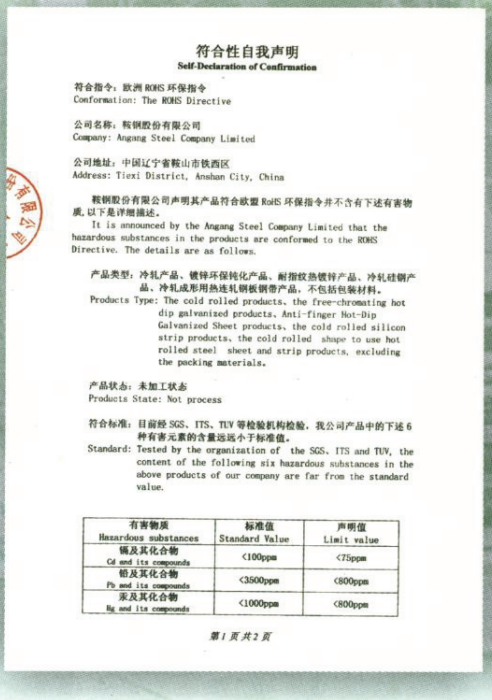
鞍钢股份有限公司

GB/T28001—2001

北京国金恒信管理体系认证有限公司
（中国冶金工业质量体系认证中心）
环境管理体系认证证书

鞍钢股份有限公司

GB/T24001-2004—ISO14001:2004



符合性自我声明
Self-Declaration of Confirmation

符合指令：欧洲 ROHS 环保指令
Conformation: The ROHS Directive

公司名称：鞍钢股份有限公司
Company: Angang Steel Company Limited

公司地址：中国辽宁省鞍山市铁西区
Address: Tiexi District, Anshan City, China

鞍钢股份有限公司声明其产品符合欧盟 RoHS 环保指令并不含有下述有害物质，以下是详细描述。
It is announced by the Angang Steel Company Limited that the hazardous substances in the products are conformed to the ROHS Directive. The details are as follows.

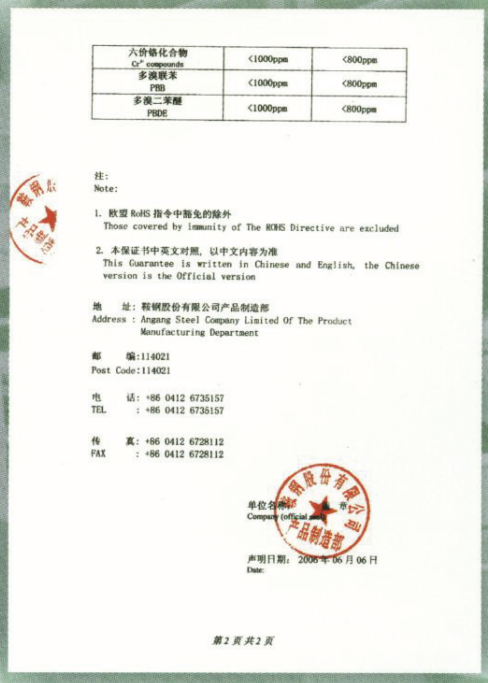
产品类型：冷轧产品、镀锌环保钝化产品、耐指纹热镀锌产品、冷轧硅钢产品、冷轧成形用热连轧钢板钢带产品，不包括包装材料。
Products Type: The cold rolled products, the free-chromating hot dip galvanized products, Anti-finger Hot-Dip Galvanized Sheet products, the cold rolled silicon strip products, the cold rolled shape to use hot rolled steel sheet and strip products, excluding the packing materials.

产品状态：未加工状态
Products State: Not process

符合标准：目前经 SGS、ITS、TUV 等检验机构检验，我公司产品中的下述 6 种有害元素的含量远远小于标准值。
Standard: Tested by the organization of the SGS, ITS and TUV, the content of the following six hazardous substances in the above products of our company are far from the standard value.

有害物质 Hazardous substances	标准值 Standard Value	声明值 Limit value
镉及其化合物 Cd and its compounds	<100ppm	<75ppm
铅及其化合物 Pb and its compounds	<3500ppm	<800ppm
汞及其化合物 Hg and its compounds	<1000ppm	<800ppm

第 1 页 共 2 页



六价铬化合物 Cr^{6+} compounds	<1000ppm	<800ppm
多溴联苯 PBB	<1000ppm	<800ppm
多溴二苯醚 PBDE	<1000ppm	<800ppm

注：
Note:

1. 欧盟 RoHS 指令中豁免的除外
Those covered by immunity of The ROHS Directive are excluded

2. 本保证书中英文对照，以中文内容为准
This Guarantee is written in Chinese and English, the Chinese version is the Official version

地　址：鞍钢股份有限公司产品制造部
Address : Angang Steel Company Limited Of The Product Manufacturing Department

邮　编：114021
Post Code:114021

电　话：+86 0412 6735157
TEL　　: +86 0412 6735157

传　真：+86 0412 6728112
FAX　　: +86 0412 6728112

单位名称：
Company (official name):

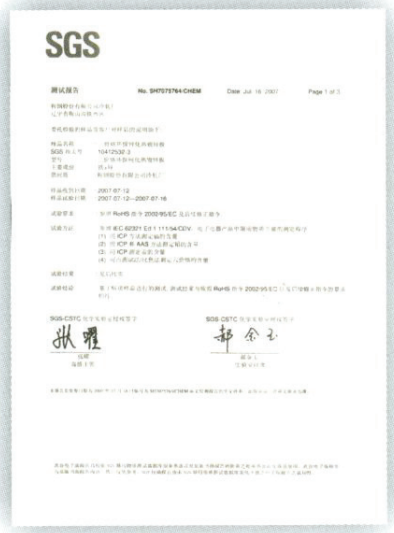
声明日期：2006 年 06 月 06 日
Date:

第 2 页 共 2 页

认证证书
Certificates


SGS

测试报告 No. SH7075758/CHEM Date: Jul. 16, 2007 Page 1 of 3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SGS

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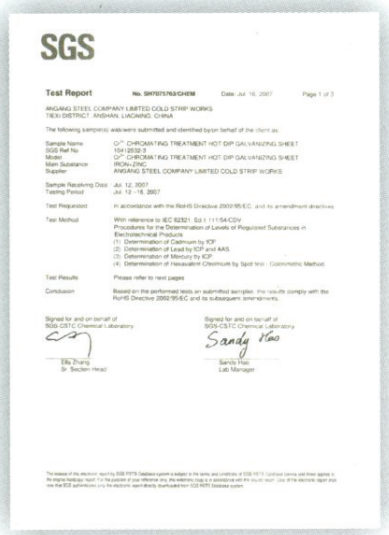

SGS

Test Report No. SH7075763/CHEM Date: Jul. 16, 2007 Page 1 of 3

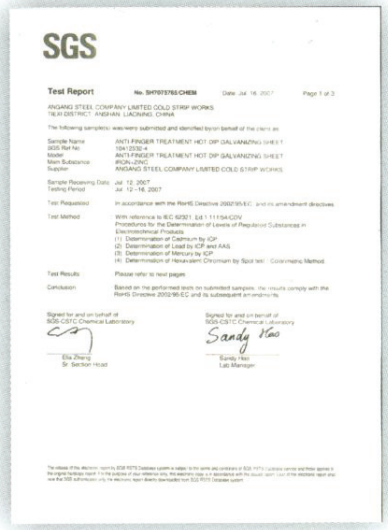
ANGANG STEEL COMPANY LIMITED COLD STRIP WORKS
TIEXI DISTRICT, ANSHAN, LIAONING, CHINA

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Name	Cr^{6+} CHROMATING TREATMENT HOT DIP GALVANIZING SHEET
SGS Ref No.	1041253/2-3
Model	Cr^{6+} CHROMATING TREATMENT HOT DIP GALVANIZING SHEET
Main Substance	IRON+ZINC
Supplier	ANGANG STEEL COMPANY LIMITED COLD STRIP WORKS
Sample Receiving Date	Jul. 12, 2007
Testing Period	Jul. 12 - 16, 2007
Test Requested	In accordance with the RoHS Directive 2002/95/EC and its amendment directives.
Test Method	With reference to IEC 62321, Ed.1:111/54/CDV Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products (1) Determination of Cadmium by ICP (2) Determination of Lead by ICP and AAS (3) Determination of Mercury by ICP (4) Determination of Hexavalent Chromium by Spot test / Colorimetric Method
Test Results	Please refer to next pages
Conclusion	Based on the performed tests on submitted samples, the results comply with the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of SGS-CSTC Chemical Laboratory
Ella Zhang
Sr. Section Head

Signed for and on behalf of SGS-CSTC Chemical Laboratory
Sandy Hao
Lab Manager


SGS

Test Report No. SH7075765/CHEM Date: Jul. 16, 2007 Page 1 of 3

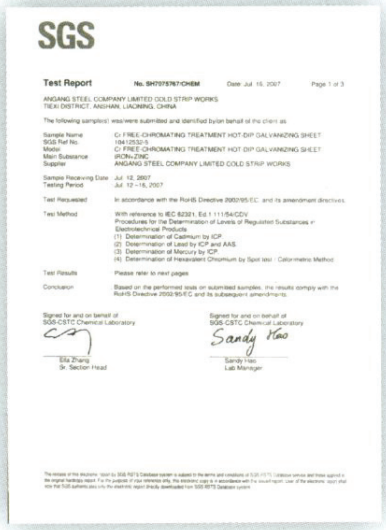
ANGANG STEEL COMPANY LIMITED COLD STRIP WORKS
TIEXI DISTRICT, ANSHAN, LIAONING, CHINA

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Name	ANTI-FINGER TREATMENT HOT DIP GALVANIZING SHEET
SGS Ref No.	1041253/2-4
Model	ANTI-FINGER TREATMENT HOT DIP GALVANIZING SHEET
Main Substance	IRON+ZINC
Supplier	ANGANG STEEL COMPANY LIMITED COLD STRIP WORKS
Sample Receiving Date	Jul. 12, 2007
Testing Period	Jul. 12 - 16, 2007
Test Requested	In accordance with the RoHS Directive 2002/95/EC and its amendment directives.
Test Method	With reference to IEC 62321, Ed.1:111/54/CDV Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products (1) Determination of Cadmium by ICP (2) Determination of Lead by ICP and AAS (3) Determination of Mercury by ICP (4) Determination of Hexavalent Chromium by Spot test / Colorimetric Method
Test Results	Please refer to next pages
Conclusion	Based on the performed tests on submitted samples, the results comply with the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of SGS-CSTC Chemical Laboratory
Ella Zhang
Sr. Section Head

Signed for and on behalf of SGS-CSTC Chemical Laboratory
Sandy Hao
Lab Manager


SGS

Test Report No. SH7075767/CHEM Date: Jul. 16, 2007 Page 1 of 3

ANGANG STEEL COMPANY LIMITED COLD STRIP WORKS
TIEXI DISTRICT, ANSHAN, LIAONING, CHINA

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Name	Cr FREE-CHROMATING TREATMENT HOT-DIP GALVANIZING SHEET
SGS Ref No.	1041253/2-5
Model	Cr FREE-CHROMATING TREATMENT HOT-DIP GALVANIZING SHEET
Main Substance	IRON+ZINC
Supplier	ANGANG STEEL COMPANY LIMITED COLD STRIP WORKS
Sample Receiving Date	Jul. 12, 2007
Testing Period	Jul. 12 - 16, 2007
Test Requested	In accordance with the RoHS Directive 2002/95/EC and its amendment directives.
Test Method	With reference to IEC 62321, Ed.1:111/54/CDV Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products (1) Determination of Cadmium by ICP (2) Determination of Lead by ICP and AAS (3) Determination of Mercury by ICP (4) Determination of Hexavalent Chromium by Spot test / Colorimetric Method
Test Results	Please refer to next pages
Conclusion	Based on the performed tests on submitted samples, the results comply with the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of SGS-CSTC Chemical Laboratory
Ella Zhang
Sr. Section Head

Signed for and on behalf of SGS-CSTC Chemical Laboratory
Sandy Hao
Lab Manager

用户至上 合作共赢

Centering on the customers Cooperating to obtain win–win

公司本部

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传真：0412-6721400
邮编：114002
网址：http://www.ansteel.com.cn
免费服务热线:800-890-0858

Marketing Department of ANGANG STEEL COMPANY LIMITED
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FAX: 0412-6721400
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Free service telephone: 800-890-0858

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Angang Group Korea Co., Limited
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鞍钢澳大利亚有限公司
Ansteel Australia Pty Ltd
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美洲地区 America

鞍钢美国有限公司
Angang Ameica, Inc
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TEL：001-2015195103 FAX：001-7322389259

欧洲地区 Europe

鞍钢欧洲有限公司
Ansteel Europe GMBH
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TEL：0049-211-38548710 FAX：0049-211-38548716

ANSTEEL

Non-confidential attachment GEN 2

Product manual of **hot rolled strip**

热轧带钢产品手册

www.ansteel.com.cn

鞍钢股份有限公司
ANGANG STEEL COMPANY LIMITED

ANSTEEL

鞍钢股份有限公司

鞍钢股份有限公司是鞍山钢铁集团公司的控股上市子公司（深圳证交所A股、香港联交所H股）。公司具有大型烧结、焦化、炼铁、炼钢、轧钢、动力等技术、装备与人员的综合资源配置。公司主体装备达到国际先进和国内领先水平，能够生产高质量、高附加值的产品。

公司目前能够生产150种用途、850个牌号、50000个规格的钢铁产品和近40种焦化产品，广泛应用于机械、冶金、石油、化工、煤炭、电力、铁路、船舶、汽车、建筑、家电、航空、国防等行业，还可以根据顾客的特殊要求和国家重点工程项目研制、开发、生产特种产品，满足市场需求和顾客的特性需要。

公司先后获得GB/T 19001–2000质量管理体系认证、GB/T 24001–2004环境管理体系认证、GB/T 28001–2001职业健康安全管理体系认证。造船用钢通过中、美、德、英、意、法、挪、韩、日九国船级社认证，石油油管、套管通过美国API Spec 5CT认证，汽车用钢产品通过ISO/TS 16949:2002认证。

公司将以一流的装备、一流的产品、一流的服务与您携手共创美好的未来！

Angang Steel Company Limited

Angang Steel Company Limited (Ansteel) is a listed company controlled by Anshan Iron and Steel Group Corporation (A shares in Shenzhen Stock Exchange and H shares in Hong Kong Stock Exchange). Ansteel possesses overall resource distribution of techniques, facilities and staff integrating large–scale sintering, coking, iron–making, steel–making, rolling, power supply and the like. The main equipments have been up to the international advanced and domestic leading level with the products of high quality and high value added.

