TEST REPORT

Your Ref:

Date: 02 March 2005

Our Ref:

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SUBJECT

Metal toxicity test of 'SUN' Brand Stainless Steel Panel (SS 316) to meet the requirements and compliance to AS/NZS 4020:2002, Appendix H.

CLIENT

Hydro Dynamic Engineering Pte Ltd Blk 209 New Upper Changi Road #04-631 Singapore 460209

Attn: Mr Patrick Tan

SAMPLE SUBMISSION DATE

24 Feb 2005

DESCRIPTION OF PRODUCT

Type of Materials

: Stainless Steel Panel (SS316)

Brand

: SUN

DESCRIPTION OF SAMPLE

Two cut samples Stainless Steel Panel (70mm x 70mm x 2mm) of which each providing an approximate surface area of 9800mm² were tested.

METHOD OF TEST

AS/NZS 4020:2002 Products for use in contact with drinking water.
(To be evaluated in accordance with WHO Guidelines for Drinking Water Quality, 1993)

1) Sample Preparation - Appendix A

2) Scaling Factor - Derivation And Application, Appendix B

3) Test Method - Extraction Of Metals, Appendix H (Elemental Analysis By ICP-MS)







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RESULTS

Sample Marked Elements		'SUN' Brand Stainless Steel Panel - (SS316) (1 st Extraction)		Requirement
		Sample 1	Sample 2	WHO Guidelines for Drinking Water Quality (1993) (mg/l) max
1)	Antimony. Sb (mg/l)	< 0.003	< 0.003	0.005
2)	Arsenic, As (mg/l)	< 0.007	< 0.007	0.01
3)	Barium, Ba (mg/l)	< 0.01	< 0.01	0.7
4)	Cadmium, Cd (mg/l)	< 0.001	< 0.001	0.003
5)	Chromium, Cr (mg/l)	< 0.01	< 0.01	0.05
6)	Copper, Cu (mg/l)	< 0.1	< 0.1	2
7)	Lead, Pb (mg/l)	< 0.01	< 0.01	0.01
8)	Mercury, Hg (mg/l)	< 0.001	< 0.001	0.001
9)	Molybdenum, Mo (mg/l)	< 0.01	< 0.01	0.07
10)	Nickel, Ni (mg/l)	< 0.01	0.01	0.02
11)	Selenium, Se (mg/l)	< 0.01	< 0.01	0.01
12)	Silver, Ag (mg/l)	< 0.01	< 0.01	0.1 *

Note:

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Less than

: The requirement for silver, (Ag) is taken from AS/NZS 4020:2002.

Scaling Factor:

Not applied, the product was tested by immersion method. Each sample with an approximate surface area of 9800mm² was exposed to 1 litre of test water.

Remarks

- 1) The water extract of the sample satisfied the WHO Guidelines for Drinking Water Quality (1993) with respect to all the toxic metals.
- 2) The results stated in this report relate to sample or samples of the product submitted for testing. Any changes in the material formulation, the process manufacture, the method of application, or the surface area-to-volume ratio in the end use, could affect the suitability of the product for the use in contact with drinking water.

ELSIE OW TECHNICAL EXECUTIVE CHEN HUAYI, PhD SENIOR CHEMIST ELEMENTAL ANALYSIS TESTING GROUP

02 Mar 2005

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