

## Test Report

No. SH8022139-1/ CHEM

Date: Jun. 4, 2008

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公司名称: 上海宝山钢铁股份有限公司

Company Name: SHANGHAI BAOSHAN IRON & STEEL CO., LTD

地址: 上海同济路 1800 号

Address: 6/F, 1800 TONGJI RD, BAOSHAN, SHANGHAI, CHINA

THIS REPORT IS TO SUPERSEDE TEST REPORT NO.SH8022139/CHEM DATE: 2008/03/20

样品名称: 热镀锌钝化涂油

TYPE OF PRODUCT: CONTINUOUSLY HOT-DIP ZINC COATED STEEL SHEET & STRIP, CHEMICAL PASSIVATED AND OILING

SGS 相关号: 10869348-8

SGS Ref No.: 10869348-8

收件日期(SAMPLE RECEIVED). Feb.27, 2008

测试日期(TESTING DATE). Feb.27 to Mar.05, 2008, Mar.17 to 20, 2008

- Test Requested/测试要求 : (1) To determine the Cadmium, Lead and Mercury content of the plating for submitted sample.  
测定委托样品镀层中镉, 铅, 汞的含量
- (2) To determine the Hexavalent Chromium content of the plating for submitted sample.  
测定委托样品镀层中六价铬的含量
- (3) To determine the PFOS (Perfluorooctane Sulfonates) and PFOA (Perfluorooctanoic Acid) content of the plating for submitted sample.  
测定委托样品镀层中全氟辛烷磺酰基化合物(PFOS) 和全氟辛酸(PFOA)的含量

试验方法/测试结果 : 见后续页

Test method/Test Results: Please refer to next page

Signed for and on behalf of  
SGS-CSTC Chemical Laboratory



Ella Zhang  
Section Manager

Signed for and on behalf of  
SGS-CSTC Chemical Laboratory



Sandy Hao  
Lab Manager

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Test method/测试方法 : (1) Acid washing method for Cadmium, Lead and Mercury content in plating. Analysis was performed by Inductively Coupled Argon Plasma-Atomic Emission Spectrometer (ICP-AES) and Atomic Absorption Spectrometer (AAS).  
酸洗脱方法测定镀层中的镉,铅和汞含量.  
采用ICP和AAS进行分析

(2) With reference to IEC 62321/2<sup>nd</sup> CDV (111/95/CDV) for Hexavalent Chromium by spot test / Colorimetric Method.  
参照 IEC 62321/2<sup>nd</sup> CDV (111/95/CDV), 采用点测试法/比色法测定六价铬的含量

(3) With reference to EPA 3540C: 1996 / EPA 3550C: 2000.  
Analysis was performed by High Performance Liquid Chromatograph-Mass Spectrometer (HPLC-MS).  
参照 EPA 3540C: 1996 / EPA 3550C: 2000 方法. 采用 HPLC-MS 测试.

## Test results by chemical method

(1)-(2) Cadmium, Lead, Mercury and Hexavalent Chromium content of the plating for submitted sample. (Unit: mg/kg)

样品镀层中镉, 铅, 汞和六价铬的含量(单位: mg/kg)

Test Item(s)/ 测试项目	Method(refer to)/ 方法(参见)	1	MDL
Cadmium (Cd) in plating/ 镀层中镉(Cd)	(1)	ND	10
Lead (Pb) in plating/ 镀层中铅(Pb)		17	10
Mercury (Hg) in plating/ 镀层中汞(Hg)		ND	10
Hexavalent Chromium (Cr VI)/ 六价铬(Cr VI)	(2)	Positive	See Note (4)/ 参见备注 (4)

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SGS Standards Technical Services, Ltd.  
Sanghaier Testing Center-Client Laboratory

1/F,7/F,9/F&10/F, the 3<sup>rd</sup> Building, No.889, Yishan Road, Xuhui District, Shanghai, China 200233 EE t +86 21 64951616\*2723 f +86 21 64953679  
中国上海 徐汇区宜山路 889 号 3 号楼 1 楼、7 楼、9 楼、10 楼 邮编: 200233 HL t +86 21 64951616\*2720 f +86 21 54500353 www.cn.sgs.com