Ansteel can manufacture steel products with more than 150 appliances, 850 steel grades and more than 50000 specifications and coking products with 40 varieties. The products are widely used in the industries of mechanical, metallurgy, petroleum, chemical, coal, power, railway, ship, automotive, construction, household appliances, aerospace, national defense and the like. Ansteel can also research, develop and manufacture special products for the special customers' requirements and national major projects to meet the market demand and special requirements.

Ansteel has passed the certifications of GB/T 19001–2000 quality management system, GB/T 24001–2004 environment management system and GB/T 28001–2001 vocational health and safety management system. The shipbuilding steel has been certified by 9 classification societies from China, USA, England, Italy, France, Norway, South Korea and Japan. The petroleum tube and casing tube have passed the certification of API Spec 5CT. The automotive steel has been certified by ISO/TS 16949:2002. Ansteel will create the bright future with you hand in hand with the top facilities, top products and top services.

「产品概述」
Introduction of products

鞍钢股份有限公司现有1580、1700ASP、1780、2150ASP四条热连轧生产线，年生产能力为1550万吨。可生产厚度为1.2～25.4mm，宽度为700～2000mm的热轧板卷。产品钢质纯净，成分、性能均匀稳定，表面、板形质量优良，尺寸精度高。可为石油天然气输送管线、集装箱、铁路车辆、汽车、船舶、压力容器、机械制造等行业提供优质热连轧产品。如果您所需产品的品种、规格、特殊要求在本公司样本中未覆盖，请告知本公司，本公司将予以及时答复。

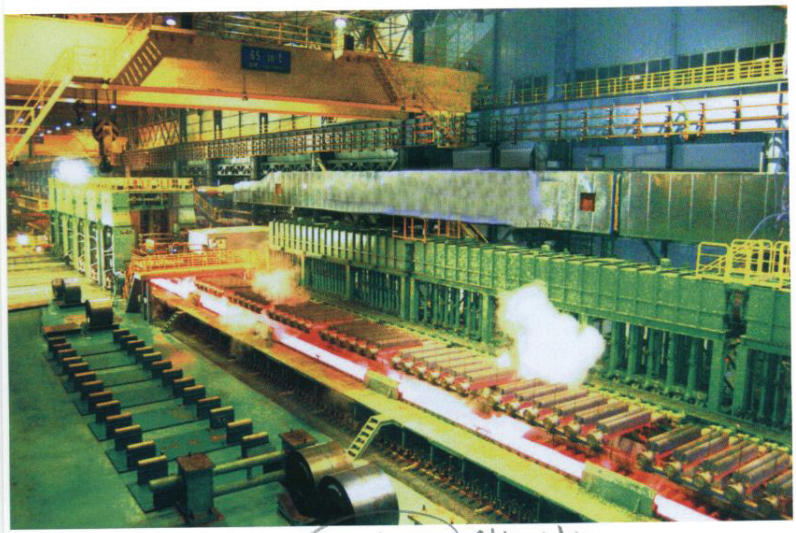
Ansteel has 4 production lines with width of 1580mm, 1700ASP, 1780mm and 2150ASP with annual output capacity of 15.5 million ton of products with 1.2 ~ 25.4mm thick and 700 ~ 2000mm wide. The products have the characteristics of purified steel grade, homogeneous and stable composition and performances, excellent surface and shape quality and high dimension precision. Ansteel can provide quality continuous hot rolled products to the industries of conveying pipelines of petroleum and natural gas, carrier, railroad vehicles, automotive, ship, pressure container, mechanical manufacture and the like. If the varieties, specifications and special requirements of products are not covered in the manual, please feel free to contact us. Ansteel will reply you as soon as possible.

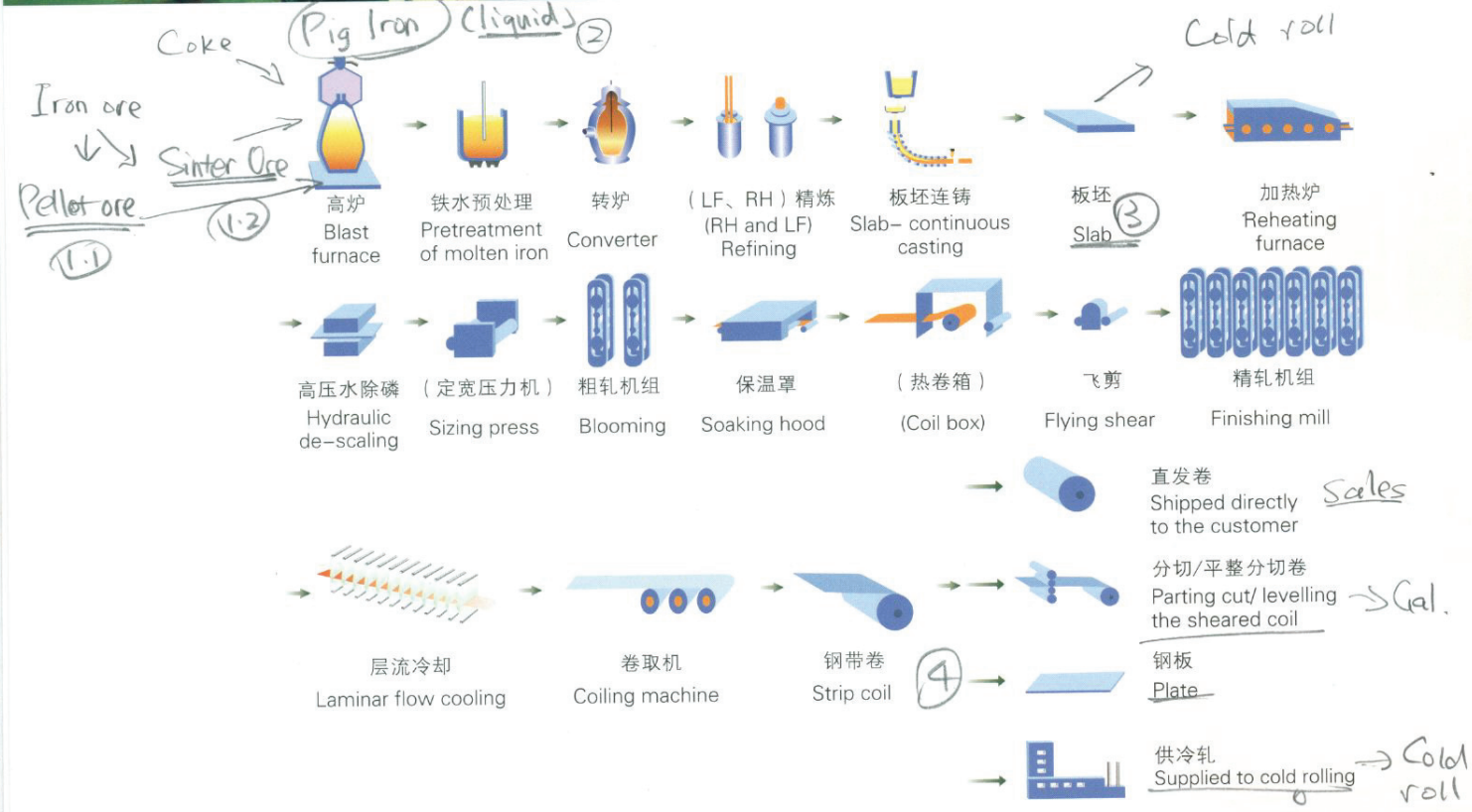


目录 Contents

ANSTEEL

生产流程
Production Flow





主要装备及工艺特点
Main equipments and technical characteristics

RH真空处理

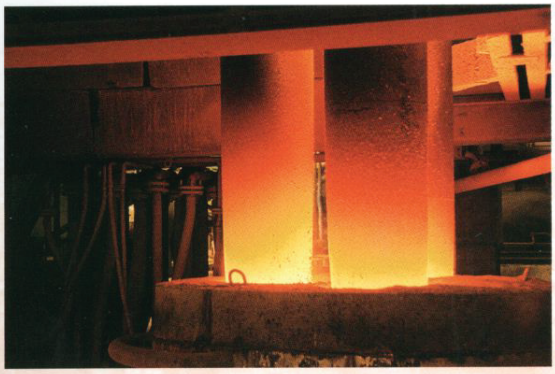
降C去H，减少夹杂，均匀成分

Vacuum treatment

Decrease C content and eliminate H

Decrease inclusion

Uniform compostition



脱硫扒渣

降低铁水硫含量

Desulphuration and slag removal

Decrease S content of the molten iron

ANSTEEL

主要装备及工艺特点
Main equipments and technical characteristics

连轧机组
PC轧机、串辊等可有效控制板形

Continuous rolling
Efficiently controlling the shape by PC mill and strings of roller

定宽压力机
实现宽度自由轧制

Size press
Freely rolling with various width

全系统实现智能化控制
Digital control in the whole system

标准与性能
Standard and properties

标准简介
Introduction of standard

标准是“为保证产品的适用性，对产品必须达到的某些或全部要求所制订的技术依据”。
Standard is the technical reference to guarantee the adaptability of the products that they must meet some or all parts of the requirements.

常用标准代号名称
Common code and name of standard

标准代号 Standard code	中文名称 Chinese name
Q/ASB	鞍钢企业标准 Angang standard
GB	中国国家标准 Chinese national standard
JIS	日本工业标准 Japanese industry standard
API	美国石油协会 American petroleum association
SAE	美国汽车工程师协会 Society of automotive engineers
ASTM	美国材料与试验协会 American society for testing and materials
DIN	德国工业标准 Deutsche industrie normen
SEW	德国钢铁工程师协会标准VDEH Verein Deutscher Eisenh Ü ttenleute

标准与性能
Standard and properties

各船级社代号名称
Code and name of classification societies

标准代号 Standard code	中文名称 Chinese name
CCS	中国船级社 China Classification Society
BV	法国船级社 Bureau Veritas
GL	德国劳氏船级社 Germanischer Lloyd
LR	英国劳氏船级社 Lloyd's Register of Shipping
DnV	挪威船协会 Det Norske Veritas
KR	韩国船级社 Korean Register of Shipping
RINA	意大利船级社 Registro Italiano Navale

标准与性能
Standard and properties

热轧品种类别
Product varieties

品名 Name	牌号 Steel grade	牌号引用 Quotation	执行标准 Executive standard	厚度 Thickness mm	宽度 Width mm	适用范围 Application
碳素结构钢 Carbon constructional steel	Q195、Q215A、Q215B、Q235A、Q235B、Q235C、Q235D	GB/T 700	Q/ASB 271	1.9 ~ 25.4	700 ~ 2000	一般结构用 Applied for normal construction
	SS330、SS400	JIS G 3101				
低合金结构钢 Low-alloy constructional steel	Q345A、Q345B、Q345C、Q345D	GB/T 1591	Q/ASB 271	2.5 ~ 20.0	700 ~ 1950	一般结构用 Applied for normal construction
	SS490	JIS G 3101				
	SM490A、SM490YA	JIS G 3106				
低碳钢 Low carbon steel	SPHC、SPHD、SPHE	JIS G 3131	Q/ASB 330	1.9 ~ 25.4	700 ~ 2000	冷轧或冷成型用 Applied for cold rolling or cold forming
优质碳素结构钢 Carbon constructional quality steel	20 ~ 45	GB/T 699	Q/ASB 271	2.0 ~ 19.0	700 ~ 1630	经切削加工并热处理后使用的机械结构件 After being machined and hot treated to used as mechanical component
	S25C、S35C、S45C	JIS G 4051				
制管用钢 Tube steel	SPHT1、SPHT2、SPHT3	JIS G 3132	Q/ASB 271	1.9 ~ 25.4	700 ~ 2000	焊接钢管用 Applied to weld tube
汽车结构用钢 Automotive steel	A320L、A420L、A510L、A550L、A610L		Q/ASB 275	2.0 ~ 19.0	700 ~ 2000	用于要求具有良好的冷成型性及高强度要求的汽车纵梁、横梁等 Applied to produce longitudinal girder and ross girder with excellent cold forming and high strength
	QStE340TM、QStE380TM、QStE420TM、QStE460TM、QStE500TM	SEW 092				
	SAPH400、SAPH440	JIS G 3113				用于制造纵梁、横梁、车轮 Applied to produce longitudinal girder, cross girder and wheel
	LQ330、LQ380、LQ410、LQ450、A330LF、A400LF					用于制造具有良好的冷成型性的汽车滚型车轮轮辋及轮辐 Applied to produce rolling wheel rim and web
集装箱用钢 Container steel	SPA-H		Q/ASB 2	1.6 ~ 10.0	700 ~ 1800	用于制造集装箱 Applied to produce container

标准与性能
Standard and properties

热轧品种类别
Product varieties

品名 Name	牌号 Steel grade	牌号引用 Quotation	执行标准 Executive standard	厚度 Thickness mm	宽度 Width mm	适用范围 Application
管线钢 Pipeline steel	S245、S290、S320、S360、S390、S415、S450、S485	GB/T 16164	Q/ASB 276	3.3～20.0	700～1950	用于石油天然气输送管以及具有类似要求的其它流体输送管 Applied to produce conveying tube of petroleum and natural gas and other fluid conveying tube with similar requirements
	L245、L245NB、L245MB、L290、L290NB、L290MB、L320、L360、L360NB、L360MB、L390、L415、L415NB、L415MB、L450、L450MB、L485、L485MB	GB/T 9711.1 GB/T 9711.2				
	B、X42、X46、X52、X56、X60、X65、X70	API 5L				
	J55	API 5CT	Q/ASB 176			用于直缝电阻焊套管 Applied to produce casing electric resistance straight welded casing
耐腐蚀结构用钢 Corrosion-resistant constructional steel	09CuPTiRE、09CuPCrNiA	TB/T1979	Q/ASB 274	2.5～14.0	700～1900	用于制造铁路车辆、建筑、塔架和其它结构件 Applied to produce railroad vehicle, construction, tower and other construction parts
	Q450NQR1		XGX 2004-05			
造船用钢 Ship-bulding steel	A、B、D、AH32、AH36、DH32、DH36	CCS、LR、BV、GL、DnV、KR、RINA	Q/ASB 141	2.5～18.0	700～2000	用于制造各种类型船舶 Applied to produce various kinds of vessels
工程机械用钢 Engineering mechine steel	HQ460、HQ600MC		AXGX 005-2005	5.6～12.8	700～1550	用于各种工程机械制造 Applied to produce various engineering machines
桥梁用钢 Bridge steel	Q345qC、Q345qD		GB/T 714	2.5～20.0	700～1950	用于各种桥梁结构 Applied to produce various bridge construction

