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# **Test Report**

俊益鋼鐵股份有限公司 JUNG YI STEEL CO., LTD. 台中市大里區工業9路9號

NO. 9, GONGYE 9TH RD., DALI DIST., TAICHUNG CITY 41280, TAIWAN (R. O. C.)

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):

送樣廠商(Sample Submitted By) : 俊益鋼鐵股份有限公司 (JUNG YI STEEL CO., LTD.)

樣品名稱(Sample Description) : 鋼棒-碳鋼1045 055 黑皮

樣品材質(Sample Material) : 1045

供應廠商(Manufacturer/Vendor) : 豐興鋼鐵股份有限公司 (FENG HSIN STEEL CO., LTD.)

原產國(Country of Origin) : 台灣 (TAIWAN) 樣品批號(Item/Lot No.) : 2019-2Q-0528-1 收件日期(Sample Receiving Date) : 2019/05/29

測試期間(Testing Period) : 2019/05/29 to 2019/06/05

测試需求(Test Requested): 依據客戶指定,參考RoHS指令2011/65/EU Annex II測試鎘、鉛、汞、六價鉻. (As

specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI) contents in the submitted sample(s).)

測試方法(Test Method) : 請參閱下一頁 (Please refer to following pages). 測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages).

結論(Conclusion) : 根據客戶所提供的樣品,其編、鉛、汞、六價鉻的測試結果符合RoHS 2011/65/EU Annex II

之限值要求. (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI) comply with the limits as set by RoHS

Directive 2011/65/EU Annex II.)

Troy Chang / Manager - Vec SGS
Signed for and behalf of SGS TAIWAN LTD.
Chemical Laboratory - Taipei

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#### 測試結果(Test Results)

測試部位(PART NAME)No.1 鐵灰色金屬 (IRON-GRAY METAL)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result) No.1	限值 (Limit)
鎬 / Cadmium (Cd)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿 原子發射光譜儀檢測. / With reference	2	n. d.	100
鉛 / Lead (Pb)	mg/kg	to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.	1000
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4:2013+ AMD1:2017,以感 應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-4:2013+ AMD1:2017 and performed by ICP-AES.	2	n. d.	1000
六價鉻 / Hexavalent Chromium Cr(VI)(#2)	μg/cm²	参考IEC 62321-7-1 (2015),以UV-VIS檢 測. / With reference to IEC 62321-7-1 (2015) and performed by UV-VIS.	0.10	n. d.	-

### 備註(Note):

- 1. mg/kg = ppm; 0. 1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. "-" = Not Regulated (無規格值)
- - a. 當六價鉻結果大於0.13 μg/cm²,表示樣品表層含有六價鉻. / The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 μg/cm<sup>2</sup>. The sample coating is considered to contain Cr(VI).
  - b. 當六價鉻結果為n.d. (濃度小於0.10 μg/cm²),表示表層不含六價鉻. / The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 μg/cm²). The coating is considered a non-Cr(VI) based
  - c. 當六價鉻結果介於 0.10 及 0.13 μg/cm<sup>2</sup> 時,無法確定塗層是否含有六價鉻. / The result between 0.10 μg/cm<sup>2</sup> and 0.13 μg/cm<sup>2</sup> is considered to be inconclusive - unavoidable coating variations may influence the determination.

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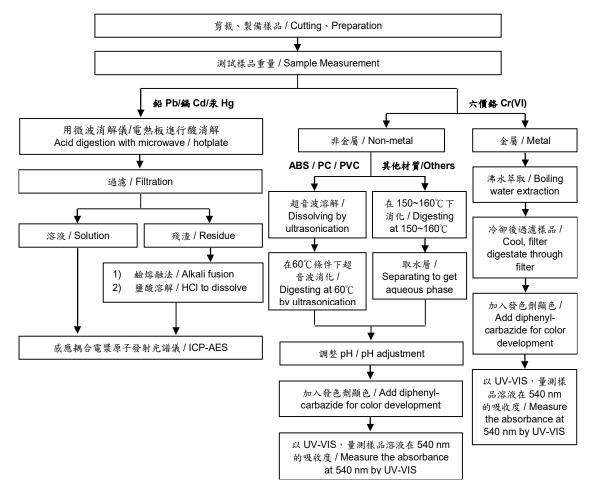
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#### 重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外)

These samples were dissolved totally by pre-conditioning method according to below flow chart. ( Cr<sup>6+</sup> test method excluded)

- 測試人員: 陳恩臻 / Technician: Rita Chen
- 測試負責人:張啟興 / Supervisor: Troy Chang



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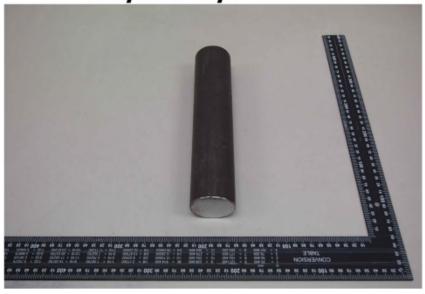
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> \* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. \* (The tested sample / part is marked by an arrow if it's shown on the photo.)

> > CE/2019/56103



\*\* 報告結尾 (End of Report) \*\*

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