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# **Test Report**

俊益鋼鐵股份有限公司

JUNG YI STEEL CO., LTD.

台中市大里區工業九路九號

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

樣品材質(Sample Material) : 1045

供應廠商(Supplier Company Name) : 俊益鋼鐵股份有限公司 (JUNG YI STEEL CO., LTD.)

電話(Tel) : 886-4-24914678 傳真(Fax) : 886-4-24914680

E-MAIL : jungyi.steel@gmail.com

: 中國鋼鐵股份有限公司 (CHINA STEEL) 原材料供應商(Vendor)

原產國(Country of Origin) : 台灣 (TAIWAN) 樣品批號(Item/Lot No.) : 2016-2Q-0614-1 收件日期(Sample Receiving Date) : 2016/06/15

: 2016/06/15 TO 2016/06/22 測試期間(Testing Period)

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

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.)

請見下一頁 (Please refer to next pages). 測試方法(Test Method) 請見下一頁 (Please refer to next pages). 測試結果(Test Results)

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 指令 2011/65/EU 結論(Conclusion)

> Annex II之限值要求 (Based on the performed tests on submitted samples, the test result(s) of Cadmium, Lead, Mercury, Cr(VI) comply with the limits as set by

RoHS Directive 2011/65/EU Annex II.)

Signed for and on SĞS TAIWAN LTD. Chemical Laboratory - Taipei

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#### 測試結果(Test Results)

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

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)
鎘 / Cadmium (Cd)	mg/kg	参考IEC 62321-5 (2013), 以感應耦合電 漿原子發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.	100
鉛 / Lead (Pb)	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 to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.	1000
汞 / Mercury (Hg)	mg/kg	参考IEC 62321-4 (2013), 以感應耦合電 漿原子發射光譜儀檢測. / With reference to IEC 62321-4 (2013) 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.	_

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台中市大里區工業九路九號

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

#### 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)
- 5. (#2) =
  - 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/cm<sup>2</sup>). The coating is considered a non-Cr(VI) based
  - c. 當六價鉻結果介於 0.10 及  $0.13~\mu g/cm^2$  時,無法確定塗層是否含有六價鉻. / The result between  $0.10~\mu g/cm^2$ and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive - unavoidable coating variations may influence the determination.

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俊益鋼鐵股份有限公司 JUNG YI STEEL CO., LTD.

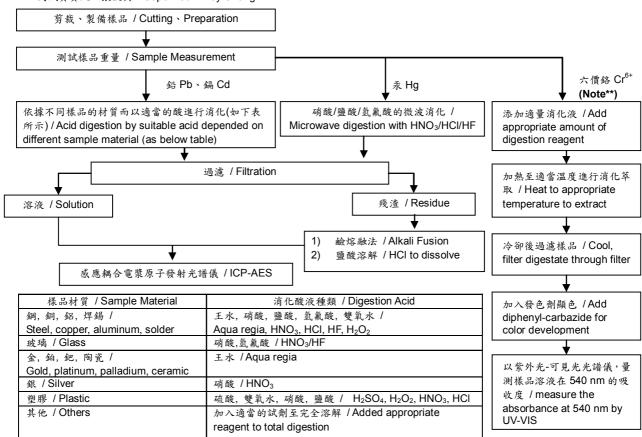
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根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外)

These samples were dissolved totally by pre-conditioning method according to below flow chart. (  $\operatorname{Cr}^{6^+}$  test method excluded )

- 測試人員:王志瑋 / Technician: JR Wang
- 測試負責人:張啟興 / Supervisor: Troy Chang



#### Note\*\* (For IEC 62321)

- (1) 針對非金屬材料加入鹼性消化液,加熱至 90~95℃ 萃取. / For non-metallic material, add alkaline digestion reagent and heat to 90~95℃
- (2) 針對金屬材料加入純水,加熱至沸騰萃取. / For metallic material, add pure water and heat to boiling.

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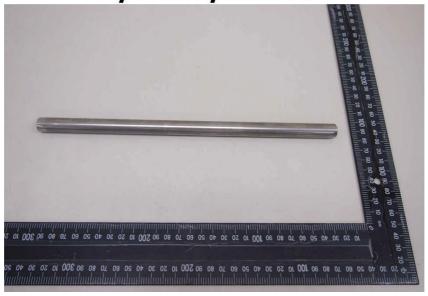
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> \* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. \* (The tested sample / part is marked by an arrow if it's shown on the photo.)

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\*\* 報告結尾 (End of Report) \*\*

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