标准与性能
Standard and properties

热轧品种类别
Product varieties

品名 Name	牌号 Steel grade	牌号引用 Quotation	执行标准 Executive standard	厚度 Thickness mm	宽度 Width mm	适用范围 Application
焊接气瓶用钢 Welded gas vessel steel	HP295	GB 6653	Q/ASB 273	2.5 ~ 6.0	900 ~ 1350	焊接气瓶用 Applied to produce gas vessels
	SG295	JIS G 3116				
刃具用钢 Cutting tool steel	65Mn		Q/ASB 85	3.0 ~ 8.0	800 ~ 1500	用于生产农机耙片、刃具、锯片、机械刀片及弹簧等 Applied to produce rake blade, saw blade, mechanical blade, spring for manufacture agricultural machincry and the like
合页用钢 Hinge steel	AHYG		Q/ASB 341	3.0 ~ 6.0	700 ~ 1630	用于生产合页 Applied to produce hinge
花纹钢板 Aheckered plate	Q195、Q215A、Q215B、Q235A、Q235B	GB/T 700	Q/ASB 272	2.5 ~ 8.0	900 ~ 1500	用于生产扁豆形花纹钢板 Applied to produce tear plate
	SS400	JIS G 3101				

标准与性能
Standard and properties

碳素结构钢
Carbon constructional steel

钢级 Steel grade	化学成分，% Chemical compostion					拉伸试验 Tensile test				冲击试验 Impact test	
	C	Si	Mn	P	S	屈服强度 Yield strength MPa		抗拉强度 Tensile strength MPa	断后伸长率 Breaking elont-ation %	试验温度 Testing tempe-rature ℃	冲击功 Impact energy A_{kv}，J
	不大于 Not greater than					钢板厚度，mm Thickness，mm					
						≤16	>16				
Q195	0.12	0.30	0.50	0.035	0.040	≥195	≥185	315～430	≥33		
Q215A	0.15	0.35	1.20	0.045	0.050	≥215	≥205	335～450	≥31		
Q215B					0.045					+20	≥27
Q235A	0.22	0.35	1.40	0.045	0.050	≥235	≥225	370～500	≥26		
Q235B	0.20				0.045					+20	≥27
Q235C	0.17			0.040	0.040					0	
Q235D				0.035	0.035					-20	

牌号 Steel grade	化学成分，% Chemical composition					拉伸试验 Tensile test						弯曲试验 Bending test
	C	Si	Mn	P	S	下屈服强度 Lower yield strength MPa		抗拉强度 Tensile strength MPa	断后伸长率，% Breaking elongation			180° 弯心直径 Pin diameter（b≥35mm）
				不大于 Not greater than		钢板厚度，mm Thickness，mm			A_{50mm}		A_{200mm}	
						≤16	>16		钢板厚度，mm Thickness，mm			
									≤5	>5～16	>16	
SS330	≤0.15	≤0.35	≤1.20	0.035	0.035	≥205	≥195	330～430	≥26	≥21	≥26	0.5a
SS400	≤0.20	≤0.35	≤1.40	0.035	0.035	≥255	≥245	400～510	≥21	≥17	≥21	1.5a

标准与性能
Standard and properties

低合金结构钢
Low-alloy constructional steel

钢级 Steel grade	化学成分，% Chemical composition									拉伸试验 Tensile test				冲击试验 Impact test	
	C	Si	Mn	P	S	Nb	V	Ti	Als	屈服强度 Yield strength MPa 厚度 Thickness mm ≤16	屈服强度 Yield strength MPa 厚度 Thickness mm >16	抗拉强度 Tensile strength MPa	伸长率 Elongation %	试验温度 Testing temperature ℃	冲击功 Impact energy A_{kv}, J
Q345A	≤0.20	≤0.55	1.00～1.60	≤0.045	≤0.045	0.015～0.060	0.02～0.15	0.02～0.20		≥345	≥325	470～630	≥21	20	≥34
Q345B				≤0.040	≤0.040									0	
Q345C				≤0.035	≤0.035				≥0.015				≥22	-20	
Q345D	≤0.18			≤0.030	≤0.030				≥0.015					-40	≥27

牌号 Steel grade	化学成分，% Chemical compostion					拉伸试验 Tensile test						弯曲试验 Bending test
	C	Si	Mn	P	S	下屈服强度 Lower yield strength MPa 厚度 Thickness ≤16mm	下屈服强度 Lower yield strength MPa 厚度 Thickness >16mm	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation % A_{50mm} 厚度 Thickness ≤5mm	断后伸长率 Breaking elongation % A_{200mm} 厚度 Thickness >5～16mm	断后伸长率 Breaking elongation % A_{200mm} 厚度 Thickness >16 mm	180° 弯心直径 Pin diameter (b≥35mm)
	不大于 Not greater than											
SS490	0.24	0.35	1.60	0.035	0.035	≥285	≥275	490～610	≥19	≥15	≥19	4a
SS490A	0.20	0.55	1.60	0.035	0.035	≥325	≥315	490～610	≥22	≥17	≥22	
SS490YA	0.20	0.55	1.60	0.035	0.035	≥365	≥355	490～610	≥19	≥15	≥19	

标准与性能
Standard and properties

低碳钢
Low carbon steel

牌号 Steel grade	化学成分，% Chemical composition					拉伸试验 Tensile stest							180° 弯曲试验 Bending test	
	C	Si	Mn	P	S	抗拉强度 Tensile strength MPa	断后伸长率 Breaing elongation A_{50mm}，%（L_o=50mm，b=25mm）						弯心直径 Pin diameter（b=35mm）	
	不大于 Not greater than						钢板厚度 Thickness mm						钢板厚度 Thickness mm	
							<1.6	1.6～<2.0	2.0～<2.5	2.5～<3.2	3.2～<4.0	≥4.0	<3.2	≥3.2
SPHC	0.12	0.05	0.60	0.030	0.020	270～440	≥27	≥29	≥30	≥31	≥32	≥32	0	a
SPHD	0.08	0.05	0.50	0.025	0.020	270～420	≥30	≥32	≥33	≥35	≥37	≥39	0	0
SPHE	0.06	0.05	0.50	0.020	0.020	270～400	≥31	≥33	≥35	≥37	≥39	≥41	0	0

优质碳素结构钢
Carbon constructional quality steel

牌号 Steel grade	化学成分，% Chemical composition								
	C	Si	Mn	Cr	Ni	Cu	P	S	
				不大于 Not greater than					
20	0.17～0.23	0.17～0.37	0.35～0.65	0.25	0.30	0.25	0.035	0.035	
35	0.32～0.39	0.17～0.37	0.50～0.80	0.25	0.30	0.25	0.035	0.035	
45	0.42～0.50	0.17～0.37	0.50～0.80	0.25	0.30	0.25	0.035	0.035	
S20C	0.18～0.23	0.15～0.35	0.30～0.60				0.030	0.035	
S35C	0.32～0.38	0.15～0.35	0.60～0.90				0.030	0.035	
S45C	0.42～0.48	0.15～0.35	0.60～0.90				0.030	0.035	

标准与性能
Standard and properties

制管用钢
Tube steel

牌号 Steel grade	化学成分，% Chemical composition					拉伸试验 Tensile test						180° 弯取试验 Bending test	
						下屈服强度 Lower yield strength MPa	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation A_{50mm}，%（L_0=50mm，b=25mm）				弯心直径 Pin diameter mm(b≥35mm)	
								钢板厚度 Thickness mm				钢板厚度 Thickness mm	
	C	Si	Mn	P	S			<1.6	1.6～<3.0	3.0～<6.0	6.0～13.0	≤3.0	>3.0
SPHT1*	≤0.10	≤0.35	≤0.50	≤0.035	≤0.035	≥200	≥270	≥30	≥32	≥35	≥37	0	1a
SPHT2*	≤0.18	≤0.35	≤0.60	≤0.035	≤0.035	≥215	350～480	≥25	≥27	≥30	≥32	2a	3a
SPHT3*	≤0.25	≤0.35	0.30～0.90	≤0.035	≤0.035	≥265	410～550	≥20	≥22	≥25	≥27	3a	4a

* 根据需方要求，Si含量可不大于0.05%。
To meet the customers' requirements, the contnent of Si can be greater than 0.05%.

集装箱用钢
Container steel

牌号 Steel grade	化学成分，% Chemical composition								厚度 Thickness mm	拉伸试验 Tensile test				180° 弯曲试验 Bending test		冲击试验 Impact test	
	C	Si	Mn	P	S	Cu	Cr	Ni		下屈服强度 Lower yield strength MPa	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation %	试样尺寸 Sample dimension $L_0 \times b$, mm	弯心直径 Pin diameter mm	试样方向 Sample direction	温度 Temperature	冲击功 Impact energy A_{kv}, J
SPA-H	0.05～0.12	0.25～0.75	0.20～0.60	0.070～0.120	≤0.025	0.25～0.50	0.30～1.25	≤0.65	≤6	≥355	490～600	≥22	50×25	a	纵向 Vertical	常温 in the normal temperature	≥47
									>6～12	≥355	490～610	≥15	200×40	2.0a	纵向 Vertical		

标准与性能
Standard and properties

汽车结构用钢
Automotive structural steel

牌号 Steel grade	厚度 Thickness mm	化学成分，[b]% Chemical composition									拉伸试验 Tensile test			180° 弯曲试验 Bending test 弯心直径 Pin diameter b=35mm
		C	Si	Mn	P	S	Nb	V	Ti	Als	抗拉强度 Tensile strength MPa	下屈服强度 Lower yield strength MPa	伸长率 Elongation %	
		不大于 Not greater than												
A320L	≤5.0	0.10	0.05	0.50	0.030	0.025					320～420	≥215	≥27	0
A420L[a]	≤12.0	0.12	0.05	1.20	0.030	0.025	0.06				420～520	≥305	≥25	0.5a
A510L[a]	≤12.0	0.16	0.05	1.60	0.025	0.020	0.06				510～610	≥355	≥24	0.5a
A550L[a]	≤12.0	0.18	0.05	1.60	0.025	0.020	0.06				550～650	≥400	≥22	1.0a
A610L	≤10.0	0.12	0.05	1.70	0.025	0.020	0.09		0.22	≥0.015	610～700	≥500	≥20	1.0a
LQ330[c]	2.5～8.0	0.08	0.20	0.80	0.020	0.020	0.04	0.04	0.04	≥0.005	330～430	≥230	≥30	0.5a
LQ380[c]		0.10	0.20	1.00			0.04	0.04	0.04	≥0.005	380～480	≥260	≥28	0.5a
LQ410[c]	2.5～8.0	0.12	0.35	1.20	0.020	0.020	0.04	0.04	0.04	≥0.005	410～520	≥315	≥26	0.5a
LQ450[c]		0.14	0.35	1.40			0.04	0.04	0.04	≥0.005	450～560	≥345	≥25	1.0a
A330LF[c]	3.0～8.0	0.12	0.20	1.00	0.030	0.025					330～440	≥215	≥30	0.5a
A400LF[c]	12.0～16.0	0.20	0.30	1.30	0.020	0.020				≥0.005	400～510	≥260	≥25	1.0a

[a] 供方可加入一定量的钛。
The supplier can add finite volume of Ti.

[b] Nb+V+ Ti≤0.22%。
The total of Nb, V and Ti is not greater than 0.22%.

[c] 由供方决定可加入铌、钒、钛元素中的一种或它们的任一组合。
The supplier can determine to add one of Nb, V and Ti or any mixture of them.

牌号 Steel grade	厚度 Thickness mm	化学成分，% Chemical composition									拉伸试验 Tensile test				180° 弯取试验 Bending test 弯心直径 Pin diameter b=35mm
		C	Si	Mn	P	S	Nb	V	Ti	Als	抗拉强度 Tensile strength MPa	上屈服强度 Upper yield strength MPa	伸长率，% Elongation		
		不大于 Not greater than											Lo=80mm, b=20mm	Lo=5.65$\sqrt{S_0}$	
													钢板厚度 Thickness		
													<3.0mm	≥3.0mm	
QStE340TM[a]	3.0～10.0	0.12	0.50	1.30	0.025	0.020	0.09	0.20	0.15	≥0.005	420～540	≥340	≥19	≥25	0.5a
QStE380TM[a]				1.40	0.025	0.015					450～590	≥380	≥18	≥23	
QStE420TM[a]				1.50	0.025	0.015					480～620	≥420	≥16	≥21	
QStE460TM[a]				1.60	0.025	0.015					520～670	≥460	≥14	≥19	1.0a
QStE500TM[a]				1.70	0.025	0.015					550～700	≥500	≥12	≥17	

[a] Nb+V+ Ti≤0.22%。

标准与性能
Standard and properties

汽车结构用钢
Automotive structural steel

牌号 Steel grade	厚度 Thickness mm	化学成分，% Chemical composition						拉伸试验 Tensile test											180° 弯取试验 Bending test 弯心直径 Pin diameter b=35mm	
		C	Si	Mn	P	S	Als	抗拉强度 Tensile strength MPa	下屈服强度 Lower yield strength MPa			断后伸长率,% Breaking elongation								
												A_{50}							A_{200}	
		不大于 Not greater than							厚度,mm Thickness, mm											
									<6	6~<8	8~<14.0	<2	2~<2.5	2.5~<3.5	3.5~<4.0	4.0~<6.3	≥6.3	<2	≥2
								不小于 Not less than												
SAPH400	1.6~14.0	0.20	0.30	1.20	0.025	0.020		400	255	235	235	31	32	34	35	36	24	2a	2a
SAPH440	1.6~14.0	0.20	0.30	1.20	0.025	0.020	≥0.005	440	305	295	275	29	30	32	33	34	22	2a	3a