(3) PFOS (Perfluorooctane Sulfonates) and PFOA (Perfluorooctanoic Acid) content of the plating for submitted sample (Unit: ug/m<sup>2</sup>)

样品镀层中全氟辛烷磺酰基化合物(PFOS) 和全氟辛酸(PFOA)的含量(单位: ug/m<sup>2</sup>)

Test Item(s)/ 测试项目	Method(refer to)/ 方法(参见)	1	MDL
<b>PFOS (Perfluorooctane Sulfonates )</b> $\Sigma \left\{ \begin{array}{l} \text{PFOS-acid} \\ \text{PFOS-salt} \end{array} \right\}$ 全氟辛烷磺酰基化合物(PFOS) $\Sigma \left\{ \begin{array}{l} \text{PFOS-酸} \\ \text{PFOS-盐} \end{array} \right\}$	(3)	ND	1
<b>PFOA(Perfluorooctanoic Acid)</b> $\Sigma \left\{ \begin{array}{l} \text{PFOA-acid} \\ \text{PFOA-salt} \end{array} \right\}$ 全氟辛酸(PFOA) $\Sigma \left\{ \begin{array}{l} \text{PFOA-酸} \\ \text{PFOA-盐} \end{array} \right\}$		ND	1

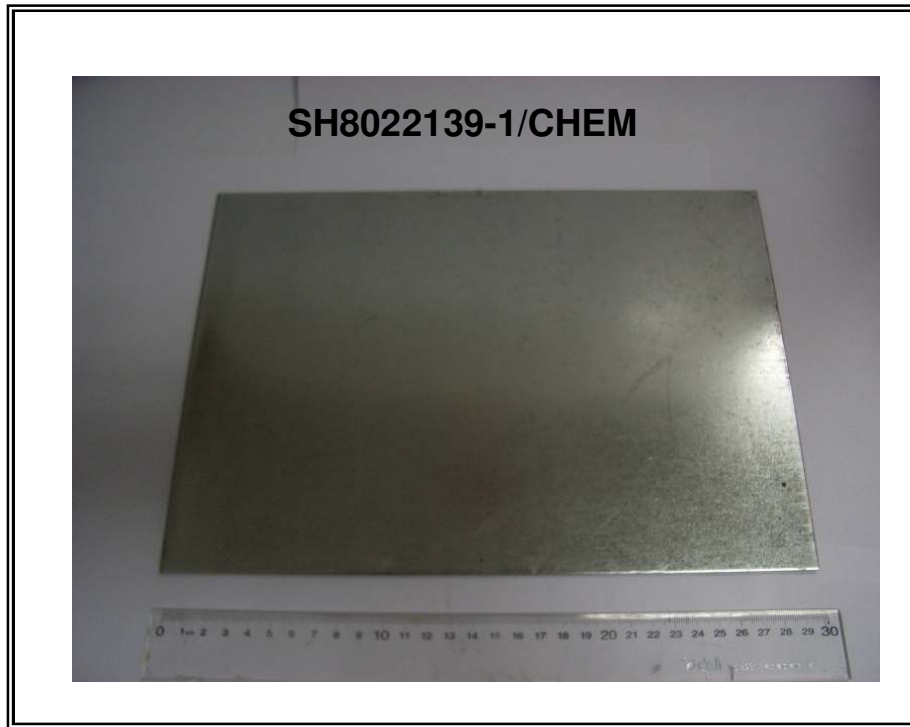
Test Part Description:

1. Silvery metal board

Note :

- (1) mg/kg=ppm  
毫克每千克=百万分之一(mg/kg=ppm)
- (2) ND = Not detected  
ND=未检出
- (3) MDL = Method Detection Limit  
MDL =检测极限值
- (4) Spot-test:  
Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;  
(The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.)  
Boiling-water-extraction:  
Negative = Absence of CrVI coating  
Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.  
点测试法:  
Negative= 镀层中未检测到六价铬, Positive = 镀层中检测到六价铬;  
(当点测试结果为 Negative 或无法确定时,将采用沸水萃取法作进一步的结果验证。)  
沸水萃取法:  
Negative = 镀层中未检测到六价铬  
Positive = 镀层中检测到六价铬; 表明 50 cm<sup>2</sup> 表面积的被测试样品的沸水萃取液中六价铬的浓度等于或大于 0.02 mg/kg

Sample photo:



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