

No. LPCI/00629/08

CTS Ref. CTS/08/0156/Group

Date: 2008/01/18

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GROUP STEEL CORPORATION (M) SDN. BHD. 180, KAWASAN INDUSTRI AYER KEROH, 75450 MELAKA.

The following merchandise was (were) submitted and identified by the client as:

Sample Description

Galvanizing Strip

(

Sample Receiving Date

Cr – free Product 2008/01/14

**Testing Period** 

2008/01/14 to 2008/01/18

**Test Requested** 

In accordance with the RoHS Directive 2002/95/EC, and its

amendment directives.

**Test Method** 

(1) With reference to EPA Method 3050B for Cadmium Content.

Analysis was performed by ICP

(2) With reference to EPA Method 3050B for Lead Content.

Analysis was performed by ICP

(3) With reference to EPA Method 3052 for Mercury Content.

Analysis was performed by ICP

(4) With reference to EPA Method 3060A & 7196A for Hexavalent

Chromium.

Analysis was performed by UV/Vis Spectrophotometry.

(5) With reference to EPA Method 3540C/3550B for PBB / PBDE

Content.

Analysis was performed by GC/MS.

Test Results

Please refer to next page.

Analysts

Lim Meng Hoe & Jocelyn Christmas

SGS LABORATORY SERVICES (M) SDN. BHD.

CHONG KIEN LEN B.Sc.(HONS) AMIC LAB MANAGER

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Test results by chemical method (Unit: mg/kg)

Test Item(s):	Method (refer to)	Result	MDL
Cadmium(Cd)	(1)	N.D.	2
Lead (Pb)	(2)	N.D.	2
Mercury (Hg)	(3)	N.D.	2
Hexavalent Chromium (CrVI) by alkaline extraction	(4)	N.D.	2
Sum of Polybrominated Biphenyl (PBBs)	(5)	N.D.	-
Monobromobiphenyl		N.D.	5
Dibromobiphenyl		N.D.	5
Tribromobiphenyl		N.D.	5
Tetrabromobiphenyl		N.D.	5
Pentabromobiphenyl		N.D.	5
Hexabromobiphenyl		N.D.	5
Heptabromobiphenyl		N.D.	5
Octabromobiphenyl		N.D.	5
Nonabromobiphenyl		N.D.	5
Decabromobiphenyl		N.D.	5
Sum of Polybrominated Diphenylethers (PBDEs)		N.D.	<u> </u>
Monobromodiphenyl ether		N.D.	5
Dibromodiphenyl ether		N.D.	5
Tribromodiphenyl ether		N.D.	5
Tetrabromodiphenyl ether	]	N.D.	5
Pentabromodiphenyl ether		N.D.	5
Hexabromodiphenyl ether	_]	N.D.	5
Heptabromodiphenyl ether	_	N.D.	5
Octabromodiphenyl ether	<u> </u>	N.D.	5
Nonabromodiphenyl ether		N.D.	5
Decabromodiphenyl ether		N.D.	. 5

**Test Part Description:** 

As per page 3

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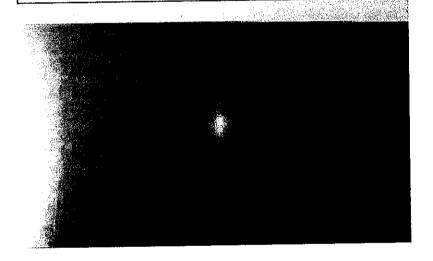
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Test Part Description:

Sample Description

**Galvanizing Strip** Cr - free Product

GROUP STEEL CORPORATION (M) SDN. BHD. LPCI/00629/08



Note: (a) mg/kg = ppm

(b) N.D. = Not Detected

(c) MDL = Method Detection Limit

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#### 1. DETERMINATION OF HEXAVALENT CHROMIUM BY **METHOD US EPA 3060A/7196A**

Sample Preparation Add colour-developing reagent Acidify with H2SO4 Let stand for 5-10 min

Analyses by UV- Spectrophotometer (540 nm)

### 2. DETERMINATION OF LEAD CONTENT BY US **EPA 3050B** Cut sample in small pieces

Weight sample (1.0g) into digestion vessel

Acid digestion (HCI and HNO<sub>3</sub>)

"Totally Dissolved"

Filtration

Analyses by ICP

### 3. MICROWAVE ASSISTED ACID DIGESTION OF SILICEOUS AND ORGANICALLY BASED METRICES (US EPA 3052)

Cut sample in small pieces

Weight sample (0.2-0.5g) into digestion vessel

Acid digestion (HF and HNO<sub>3</sub>) - Microwave

"Totally Dissolved"

Filtration

Analyses by ICP

## 4. DETERMINATION OF CADMIUM CONTENT BY US **EPA 3050B**

Cut sample in small pieces

Weight sample (1.0g) into digestion vessel

Acid digestion (HCl and HNO<sub>3</sub>)

"Totally Dissolved"

Filtration

Analyses by ICP

5. DETERMINATION OF PBB/PBDE WITH GC-MS Cut sample in small pieces Weight sample (2g) into extraction thimble Soxhlet Extraction with Toluene Filter through 0.45 um membrane filter Analyses by GC-MS (with appropriate dilution)

		Name	Signature	Date
Prepared By	Lab. Manager	Chong Kien Len	1 Hey.	18 <sup>th</sup> January 2008
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\*\*\*\* End of Report \*\*\*\*

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