造船用钢
Ship-building steel

钢级 Steel grade	化学成分，% Chemical composition								拉伸试验 Tensile test			冲击试验 Impact test	
	C	Si	Mn	P	S	Nb	V	Ti	Als	屈服强度 Yield strength MPa	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation A_{50mm}, %	试验温度 Testing temperature ℃	冲击功 Impact energy A_{kV}, J
				不大于 Not greater than										
A	≤0.20	≤0.35	≥0.50	0.035	0.035				0.015~0.045	≥235	400~520	≥22	20	–
B			≥0.60	0.035	0.035								0	≥27
D			≥0.70	0.030	0.030								-20	≥27
AH32	≤0.18	≤0.50	0.90~1.60	0.030	0.030	0.02~0.05	≤0.10	≤0.02	0.015~0.055	≥315	450~590	≥22	0	≥31
DH32				0.025	0.025								-20	≥31
AH36				0.030	0.030					≥355	490~620	≥21	0	≥34
Dh36				0.025	0.025								-20	≥34

标准与性能
Standard and properties

管线钢
Pipeline steel

Q/ASB 276-2004	GB/T 14164-1993	GB/T 9711.1、2-1999	API 5L
S245	S240	L245、L245NB、L245MB	B
S290	S290	L290、L290NB、L290MB	X42
S320	S315	L320	X46
S360	S360	L360、L360NB、L360MB	X52
S390	S385	L390	X56
S415	S415	L415、L415NB、L415MB	X60

牌号 Steel grade	化学成分[a]，% Chemical composition					
	C	Si	Mn	P	S	其它 Other
S245	≤0.17	≤0.35	≤1.20	≤0.025	≤0.015	–
S290	≤0.20	≤0.35	≤1.30	≤0.025	≤0.015	[b]
S320	≤0.20	≤0.35	≤1.40	≤0.025	≤0.015	[b]
S360	≤0.20	≤0.35	≤1.40	≤0.025	≤0.015	[b]
S390	≤0.20	≤0.40	≤1.40	≤0.025	≤0.015	[b]
S415	≤0.12	≤0.40	≤1.60	≤0.025	≤0.015	[b]
S450	≤0.12	≤0.40	≤1.60	≤0.025	≤0.015	[b]
S485	≤0.12	≤0.40	≤1.70	≤0.025	≤0.015	[b]

[a] 对于S290及S290以上钢级的牌号，碳含量比规定最大含碳量每降低0.01%，锰含量则允许比规定最大锰含量提高0.05%；但对于S290、S320和S360钢级，最大锰含量不得大于1.50%；对于S390、S415和S450钢级，最大锰含量不得大于1.65%；对于S485钢级，最大锰含量不得大于2.00%。
To the steel grade of S290 and above S290, every decrease by 0.01% based on the regulated maxi mum content of C permits the increase by 0.05% based on regulated maximum content of Mn. But to steel grade of S 290, s320 and S360, the maximum content of Mn should not be greater than 1.50%. To steel grade of S390, S415 and S450, the maxi mum content of Mn should not be greater than 0.01% and to steel grade of S485, the maximum content of Mn should not be greater than 2.00%.

[b] 由供方决定可加入铌、钒、钛元素中的一种或它们的任一组合，但铌、钒、钛元素含量之和不应超过0.15%。
The supplier can determine to add one of Nb, V and Ti or any mixture of them. But the total content of Nb, V and Ti should not be greater than 0.15%.

标准与性能
Standard and properties

管线钢
Pipeline steel

牌号 Steel grade	拉伸试验 Tensile test			180°弯曲试验 Bending test	0°C冲击试验 Impact test			硬度 Hardness
	屈服强度 Yield strength MPa	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation %	弯心直径 Pin diameter	冲击功 Impact energy A_{kv}, J	剪切面积Shearing area, SA% 平均值 Average	剪切面积Shearing area, SA% 单个试样最小值 Minimum of individual sample	Hv10
S245	245 ~ 445	415 ~ 755	≥21	d=2a	≥42	≥90	≥80	–
S290	290 ~ 495	415 ~ 755	≥21					
S320	320 ~ 525	435 ~ 755	≥20					
S360	360 ~ 530	460 ~ 755	≥19					≤220
S390	390 ~ 545	490 ~ 755	≥18					
S415	415 ~ 565	520 ~ 755	≥17					
S450	450 ~ 600	535 ~ 755	≥17		≥47			≤235
S485	485 ~ 620	570 ~ 755	≥16		≥63			≤250

钢级 Steel grade	化学成分，% Chemical composition						拉伸试验 Tensile test			180° 弯曲试验 Bending test	冲击试验 Impact test	
	C	Si	Mn	P	S	Nb+V+Ti	屈服强度 Yield strength MPa	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation A_{50mm}, %	弯心直径 Pin diameter mm	试验温度 Testing temperature ℃	冲击功 Impact energy A_{kv}, J
J55	0.15 ~ 0.21	0.10 ~ 0.30	≤1.40	≤0.020	≤0.010	≤0.15	410 ~ 540	≥520	≥24	2a	– 10	≥50

标准与性能
Standard and properties

耐腐蚀用钢
Corrosion-resistant steel

牌号 Steel grade	化学成分[a,b]，% Chemical composition									
	C	Si	Mn	P	S	Cr	Cu	Ti	Ni	RE
09CuPTiRE-A（Q295GNH）	≤0.12	0.20～0.40	0.25～0.55	0.07～0.12	≤0.020		0.25～0.50	≤0.03		0.006～0.15
09CuPCrNi-A（Q345GNHL）	≤0.12	0.25～0.75	0.20～0.50	0.07～0.12	≤0.020	0.30～1.25	0.25～0.50		0.12～0.65	

[a] 允许加入Nb、V、Ti等微量元素。
Trace element of Nb, V and Ti can be added.
[b] 当S≤0.010%时，RE可不作为验收条件。
When the value of S is not greater than 0.010%, RE can not be the acceptance requirement.

牌 号 Steel grade	厚度 Thickness mm	拉伸试验[a] Tensile test				180° 弯曲试验[a,b] Bending test 弯心直径 Pin diameter b≥20mm	冲击试验[c] Impact test -40℃冲击功 Impact energy in -40℃ J
		下屈服强度 Lower yield strength MPa	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation %	屈强比 Yield ration		
09CuPTiREA（Q295GNH）	≤6	≥305	≥400	≥24	≤0.75	a	≥21
	>6～14					2a	
09CuPCrNiA（Q345GNHL）	≤6	≥355	≥490	≥24		a	
	>6～14					2a	

[a] 拉伸、弯曲试验取横向试样。
The sample is taken horizontally in the tensile and bending test.
[b] 弯曲试验仲裁试样宽度b=20mm。
The width of arbitrary sample in the bending test is 20mm.
[c] 冲击试验取纵向试样。
The sample is taken vertically in the impact test.

标准与性能
Standard and properties

工程机械用钢
Engineering machine steel

牌号 Steel grade	化学成分，% Chemical composition					厚度 Thickness mm	拉伸试验 Tensile test			180° 弯曲试验 Bending test		冲击试验 Impact test
	C	Si	Mn	P	S		屈服强度 Yield strength MPa	抗拉强度 Tensile strength MPa	伸长率 Elongation %	b=35mm d=2a		纵向-20℃ Vertical direction A_{kv}, J
	不大于 Not greater than											
HQ600MC	0.12	0.50	2.00	0.025	0.015	≤16	≥590	685～830	≥17	a≤10mm	d=2a	≥47
										a>10～16mm	d=3a	
HQ460	0.15	0.50	1.80	0.025	0.015	≤12	≥460	590～750	≥18	a≤12mm	d=2a	≥47
						>12～20	≥460	570～730	≥18	a>12～20mm	d=3a	

桥梁用钢
Bridge steel

牌号 Steel grade	化学成分，% Chemical composition						厚度 Thickness mm	拉伸试验 Tensile test			180° 弯曲试验 Bending test		冲击试验 Impact test		
	C	Si	Mn	P	S	Als		屈服强度 Yield strength MPa	抗拉强度 Tensile strength MPa	伸长率 Elongation %	钢材厚度 Thickness mm		纵向V型冲击 Vertical V impact		纵向V型时效冲击 Vertical V ageing impact J
				不大于 Not greater than									温度 Temperature ℃	J	
Q345qC	≤0.20	≤0.60	1.00～1.60	0.035	0.035		≤16	≥345	≥510	≥21	≤16	>16	0		
							>16～20	≥325	≥490	≥20					
Q345qD	≤0.18	≤0.60	1.10～1.60	0.025	0.025	≥0.015	≤16	≥345	≥510	≥21	d=2a	d=3a	-20	≥34	≥34
							>16～20	≥325	≥490	≥20					

标准与性能
Standard and properties

焊接气瓶用钢
Welded gas vessel steel

牌号 Steel grade	化学成分，% Chemical composition						拉伸试验 Tensile test			180° 弯曲试验 Bending test 弯心直径 Pin diameter b≥35mm
	C	Si	Mn	P	S	Als	下屈服强度 Lower yield strength MPa	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation %	
SG295	≤0.19	≤0.35	≤1.00	≤0.025	≤0.020	≥0.015	≥295	≥440	≥28	3.0a
HP295	≤0.19	≤0.10	≤1.00	≤0.025	≤0.020	≥0.015	≥315	460～560	≥28	2.0a

刃具用钢
Cutting tool steel

牌号 Steel grade	化学成分，% Chemical composition							
	C	Si	Mn	P	S	Ni	Cr	Cu
65Mn	0.62～0.70	0.17～0.37	0.90～1.20	≤0.030	≤0.030	≤0.25	≤0.25	≤0.20

合页用钢
Hinge steel

牌号 Steel grade	化学成分，% Chemical composition					下屈服强度 Lower yield strength MPa	抗拉强度 Tensile strength MPa	断后伸长率 Breaking elongation %
	C	Si	Mn	P	S			
AHYG	0.07～0.12	≤0.15	0.20～0.35	≤0.030	≤0.030	≥195	315～430	≥33

标准与性能
Standard and properties

尺寸、外形的允许偏差
Permissible deviation of dimension and outline

Q/ASB 269 热连轧钢板及钢带厚度允许偏差

Permissible thickness deviation of continuous hot rolled plate and strip

公称厚度 Nominal thickness mm	以下宽度时的厚度允许偏差，mm Permissible deviation of thickness that is less than，mm											
	PT.A				PT.B				PT.O			
	≤1200	>1200 ~1500	>1500 ~1800	>1800	≤1200	>1200 ~1500	>1500 ~1800	>1800	≤1200	>1200 ~1500	>1500 ~1800	>1800
≤1.5	±0.15	±0.17	—	—	±0.10	±0.12	±0.13	±0.13	±0.15	±0.17	—	—
>1.5~2.0	±0.17	±0.19	±0.21	±0.21	±0.11	±0.13	±0.13	±0.13	+0.15 −0.19	+0.17 −0.20	+0.18 −0.20	+0.19 −0.21
>2.0~2.5	±0.18	±0.21	±0.23	±0.25	±0.13	±0.13	±0.15	±0.15	+0.15 −0.21	+0.18 −0.22	+0.20 −0.25	+0.20 −0.27
>2.5~3.0	±0.19	±0.21	±0.24	±0.26	±0.15	±0.15	±0.15	±0.15	+0.16 −0.22	+0.18 −0.22	+0.20 −0.25	+0.20 −0.29
>3.0~4.0	±0.21	±0.23	±0.26	±0.27	±0.15	±0.15	±0.15	±0.15	+0.18 −0.24	+0.20 −0.24	+0.20 −0.27	+0.20 −0.34
>4.0~5.0	±0.24	±0.26	±0.28	±0.29	±0.15	±0.15	±0.15	±0.15	+0.18 −0.28	+0.20 −0.32	+0.20 −0.36	+0.20 −0.38
>5.0~6.0	±0.26	±0.28	±0.29	±0.31	±0.17	±0.19	±0.20	±0.21	+0.20 −0.32	+0.20 −0.36	+0.20 −0.38	+0.20 −0.42
>6.0~8.0	±0.29	±0.30	±0.31	±0.35	±0.22	±0.22	±0.23	±0.26	+0.20 −0.38	+0.20 −0.40	+0.20 −0.42	+0.25 −0.45
>8.0~10.0	±0.32	±0.33	±0.34	±0.40	±0.24	±0.26	±0.27	±0.30	+0.20 −0.44	+0.20 −0.46	+0.20 −0.48	+0.25 −0.55
>10.0~12.5	±0.35	±0.36	±0.37	±0.43	±0.26	±0.28	±0.30	±0.34	+0.20 −0.50	+0.20 −0.52	+0.20 −0.54	+0.25 −0.60
>12.5~15.0	±0.37	±0.38	±0.40	±0.46	±0.28	±0.30	±0.33	±0.36	+0.20 −0.54	+0.20 −0.56	+0.20 −0.60	+0.25 −0.67
>15.0~25.4	±0.40	±0.42	±0.45	±0.50	±0.30	±0.32	±0.36	±0.37	+0.20 −0.60	+0.20 −0.64	+0.20 −0.70	+0.25 −0.75

标准与性能
Standard and properties

尺寸、外形的允许偏差
Permissible deviation of dimension and outline

Q/ASB 269 热连轧钢板及钢带宽度允许偏差
Permissible width deviation of continuous hot rolled plate and strip

公称宽度 Nominal width mm	宽度允许偏差 Permissible width deviation mm		
	不切边（EM） mill edge		切边（EC） cut edge
	PWA	PWB	
800~2000	+20 0	+18 0	+3 0

Q/ASB 269 热连轧钢板长度允许偏差
Permissible length deviation of continuous hot rolled plate

钢板长度允许偏差为0～+5mm。
Permissible length deviation of plate is 0～+5mm.

Q/ASB 269 热连轧钢板的不平度规定
Unevenness of continuous hot rolled plate

厚度 Thickness mm	下列宽度的不平度值[a,b,c] Unevenness of the below width mm					
	≤1200		>1200～1500		>1500	
	PF.A	PF.B	PF.A	PF.B	PF.A	PF.B
≤2.0	18	18	20	20	25	20
>2.0～4.0	15	15	18	16	23	16
>4.0～6.0		14		14		14
>6.0～10.0		13		13		13
>10.0～25.4		12		12		12

[a] 表中值仅适用于钢板不适用于钢带。
The value in the table is only fit for the plate but not for strip.
[b] 当需方对钢带的不平度有要求时，在需方开卷设备保证质量的前提下，供需双方可以协商，并在合同中注明。
When there are no requirements on the unevenness from the demander and the uncoiling equipments of demander can guarantee the quality, the supplier and demander can negotiate and describe the negotiation in the contract.
[c] 当需方对钢带的不平度有异议时，表中值适用于进行充分平整操作后需方从钢带上切下的钢板。
When the demanders claim the unevenness of the plate, the value in the table is fit for edge cropped plate from the strip by demander after being parted and levelled.

标准与性能
Standard and properties

尺寸、外形的允许偏差
Permissible deviation of dimension and outline

Q/ASB 269 热连轧钢板及钢带的镰刀弯规定
Rocker of continuous hot rolled plate and strip

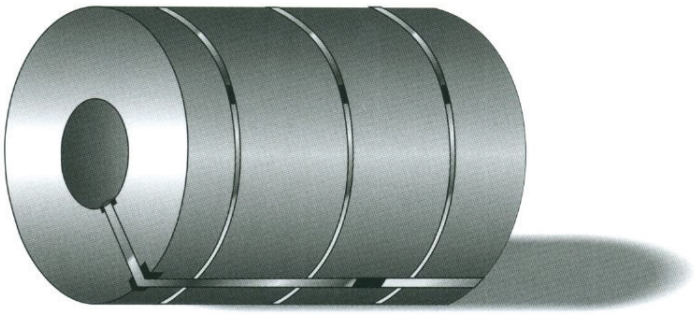
公称长度 Nomical length mm	钢板和钢带的镰刀弯 Rocker mm	
	不切边（EM） Mill edge	切边（EC） Cut edge
≤2500	3/2000	3
>2500~4000		5
>4000~6000		8
>6000		12
钢带	3/2000	—

Q/ASB 269 热连轧钢带的塔形规定
Ower of continuous hot rolled strip

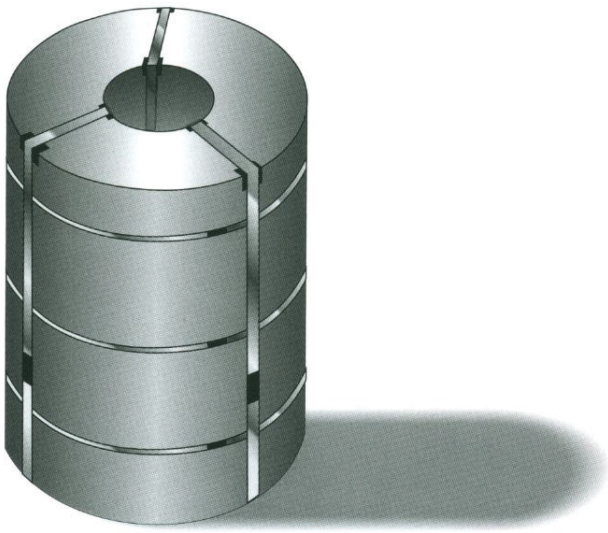
卷取质量 Coil quality	塔形高度 Column height mm
A	50
B	30

产品包装
Product packing

国内用直发卷或经分卷线钢卷
Coil that directly shipped domestically or parted

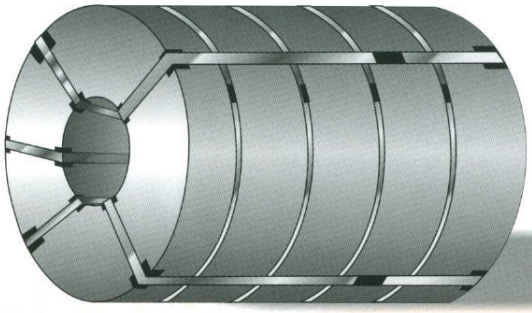


国内用直发卷
Coil that directly shipped domestically

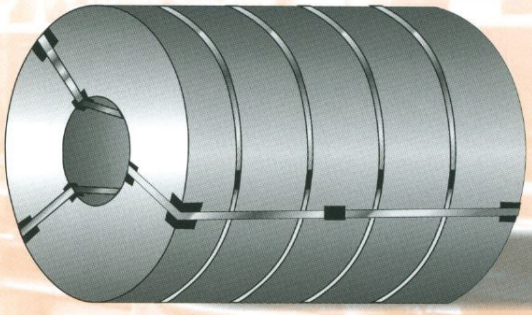


产品包装
Product packing

出口用直发卷或经分卷线钢卷
Coil that directly shipped for export or parted



高强钢钢卷
High strength steel coil



横切钢板
Crosscut steel plate

产品应用
Product application

供应西气东输一线、二线管道工程的X70、X80卷板20万吨以上
More than 200000 ton of X70 and X80 supplied for No. 1 and 2 pipeline projects of conveying gas from west to east.

在国内还参与忠武线、陕京二线、双兰线、甬-沪-宁、沿江管线、冀宁联络线、西南成品油、珠三角成品油管网、广东、福建LNG等40多条管线工程，累计销售300万吨
The accumulated sales volume is more than 3 million ton for more than 40 pipeline projects of Zhong Wu railway, two railways of Shaan and Jing, Shuang Lan railway, Shuang Lan railway, Yong- Hu-Ning, pipeline along the river, Ji-Ning tie line, finished oil pipeline in south west, finished oil pipeline network in Pearl River Delta, LNG in Guangdong and Fujiang.

管线用钢
Pipeline steel

川气出川管线工程17.5mm厚X70卷板30万吨
300000 ton of X70 coil with thickness of 17.5mm for pipeline project conveying Sichuan gas outside Sichuan.

管线产品还出口到苏丹、智利、伊朗、巴基斯坦、伊拉克、印度、土耳其等国，累计出口50万吨
The accumulated export is more than 500000 ton to Sudan, Chili, Iran, Pakistan, Iraq, India, Turkey and the like.

产品应用
Product application

集装箱用钢
Container steel

2007年实现集装箱用钢销售量超百万吨
Sales of container steel in 2007 are more than 1 million ton.

集装箱产品数量及质量名列全球热连轧集装箱用钢生产企业前矛
The volume and quality of container ranks first in the global container manufacture industry through continuous hot rolling.

可全规格覆盖并配套供应给集装箱制造行业
Ansteel can produce container steel with all specifications and supply matched set products to container manufacture industry.

开发强度更高、重量更轻的高强集装箱板AS600MC、AS7600MC，用于制造特种箱
Ansteel can develop higher and lighter high strength container of AS600MC and AS7600MC used to manufacture special containers.

产品应用
Product application

铁路耐候系列产品被广泛应用于制造铁路机车、客车、货车，销售量连续位居首位
The series of products are widely used to manufacture railroad locomotives, passenger car and truck and the sales volume ranks first successively.

为减轻车重，开发了高强耐候用钢Q450NQR1、Q550NQ51，用于制造大载重车
Ansteel has developed Q450NQR1 and Q550NQ51 to decrease the car weight to manufacture heavy autotuck.

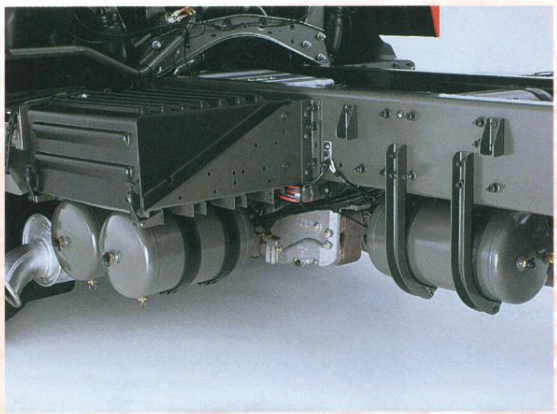
耐候用钢
Atmosphere corrosion resisting steel

用鞍钢材料制造的铁路特种车
The special vehicles produced by Ansteel steel .

产品应用
Product application

汽车用钢
Automotive steel

用鞍钢材料制造的载重汽车
The autotruck produced by Ansteel steel

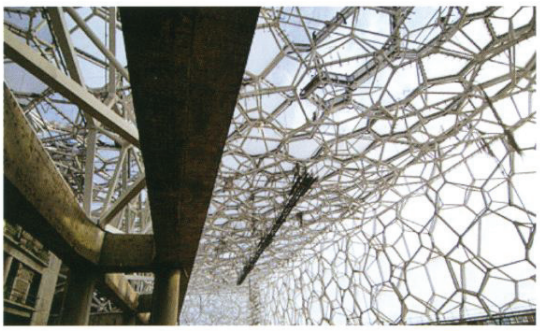


产品应用
Product application

润扬大桥
Runyang bridge

桥梁用钢
Bridge steel

苏通大桥
Nantong–Suzhou bridge

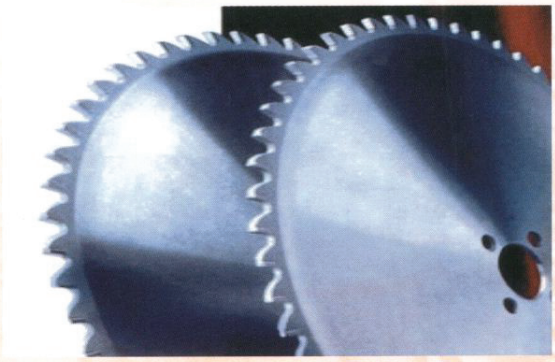


结构用钢
Constructional steel

奥运工程项目水立方
Water cube–Olympic project

产品应用
Product application

其它行业
Other industries



产品还被广泛应用于船舶、刃具、机械、磁性材料、冷成型等行业
The products have been widely used in the industries of ship, cutting tool, mechanical, magnetic material, cold froming and the like.

保证体系
Guarantee system

北京国金恒信管理体系认证有限公司
（中国冶金工业质量体系认证中心）
质量管理体系认证证书

兹证明
鞍钢股份有限公司
（地址：辽宁省鞍山市铁西区　　邮编：114021）
建立和实施了符合
GB/T19001-2000—ISO9001:2000
标准要求的质量管理体系。
该管理体系覆盖范围：
热轧钢板（带）系列；热轧中厚板系列；热轧型钢、重轨和钢还系列；热轧线材系列；冷轧薄钢板（带）系列；冷轧硅钢系列；连续热镀锌钢板（带）系列；彩色涂层钢板（带）系列；无缝钢管系列；焦化产品系列和能源动力产品系列的设计、开发、生产和服务。
注：覆盖范围有生产许可证要求的产品以生产许可证限定范围为准。

证书注册号：02206Q10095R3L
颁证日期：2006 年 7 月 12 日
换证日期：2006 年 10 月 9 日
有效期：2006 年 7 月 12 日至
2009 年 7 月 11 日
（授权代表）
国家认可注册号：CNAB022-Q

北京国金恒信管理体系认证有限公司
（中国冶金工业质量体系认证中心）
职业健康安全管理体系认证证书

兹证明
鞍钢股份有限公司
（地址：辽宁省鞍山市铁西区　　邮编：114021）
建立和实施了符合
GB/T28001—2001
标准要求的职业健康安全管理体系。
该管理体系覆盖产品范围：
热轧钢板（带）系列；热轧中厚板系列；热轧型钢、重轨和钢还系列；热轧线材系列；冷轧薄钢板（带）系列；冷轧硅钢系列；连续热镀锌钢板（带）系列；彩色涂层钢板（带）系列；无缝钢管系列；焦化产品系列和能源动力产品系列的生产、销售、支持性服务及相关的管理活动。
该管理体系覆盖地理范围：辽宁省鞍山市鞍钢厂区。
该管理体系覆盖工厂范围：化工总厂、炼铁总厂、第一炼钢厂、第二炼钢厂、第三炼钢连轧厂、无缝钢管厂、热轧带钢厂、冷轧厂、冷轧硅钢厂、中厚板厂、大型厂、线材厂、能源动力总厂（发电厂、供电厂、燃气厂、氧气厂、给水厂、计量厂）、冶金运输厂、原燃料加工储运中心、设备处、质量检验中心、技术中心。

证书注册号：02206S10013R1L
颁证日期：2006 年 7 月 12 日
换证日期：2006 年 10 月 9 日
有效期：2006 年 7 月 12 日至
2009 年 7 月 11 日
（授权代表）
国家认可注册号：CNAB022-S

北京国金恒信管理体系认证有限公司
（中国冶金工业质量体系认证中心）
环境管理体系认证证书

兹证明
鞍钢股份有限公司
（地址：辽宁省鞍山市铁西区　　邮编：114021）
建立和实施了符合
GB/T24001-2004—ISO14001:2004
标准要求的环境管理体系。
该管理体系覆盖产品范围：
热轧钢板（带）系列；热轧中厚板系列；热轧型钢、重轨和钢还系列；热轧线材系列；冷轧薄钢板（带）系列；冷轧硅钢系列；连续热镀锌钢板（带）系列；彩色涂层钢板（带）系列；无缝钢管系列；焦化产品系列和能源动力产品系列的生产、销售、支持性服务及相关的管理活动。
该管理体系覆盖地理范围：辽宁省鞍山市鞍钢厂区。
该管理体系覆盖工厂范围：化工总厂、炼铁总厂、第一炼钢厂、第二炼钢厂、第三炼钢连轧厂、无缝钢管厂、热轧带钢厂、冷轧厂、冷轧硅钢厂、中厚板厂、大型厂、线材厂、能源动力总厂（发电厂、供电厂、燃气厂、氧气厂、给水厂、计量厂）、冶金运输厂、原燃料加工储运中心、设备处、质量检验中心、技术中心。

证书注册号：02206E20016R1L
颁证日期：2006 年 7 月 12 日
换证日期：2006 年 10 月 9 日
有效期：2006 年 7 月 12 日至
2009 年 7 月 11 日
（授权代表）
国家认可注册号：CNAB022-E

认证证书
Certificates


DET NORSKE VERITAS
APPROVAL OF MANUFACTURER
CERTIFICATE

CERTIFICATE NO. AMM-3063

This is to certify that
No.3 Steelmaking and Hot Rolled Strip Plant of Angang Steel Co., Ltd.
ANSHAN 114021, China

is an approved manufacturer of
Steelmaking and Rolled Steel Products

in accordance with
Det Norske Veritas' Rules for Classification Pt. 2

and the following particulars:

Product	Slabs, Plates made from coils
Grades	Hull structural steels, see page 2
Steelmaking	Basic oxygen converter, continuous casting
Deoxidation	Killed
Fine grain elements	See page 2
Delivery conditions	See page 2
Max. thickness	See page 2

Place and date
Høvik, 2007-04-24
for DET NORSKE VERITAS AS

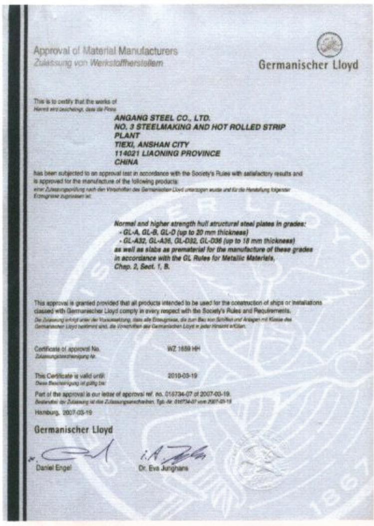
Hanne Anita Hjerpefjæen
Head of Section

Local Office
DNV Dalian

This Certificate is valid until
2011-06-30

Bjørn Inge Andersen
Surveyor

DET NORSKE VERITAS AS
Page 1 of 2


Approval of Material Manufacturers
Zulassung von Werkstoffherstellern

Germanischer Lloyd

This is to certify that the works of
Hiermit wird bescheinigt, dass die Firma

ANGANG STEEL CO., LTD.
NO. 3 STEELMAKING AND HOT ROLLED STRIP PLANT
TIEXI, ANSHAN CITY
114021 LIAONING PROVINCE
CHINA

has been subjected to an approval test in accordance with the Society's Rules with satisfactory results and is approved for the manufacture of the following products:

Normal and higher strength hull structural steel plates in grades:
- GL-A, GL-B, GL-D (up to 20 mm thickness)
- GL-A32, GL-A36, GL-D32, GL-D36 (up to 18 mm thickness)
as well as slabs as prematerial for the manufacture of these grades in accordance with the GL Rules for Metallic Materials, Chap. 2, Sect. 1, B.

This approval is granted provided that all products intended to be used for the construction of ships or installations classed with Germanischer Lloyd comply in every respect with the Society's Rules and Requirements.

Certificate of approval No. WZ 1659 HH

This Certificate is valid until 2010-03-19

Part of the approval is our letter of approval ref. no. 016734-07 of 2007-03-19.

Hamburg, 2007-03-19

Germanischer Lloyd

Daniel Engel
Dr. Eva Junghans


APPROVAL CERTIFICATE FOR MANUFACTURING PROCESS
제 조 법 승 인 증 서

Certificate No. : DLN20162-SP001 **Date of Approval** : 15th January, 2007.
Product : Rolled Steels
Manufacturer : No.3 Steelmaking and Hot rolled strip plant of Angang Steel Co., Ltd. Tiexi, Anshan, Liaoning Province, China

Product Description : Hot Rolled Strips and Plates for Hull Structure
- Grade : RA, RB, RD, RA32, RD32, RA36, RD36
* Supply condition : See "Appendix 1"

Approval Condition : Product Certification is required.

THIS IS TO CERTIFY that the manufacturing process for the above mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturer and Type Approved Equipment".
Pt. 2, Ch. 1, Sec. 3, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 14th January, 2012.
Issued at Daejeon, Korea on 15th January, 2007.

한 국 선 급
KOREAN REGISTER OF SHIPPING

Moon-Kyu Park
General Manager of Materials and Equipment Team

AC-1A(2004.02)

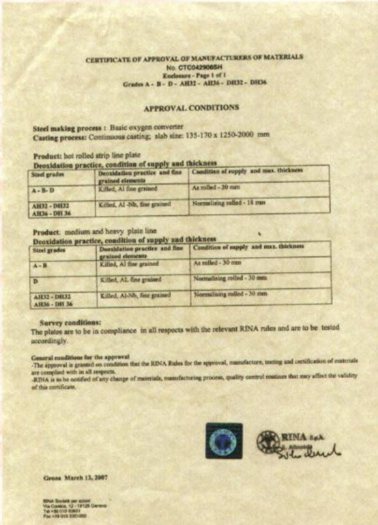

Certificate No : MD00/3301/0001/1
Appendix 1
ANGANG STEEL COMPANY LIMITED
2150 HOT ROLLED STRIP PLANT
Tiexi District
Anshan City
Liaoning Province
China, People's Republic of

Steelmaking	**B.O.S. / Con Cast**	**Grades** As below	
Plates	**Normal Strength**	**Grades**	**mm thickness Maximum**
As Rolled	Fine Grain Al	A, B, D	20.0
Plates	**Higher Strength**	**Grades**	**mm thickness Maximum**
Normalising Rolled	Fine Grain Al+Nb	AH27S, AH32, AH36, DH27S, DH32, DH36, EH27S, EH32, EH36	20.0
Plates	**Boiler & Pressure Vessel**	**Grades**	**mm thickness Maximum**
Normalising Rolled	Fine Grain Al+Nb	360FG, 410FG, 460FG, 490FG, 510FG	20.0

Valid Until : 04 January 2010
Date of Issue : 16 January 2007

J R Coupland
Lead Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register Group

Lloyd's Register


CERTIFICATE OF APPROVAL OF MANUFACTURERS OF MATERIALS
No. CTC042906SH
Enclosure - Page 1 of 1
Grades A - B - D - AH32 - AH36 - DH32 - DH36

APPROVAL CONDITIONS

Steel making process : Basic oxygen converter
Casting process: Continuous casting; slab size: 135-170 x 1250-2000 mm

Product: hot rolled strip line plate
Deoxidation practice, condition of supply and thickness

Steel grades	Deoxidation practice and fine grained elements	Condition of supply and max. thickness
A - B - D	Killed, Al fine grained	As rolled - 20 mm
AH32 - DH32 AH36 - DH 36	Killed, Al -Nb, fine grained	Normalising rolled - 18 mm

Product: medium and heavy plate line
Deoxidation practice, condition of supply and thickness

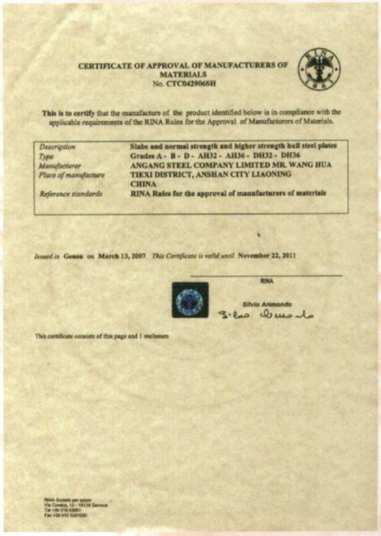
Steel grades	Deoxidation practice and fine grained elements	Condition of supply and max. thickness
A - B	Killed, Al fine grained	As rolled - 30 mm
D	Killed, AL fine grained	Normalising rolled - 30 mm
AH32 - DH32 AH36 - DH 36	Killed, Al-Nb, fine grained	Normalising rolled - 30 mm

Survey conditions:
The plates are to be in compliance in all respects with the relevant RINA rules and are to be tested accordingly.

General conditions for the approval
-The approval is granted on condition that the RINA Rules for the approval, manufacture, testing and certification of materials are complied with in all respects.
-RINA is to be notified of any change of materials, manufacturing process, quality control routines that may affect the validity of this certificate.

RINA S.p.A.

Genoa March 13, 2007


CERTIFICATE OF APPROVAL OF MANUFACTURERS OF MATERIALS
No. CTC042906SH

This is to certify that the manufacture of the product identified below is in compliance with the applicable requirements of the RINA Rules for the Approval of Manufacturers of Materials.

Description	**Slabs and normal strength and higher strength hull steel plates**
Type	**Grades A - B - D - AH32 - AH36 - DH32 - DH36**
Manufacturer	**ANGANG STEEL COMPANY LIMITED MR. WANG HUA**
Place of manufacture	**TIEXI DISTRICT, ANSHAN CITY LIAONING CHINA**
Reference standards	**RINA Rules for the approval of manufacturers of materials**

Issued in **Genoa** on **March 13, 2007**. *This Certificate is valid until* **November 22, 2011**

RINA
Silvio Arimondo

This certificate consists of this page and 1 enclosure

认证证书
Certificates

APPROVAL CERTIFICATE for MATERIALS

Angang Steel Company Limited
Anshan - CHINA

SEMI-FINISHED PRODUCTS

This certificate is valid until : 16 Feb 2012

APPROVAL CERTIFICATE for MATERIALS

Angang Steel Company Limited
Anshan - CHINA

NORMAL STRENGTH HULL STEEL ROLLED PRODUCTS

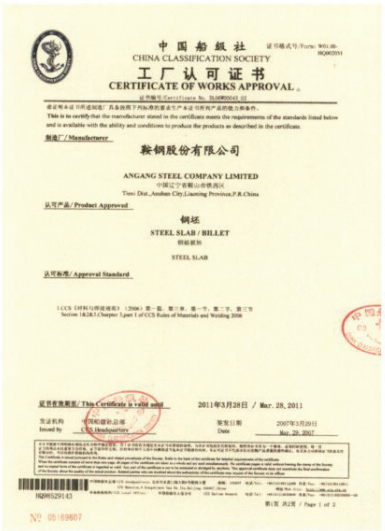
This certificate is valid until : 16 Feb 2012

APPROVAL CERTIFICATE for MATERIALS

Angang Steel Company Limited
Anshan - CHINA

HIGHER STRENGTH HULL STEEL ROLLED PRODUCTS

This certificate is valid until : 16 Feb 2012



中国船级社
CHINA CLASSIFICATION SOCIETY
工厂认可证书
CERTIFICATE OF WORKS APPROVAL

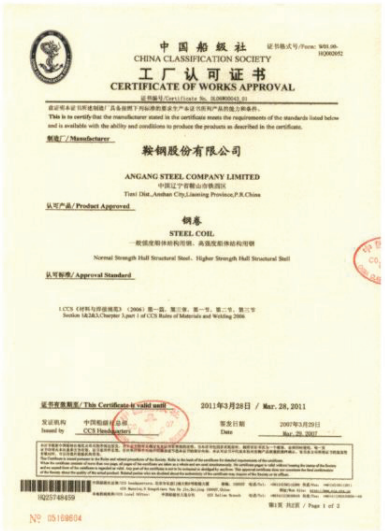
This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products as described in the certificate.

制造厂 / Manufacturer
鞍钢股份有限公司
ANGANG STEEL COMPANY LIMITED

认可产品 / Product Approved
钢坯
STEEL SLAB / BILLET

认可标准 / Approval Standard

证书有效期至 / This Certificate is valid until 2011年3月28日 / Mar. 28, 2011



中国船级社
CHINA CLASSIFICATION SOCIETY
工厂认可证书
CERTIFICATE OF WORKS APPROVAL

This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products as described in the certificate.

制造厂 / Manufacturer
鞍钢股份有限公司
ANGANG STEEL COMPANY LIMITED

认可产品 / Product Approved
钢卷
STEEL COIL

认可标准 / Approval Standard

证书有效期至 / This Certificate is valid until 2011年3月28日 / Mar. 28, 2011

用户至上 合作共赢

Centering on the customers Cooperating to obtain win–win

公司本部

鞍钢股份有限公司市场营销部
地址：辽宁省鞍山市铁东区团结街42号
电话：0412-6721410、6722255
传真：0412-6310922
邮编：114002
网址：http://www.ansteel.com.cn
免费服务热线:800-890-0858

Marketing Department of ANGANG STEEL COMPANY LIMITED
ADD: No. 42, Tuanjie Street, Tiedong District, Anshan City, Liaoning Province, PRC
TEL: 0412-6721410、6722255
FAX: 0412-6310922
PC: 114002
Website: http://www.ansteel.com.cn
Free service telephone: 800-890-0858

国内贸易分公司

鞍钢国际贸易有限公司东北分公司
地址：沈阳市和平区总站路121号C座一单元
电话：024-22504022 传真：024-22504022

鞍钢国际贸易有限公司华南分公司
地址：广州市增城凤凰城凤鸣苑3街1号
电话：020-82804767 传真：020-82804737

鞍钢集团国际经济贸易公司现货钢材销售分公司
地址：鞍山市中华南路261号
电话：0412-6733390 传真：0412-6733390

鞍钢国际经济贸易公司华北分公司
地址：天津市河东区八纬路积善里3-4-305
电话：022-24210067 传真：022-24210050

鞍钢国贸有限公司西部分公司
地址：成都市蜀汉路新天地公寓
电话：028-87572067 传真：028-87572067

鞍钢国际贸易公司华东分公司
地址：上海市东方路1998号华南大厦402室
电话：021-61624031 021-61624032 传真：021-61624130 021-61624083

亚澳地区 Asia and Australia

鞍钢集团日本株式会社
Angang group Japan Co., Limited
Addr：Room 405, Higobashi I P Building, 1-18-35, Edoborl, Nishl-Ku, Osaka, 550-0002, Japan.
TEL：0081-6-64799711 FAX：0081-6-64799708

鞍钢集团韩国有限公司
Angang Group Korea Co., Limited
Addr：Rm 606, SeungJi Haizh No.1, 702-13, Yeoksam-Dong, Kangnam-Gu, Seoul, Korea.
TEL：0082-25568390 FAX：0082-25568391

鞍钢澳大利亚有限公司
Ansteel Australia Pty Ltd
Addr：Level 1, St George Square, 225 St George Terrace, Perth, WA 6000
TEL：0061-894851706 FAX：0061-894851709

美洲地区 America

鞍钢美国有限公司
Angang Ameica, Inc
Addr：8th, Two Tower Center, East Brunswick, New Jersey, NJ 08816
TEL：001-2015195103 FAX：001-7322389259

欧洲地区 Europe

鞍钢欧洲有限公司
Ansteel Europe GMBH
Addr：Graf Adolf Platz 15, 40213 Dusseldorf, Germany.
TEL：0049-211-38548710 FAX：0049-211-38548716

鞍鋼股份有限公司
ANGANG STEEL COMPANY LIMITED*

(a joint stock limited company incorporated in the People's Republic of China with limited liability)

(Stock Code: 347)

RESOLUTIONS PASSED AT THE THIRTY-THIRD MEETING OF THE FIFTH SESSION OF THE BOARD OF DIRECTORS

The Company and its directors confirm the truthfulness, accuracy and completeness of the information disclosed and that there are no misrepresentations or misleading statements in, or material omissions from, this announcement.

Notice of the thirty-third meeting of the fifth session of the board of directors (the "**Board**") of Angang Steel Company Limited*（鞍鋼股份有限公司）(the "**Company**") was given in writing and by fax on 12 March 2012. The meeting was held at the conference room of Angang Dongshan Hotel on 27 March 2012. All eight directors of the Company attended the meeting in person or by proxy. Mr. Kwong Chi Kit, Victor, an independent non-executive director, was unable to attend the meeting in person due to other work commitments. Mr. Kwong appointed Mr. Ma Guoqiang, an independent non-executive director, to exercise the voting right on his behalf. The supervisors of the Company also attended the meeting as non-voting participants. The Meeting was convened in compliance with the relevant provisions of the Company Law of the PRC and the articles of association of the Company. At the meeting, the following resolutions were passed by unanimous affirmative votes upon discussions:

I. The report of the board of directors for 2011 was approved.

The report will be submitted for consideration and approval at the annual general meeting for the year of 2011 of the Company (the "**2011 AGM**").

II. The 2011 annual report and its summary were approved.

III. The audited financial report for 2011 was approved.

The report will be submitted for consideration and approval at the 2011 AGM.

IV. The proposed plan in relation to the distribution of profits for 2011 was approved.

As audited and confirmed by RSM China Certified Public Accountants (Special General Partnership), the Company recorded a net loss of RMB2,146 million attributable to shareholders of the Company for the year 2011 in accordance with the PRC Accounting Standards. As the Company recorded a loss, pursuant to the PRC laws and regulations and the articles of association of the Company, the Company would not make allocation to surplus reserve nor recommend any profit distribution or transfer of reserve to share capital for 2011.

This distribution proposal will be submitted for the shareholders' consideration and approval at the 2011 AGM.

V. The proposal in relation to the remunerations of the directors and senior management for 2011 was approved.

The independent non-executive directors of the Company are of the opinions that the Proposal in relation to the Remunerations of the Directors and Senior Management of the Company for 2011 prepared by the Board is consistent with the performance of the Company and the level of remuneration offered by other similar enterprises in the PRC, and have approved such proposal.

Details of the Proposal in relation to the Remunerations of the Directors and Senior Management of the Company for 2011 will be set out in the 2011 annual report of the Company.

The proposal will be submitted for the shareholders' consideration and approval at the 2011 AGM.

VI. The proposal in relation to the continuing connected transactions for 2011 was approved. Zhang Xiaogang and Yu Wanyuan, being the directors associated with the relevant connected persons, abstained from voting on this proposal.

The Company's continuing connected transactions of the year 2011 were carried out in accordance with the terms of Supply of Materials and Services Agreement (2010-2011) which was approved by the shareholders of Company at the extraordinary general meeting held on 28 December 2009. The total amount of the continuing connected transactions carried out in 2011 did not exceed the related caps.

The independent non-executive directors have confirmed:

1. the continuing connected transactions of the Company in 2011 were carried out in the ordinary course of business of the Company;

2. the continuing connected transactions of the Company in 2011 were conducted (a) in accordance with the normal commercial terms (with reference to transactions of a similar nature made by similar entities in the PRC); (b) on terms no less favourable to the Group than the terms available to or offered by the third parties (if no comparable case is available); (c) on the terms which are fair and reasonable to shareholders of the Company (if no reference case is available);

3. the continuing connected transactions of the Company in 2011 were conducted in accordance with the terms set out in Supply of Materials and Services Agreement (2010-2011) between the Company and Anshan Iron & Steel Complex*（鞍山鋼鐵集團公司）("**Angang Holding**") dated 27 October 2009, and on the terms which are fair and reasonable and in the interest of the Company and shareholders as a whole; and

4. the total amount of continuing connected transactions of the Company did not exceed the relevant applicable caps as specified under the Supply of Materials and Services Agreement (2010 to 2011).

VII. The proposal in relation to the continuing connected transactions in January and February 2012 was approved. Zhang Xiaogang and Yu Wanyuan, the directors associated with the relevant connected persons, abstained from voting.

As the Supply of Materials and Services Agreement (2012-2013) entered into between the Company and Angang Group Company*（鞍鋼集團公司）on 11 October 2011 has not been approved at the extraordinary general meeting of the Company held on 19 December 2011, in order to ensure normal operation of the Company, the Board approved the amount of continuing connected transactions of the Company in January and February 2012 in accordance with the requirements of the Shenzhen Stock Exchange.

The total amount of the continuing connected transactions conducted between the Company and Angang Group Company in January and February 2012 was RMB5,673 million, representing 10.85% of the audited net assets of the Company for 2011 (being RMB52,305 million).

The proposal remains subject to the approval of the shareholders of Company at the general meeting. Connected persons who have an interest in such connected transactions will abstain from voting on the proposal at the general meeting.

The Company has been actively negotiating with Angang Group Company on the terms of the new Supply of Materials and Services Agreement (2012-2013). Upon the determination of such terms, the Company will fulfill its obligations regarding the approval of and disclosure such new Supply of Materials and Services Agreement (2012-2013) as soon as possible.

Prior to obtaining shareholders' approval of the new Supply of Materials and Services Agreement (2012-2013), the Company will carry out the continuing connected transactions with Angang Group Company and its subsidiaries ("**Angang Group**") pursuant to the pricing principles and other relevant terms as set out in the Supply of Materials and Services Agreement (2010-2011).

Subject to the execution of the new Supply of Materials and Services Agreement (2012-2013) between the Company and Angang Group Company and the obtaining of the approval from the independent shareholders of the Company, the Company will make retrospective adjustments to the terms of the relevant continuing connected transactions entered into during the period from 1 January 2012 to the date on which the new Supply of Materials and Services Agreement (2012-2013) becomes effective pursuant to the terms of the new Supply of Materials and Services Agreement (2012-2013).

Details of the continuing connected transactions carried out by the Company and Angang Group in January and February 2012 are set out below:

Category of connected transactions	**Sub-category by products or services**	**Amount**		**% in the amount of the same type of transactions**
		January to February 2012	**2011**	
		(RMB' million)	*(RMB' million)*	
Purchase or acceptance of services	Principal raw materials	3,115	18,152	50.35
	Ancillary materials	232	1,595	14.02
	Energy and power	208	1,772	30.60
	Support services	772	6,290	52.94
	Total	4,327	27,809	—
Sales or provision of services	Products	1,248	8,452	9.55
	Minus Sieve powder, scrap steel and abandoned materials	37	211	95.18
	Comprehensive services	61	573.4	37.24
	Total	1,346	9,236.4	—

Such connected transactions have been reviewed and approved by independent non-executive directors of the Company. They have also approved to submit the above proposal to the Board for its consideration. Upon due and careful review, the independent non-executive directors expressed their independent opinions in respect of such transactions as follows:

1. the directors associated with the relevant connected persons abstained from voting in respect of the proposal at the Board meeting. The voting procedures are in compliance with relevant laws, regulations and requirements of the Articles of Association, while the connected transactions are entered into on the basis of the principle of fairness and justice and in compliance with statutory procedures.

2. The continuing connected transactions of the Company from January to February 2012 were carried out (a) in the ordinary course of business of the Company; (b) on normal commercial terms or terms no less favourable than the terms offered by an independent third party or (if no comparable is available) on terms which are fair and reasonable to shareholders of the Company; (c) on terms which are fair and reasonable to and in the interest of the shareholders of the Company as a whole, without prejudice to the interests of independent shareholders and minority shareholders; (d) in line with the actual conditions of the Company in terms of the amount of continuing connected transactions from January to February 2012 and beneficial to the normal operation of the Company.

The proposal will be submitted for the shareholders' consideration and approval at the 2011 AGM. Connected persons who are interested in the connected transactions will abstain from voting on the proposal at the general meeting.

Further details are set out in the announcement of the Company regarding the continuing connected transactions from January to February 2012 which will be published as an overseas regulatory announcement on the websites of the Company and The Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange") respectively.

VIII. The proposal in relation to the appointment of RSM China Certified Public Accountants (Special General Partnership) as the auditor of the Company for 2012, and the authorization to the Board to determine its remuneration were approved.

The proposal in relation to the re-appointment of RSM China Certified Public Accountants (Special General Partnership) as the auditor of the Company for 2012, will be submitted by the Board for the Shareholders' consideration and approval at the 2011 AGM.

The total auditing fees payable by the Company to RSM China Certified Public Accountants (Special General Partnership) and RSM Nelson Wheeler Certified Public Accountants for 2011 amounted to RMB6.1 million.

IX. The proposal in relation to self-assessment report on internal control for 2011 was approved.

Opinions of independent non-executive directors:

Pursuant to the relevant domestic and overseas regulations, the Company has carefully reviewed the efficiency of its internal control systems in 2011. Upon review, the Board has issued the self-assessment report on internal control. Upon careful review of the report and the relevant information, we are of the view that, the self-assessment on internal control of the Company has objectively and truly reflected the conditions of internal control of the Company. It has also disclosed the information on the important activities in respect of the establishment of internal control systems and the measures taken on key areas in 2011.

The self-assessment report on internal control for 2011 will be published as an overseas regulatory announcement on the websites of the Company and the Hong Kong Stock Exchange respectively.

X. The proposal in relation to the corporate social responsibility report for 2011 was approved.

The Corporate Social Responsibility Report for 2011 of the Company will be published as an overseas regulatory announcement on the websites of the Company and the Hong Kong Stock Exchange respectively.

XI. The proposal in relation to amendments to the articles of association of the Company was approved.

The Board has proposed to delete the relevant articles relating to the preparation of financial statements under the International Accounting Standards from the articles of association of the Company. Details of the proposed amendments are as follows:

Original Article 232:

"The financial statements of the Company shall be prepared not only in accordance with the PRC accounting standards, laws and regulations but also in accordance with the international accounting standards or the accounting standards of the jurisdiction outside the PRC where the Company's shares are listed. If there are major discrepancies between the financial statements prepared in accordance with these two types of accounting standards, such discrepancies shall be indicated in the notes to the financial statements. When distributing the after-tax profit for the related accounting year, the Company shall adopt whichever is the lower of the after-tax profit in financial statements (i) prepared under the PRC accounting standards and rules and regulations of the PRC or (ii) prepared under the international accountings standards or the accounting standards of the jurisdiction outside the PRC where the Company's shares are listed.''

Amended as:

"The Company's financial statements shall be prepared under the Accounting Standards for Business Enterprises in the PRC."

Original Article 233:

"Any interim results or financial information published or disclosed by the Company shall not only be prepared in accordance with the PRC accounting standards, laws and regulations of the PRC, but also in accordance with the international accountings standards or the accounting standards of the jurisdiction outside the PRC where the Company's shares are listed.''

Amended as:

"Any interim results or financial information published or disclosed by the Company shall be prepared in accordance with the Accounting Standards for Business Enterprises in the PRC. The proposal will be submitted for the shareholder's consideration and approval at the 2011 AGM."

XII. **The proposal in relation to the administrative system for registration of persons with inside information was approved.**

Pursuant to the Requirements for the Establishment of Administrative System for Registration of Persons with Inside Information of Listed Companies* (《內幕信息知情人登記管理制度》) stipulated by China Securities Regulatory Commission, the Company has formulated a new Administrative System for Registration of Persons with Inside Information which shall be implemented from the date on which it is considered and approved by the Board of the Company. The original Administrative System for Registration of Persons with Inside Information and the Administrative System for External Information Users* (《外部信息使用人管理制度》) were repealed at the same time.

The new Administrative System for Registration of Persons with Inside Information will be published as an overseas regulatory announcement on the websites of the Company and the Hong Kong Stock Exchange respectively.

XIII. **The proposal in relation to the amendments to the terms of reference of each of the remuneration and appraisal committee, the nomination committee and the audit committee was approved.**

Pursuant to the revised Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Hong Kong Listing Rules"), the Board has approved to amend the terms of reference of each of the remuneration and appraisal committee, the nomination committee and the audit committee. The respective revised terms of reference shall be effective upon the approval of the Board.

The revised terms of reference of each of the remuneration and appraisal committee, the nomination committee and the audit committee will be published on the websites of the Company and the Hong Kong Stock Exchange respectively.

XIV. **The proposal in relation to the adoption of the revised code on corporate governance practices issued by the Hong Kong Stock Exchange was approved.**

The Board has approved to adopt revised Code on Corporate Governance Practices issued by the Hong Kong Stock Exchange as its new code of governance.

XV. **The proposal in relation to the changes in the members of the committees of the Board was approved.**

Pursuant to the revised Hong Kong Listing Rules, the members of the remuneration and appraisal committee, the nomination committee and the audit committee of the fifth session of the Board are changed as follows:

(1) Remuneration and Appraisal Committee

Chairman: Kwong Chi Kit, Victor
Members: Yang Hua, Li Shijun and Ma Guoqiang

(2) Nomination Committee

Chairman: Li Shijun
Members: Zhang Xiaogang, Ma Guoqiang and Kwong Chi Kit, Victor

(3) Audit Committee

Chairman: Ma Guoqiang
Members: Li Shijun and Kwong Chi Kit, Victor

XVI. The Proposal in Relation to Convening of the 2011 AGM was approved.

It is approved to convene the 2011 AGM on 29 May 2012.

The notice of 2011 AGM and the annual report of the Company will be published and delivered by the Company in due course.

By Order of the Board
ANGANG STEEL COMPANY LIMITED*
Fu Jihui
Executive Director and Secretary to the Board

Anshan City, Liaoning Province, the PRC,
27 March 2012

As at the date of this announcement, the Board comprises the following directors:

Executive Directors:
Zhang Xiaogang
Yang Hua
Chen Ming
Yu Wanyuan
Fu Jihui

Independent Non-Executive Directors:
Li Shijun
Ma Guoqiang
Kwong Chi Kit, Victor

* *For identification purposes only*

鞍鋼股份有限公司
ANGANG STEEL COMPANY LIMITED*

(a joint stock limited company incorporated in the People's Republic of China with limited liability)

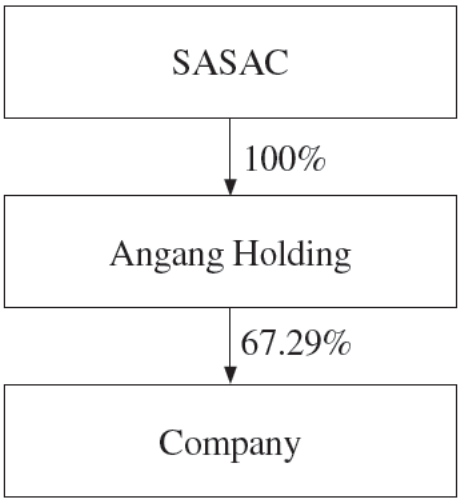
(Stock Code: 347)

RESTRUCTURING OF ANGANG HOLDING AND RESUMPTION OF TRADING

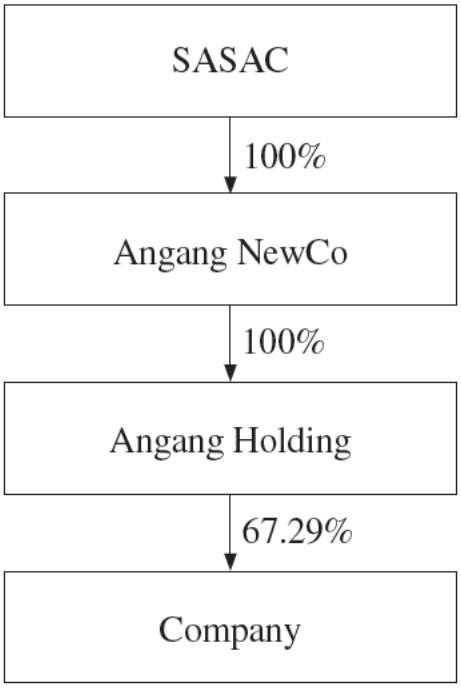
This announcement is made pursuant to Rule 13.09 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited.

The Company is notified by its controlling shareholder, Anshan Iron & Steel Group Complex*（鞍山鋼鐵集團公司）("**Angang Holding**") on 21 May 2010, that Angang Holding has received a notice from the State-owned Assets Supervision and Administration Commission of the State Council*（國務院國有資產監督管理委員會）("**SASAC**") which states that SASAC has agreed to the joint restructuring of Angang Holding and Panggang Group Company Limited*（攀鋼集團有限公司）("**Panggang Group**") (the "**Joint Restructuring**"). The Joint Restructuring entails the establishment by SASAC (as the representative of the State Council) of a new company, Angang Group Company*（鞍鋼集團公司）("**Angang NewCo**"), which will wholly own Angang Holding and Panggang Group.

Upon completion of the Joint Restructuring, there will be no change to the ultimate beneficial owner and the immediate controlling shareholder of the Company, being SASAC and Angang Holding, respectively. The current structure of Angang Holding is as follows:



The structure of Angang Holding upon completion of the Joint Restructuring will be as follows:



Trading in the shares of the Company ("**Shares**") on The Stock Exchange of Hong Kong Limited (the "**Stock Exchange**") was suspended at the request of the Company with effect from 10:23 a.m. on 24 May 2010, pending release of this announcement. Application has been made to the Stock Exchange for the resumption of trading in the Shares with effect from 9:30 a.m. on 26 May 2010.

As of the date of this announcement, Angang NewCo has not yet been established. The Company will make further announcement(s) in respect of the progress of the Joint Restructuring when further information is available.

The Company envisages that a waiver application will be made to the Executive Director of the Corporate Finance Division of the Securities and Futures Commission in respect of any mandatory general offer obligation which would otherwise arise under Rule 26 of the Code on Takeovers and Mergers as soon as possible.

By Order of the Board
Fu Jihui
Executive Director and Secretary to the Board

Anshan City, Liaoning Province, the PRC.
25 May 2010

The directors of the Company jointly and severally accept full responsibility for the accuracy of the information contained in this announcement and confirm, having made all reasonable enquiries, that to the best of their knowledge, opinions expressed in this announcement have been arrived at after due and careful consideration and there are no other facts not contained in this announcement, the omission of which would make any statement in this announcement misleading.

As at the date of this announcement, the Board comprises the following directors:

Executive Directors:
Zhang Xiaogang
Yang Hua
Chen Ming
Yu Wanyuan
Fu Jihui

Independent Non-Executive Directors:
Li Shijun
Ma Guoqiang
Liu Wei
Kwong Chi Kit, Victor

* *For identification purposes only*

Non-confidential attachment MS 6

北京嘉源律师事务所

JIA YUAN LAW FIRM

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关于反垄断审查结果的说明

Statement on the anti-trust investigation

敬启者：

本律师事务所接受鞍山钢铁集团公司（以下简称“鞍钢集团”）和攀钢集团有限公司（以下简称“攀钢集团”）的委托，为鞍钢集团和攀钢集团重组合并（以下简称“本次重组”）涉及的经营者集中反垄断审查事项提供专项法律服务。现相关申报工作已经结束，本律师事务所对本次反垄断审查的申报过程和审查结果做以下说明：

We hereby are authorized by Anshan Iron and Steel Group Complex("Angang Group") and Pangang Group, to provide legal service on the anti-trust issues incurred during their merger.

一、 本律师事务所自 2010 年 8 月起，接受鞍钢集团和攀钢集团的委托，开始准备本次重组涉及的反垄断审查的相关申报材料，并于 2010 年 11 月 29 日正式向商务部反垄断局提交申报文件，于 2011 年 1 月 5 日提交补充申报文件（一）；

二、 商务部反垄断局收到本律师事务所代理提交的反垄断审查申报文件和补充申报文件后，认为文件、资料符合法律规定并符合审查要求，因此于 2011 年 1 月 11 日向申报方鞍钢集团和攀钢集团出具《立案通知》（商反垄立案函[2011]第 3 号），决定对本次重组涉及的反垄断审查案予以立案；

三、 本次重组涉及的反垄断审查经商务部反垄断局立案后，鞍钢集团、攀钢集团及本律师事务所均确认，自 2011 年 1 月 11 日至 2011 年 2 月 11 日，未收到商务部反垄断局针对本次重组涉及的反垄断审查案作出的任何初步审查或是/否实施进一步审查的书面决定；

四、 根据《中华人民共和国反垄断法》的规定：国务院反垄断执法机构应当自收到经营者提交的符合规定的文件、资料之日起三十日内，对申报的经营者集中进行初步审查，作出是否实施进一步审查的决定，并书面通知经营者；国务院反垄断执法机构作出不实施进一步审查的决定或者逾期未作出决定的，经营者可以实施集中；

五、 经本律师事务所与商务部反垄断局沟通，其表示鞍钢集团和攀钢集团的重组不构成市场垄断，不需要进行进一步审查，但考虑到本次重组的进程，商务部反垄断局决定不针对本审查案出具书面决定，重组双方在立案之日起满三十日后即可继续进行重组活动；

六、 根据上述事实和法律规定，本律师事务所认为：

1、 本次反垄断审查的立案之日（即 2011 年 1 月 11 日）为经营者提交符合规定的文件、资料之日，商务部反垄断局应当自该日起三十日内作出是否实施进一步审查的决定，并书面通知鞍钢集团和

According to the above facts and regulations of laws, our law firm reach the below conclusion:

1. The applicant should submit qualified documents on the date that the anti-trust investigation was initiated(Jan. 11, 2011). The Anti-trust Bureau of Deparment of Commerce shall make the decision on whether to conduct a further investigation within 30 days since the initiation date, and inform Angang Group and Pangang Group in writing.

2. As confirmed by both parties and our law firm, we don't receive any notice or decision in writing within 30 days since the initiation date.

3. Thus, according to the above facts and relevant regulations of laws, Angang Group and Pangang Group could confirm that they have passed the anti-trust investigation and the merger has been approved to proceed.

攀钢集团，逾期未作出决定的，本次重组双方可以实施集中；

2、 经本次重组双方及本律师事务所确认，在本次反垄断审查立案之日起三十日内，未收到商务部反垄断局的任何书面通知、决定；

3、 鞍钢集团和攀钢集团可以依据上述事实和相关法律确认本次重组已经通过关于经营者集中的反垄断审查，可以依法实施集中。

本说明仅针对本次重组涉及的经营者集中反垄断审查做出，依据为相关事实和法律法规。

此致

北京市嘉源律师事务所

2011 年 2 月 17 日

NOTE: ***********There is no export duty for hot roll steel.*****************

Tariff code	Commodity name and Note	Import duty rate / VAT rate / Export VAT refund rate					
商品编号	商品名称及备注	进口关税税率（%）		增值税率（%）	出口退税率（%）	计量单位	监管条件
		最惠国	普通				
7207200000	含碳量≥0.25%的钢坯	2	11	17	0	千克	
7208	宽度≥600毫米的铁或非合金钢平板轧材，经热轧，但未经包覆、镀层或涂层						
7208100000	轧有花纹的热轧卷材（除热轧外未进一步加工的）	5	14	17	0	千克	A
7208250000	厚度≥4.75毫米的其他经酸洗的热轧卷材（除热轧外未进一步加工，宽≥600毫米，未包、镀、涂层）	5	14	17	0	千克	A
7208261000	4.75毫米＞厚度≥3毫米的其他大强度热轧卷材（经酸洗，宽度≥600毫米，屈服强度＞355牛顿/平方毫米）	5	14	17	0	千克	A
7208269000	其他4.75毫米＞厚度≥3毫米的热轧卷材（经酸洗，宽度≥600毫米，屈服强度≤355牛顿/平方毫米）	5	14	17	0	千克	A
7208271000	厚度＜1.5毫米的其他热轧卷材（经酸洗，宽度≥600毫米，未包、镀、涂层）	5	14	17	0	千克	A
7208279000	1.5毫米≤厚度＜3毫米其他的热轧卷材（经酸洗，宽度≥600毫米，未包、镀、涂层）	5	14	17	0	千克	A
7208360000	厚度＞10毫米的其他热轧卷材（除热轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	14	17	0	千克	A
7208370000	10毫米≥厚度≥4.75毫米的其他热轧卷材（除热轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	5	14	17	0	千克	A
7208381000	4.75毫米＞厚度≥3毫米的大强度卷材（宽度≥600毫米，屈服强度＞355牛顿/平方毫米）	5	14	17	0	千克	A
7208389000	其他4.75毫米＞厚度≥3毫米的卷材（宽度≥600毫米，屈服强度≤355牛顿/平方毫米）	5	14	17	0	千克	A
7208391000	厚度＜1.5毫米的其他热轧卷材（除热轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	3	14	17	0	千克	A
7208399000	1.5毫米≤厚度＜3毫米的其他热轧卷材（除热轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	3	14	17	0	千克	A
7208400000	轧有花纹的热轧非卷材（除热轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	0	千克	A
7208511000	厚度＞50毫米的其他热轧非卷材（宽度≥600毫米，未包、镀、涂层）	6	17	17	0	千克	A
7208512000	20毫米＜厚度≤50毫米的其他热轧非卷材（宽度≥600毫米，未包、镀、涂层）	6	17	17	0	千克	A
7208519000	10毫米＜厚度≤20毫米的其他热轧非卷材（宽度≥600毫米，未包、镀、涂层）	6	17	17	0	千克	A
7208520000	10毫米≥厚度≥4.75毫米的热轧非卷材（除热轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	0	千克	A
7208531000	4.75毫米＞厚度≥3毫米的大强度热轧非卷材（宽度≥600毫米，屈服强度＞355牛顿/平方毫米）	6	17	17	0	千克	A
7208539000	其他4.75毫米＞厚度≥3毫米的热轧非卷材（宽度≥600毫米，屈服强度≤355牛顿/平方毫米）	6	17	17	0	千克	A
7208541000	厚度＜1.5毫米的热轧非卷材（除热轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	0	千克	A

商品编号	商品名称及备注	进口关税税率（%）		增值税率（%）	出口退税率（%）	计量单位	监管条件
		最惠国	普通				
7208549000	1.5毫米≤厚度＜3毫米的热轧非卷材（除热轧外未进一步加工，宽度≥600毫米，未包、镀≤涂层）	6	17	17	0	千克	A
7208900000	其他热轧铁或非合金钢宽平板轧材（除热轧外经进一步加工，宽度≥600毫米，未经包、镀、涂层）	6	17	17	0	千克	A
7209	宽度≥600毫米的铁或非合金钢平板轧材，经冷轧，但未经包覆、镀层或涂层						
7209151000	厚度≥3毫米的大强度冷轧卷材（宽度≥600毫米，屈服强度＞355牛顿/平方毫米）	6	17	17	0	千克	A
7209159000	其他厚度≥3毫米的冷轧卷材（宽度≥600毫米，屈服强度≤355牛顿/平方毫米）	6	17	17	13	千克	A
7209161000	3毫米＞厚度＞1毫米的大强度冷轧卷材（宽度≥600毫米，屈服强度＞275牛顿/平方毫米）	6	17	17	13	千克	A
7209169000	3毫米＞厚度＞1毫米的小强度冷轧卷材（宽度≥600毫米，屈服强度≤275牛顿/平方毫米）	6	17	17	13	千克	A
7209171000	1毫米≥厚度≥0.5毫米的大强度冷轧卷材（宽度≥600毫米，屈服强度＞275牛顿/平方毫米）	3	17	17	13	千克	A
7209179000	1毫米≥厚度≥0.5毫米的小强度冷轧卷材（宽度≥600毫米，屈服强度≤275牛顿/平方毫米）	3	17	17	13	千克	A
7209181000	厚度＜0.3毫米的非合金钢冷轧卷材（未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	13	千克	A
7209189000	0.3毫米≤厚度＜0.5毫米的非合金钢冷轧卷材（未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	13	千克	A
7209250000	厚度≥3毫米的冷轧非卷材（除冷轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	13	千克	A
7209260000	3毫米＞厚度＞1毫米的冷轧非卷材（除冷轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	13	千克	A
7209270000	1毫米≥厚度≥0.5毫米的冷轧非卷材（未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	13	千克	A
7209280000	厚度＜0.5毫米的冷轧非卷材（除冷轧外未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	13	千克	A
7209900000	其他冷轧铁或非合金钢宽平轧材（除冷轧外，未进一步加工，宽度≥600毫米，未包、镀、涂层）	6	17	17	13	千克	A
7210	宽度≥600毫米的铁或非合金钢平板轧材，经包覆、镀层或涂层						
7210110000	镀（涂）锡的非合金钢厚宽平板轧材（厚度≥0.5毫米，宽度≥600毫米）	10	20	17	13	千克	A
7210120000	镀（涂）锡的非合金钢薄宽平板轧材（厚度＜0.5毫米，宽度≥600毫米）	5	20	17	13	千克	A
7210200000	镀或涂铅的铁或非合金钢平板轧材（包括镀铅锡钢板，宽度≥600毫米）	4	20	17	13	千克	
7210300000	电镀锌的铁或非合金钢宽板材（宽度≥600毫米）	8	20	17	13	千克	A
7210410000	镀锌的瓦楞形铁或非合金钢宽板材（电镀锌的除外，宽度≥600毫米）	8	20	17	13	千克	A
7210490000	镀锌的其他形铁或非合金钢宽板材（电镀锌的除外，宽度≥600毫米）	4	20	17	13	千克	A