

## 測試報告 號碼(No.): CE/2014/40607 日期(Date): 2014/04/10 頁數(Page): 1 of 13 **Test Report**

卓新工業股份有限公司 EXCELLENCE WIRE IND CO., LTD. 桃園縣蘆竹鄉長安路二段39巷13號 NO. 13, LANE 39, SEC. 2, CHANG AN RD., LUCHU HSIANG, TAOYUAN HSIEN 338, TAIWAN

以下測試樣品係由申請廠商所提供 behalf of the applicant as):		崔認 (The following sample(s) was/were submitted and identified by/on
送樣廠商(Sample Submitted	:	卓新工業股份有限公司 (EXCELLENCE WIRE IND CO., LTD.)
樣品名稱(Sample Description)	:	GOLD WIRE / 金線
收件日期(Sample Receiving Date)	:	2014/04/02
測試期間(Testing Period)	:	2014/04/02 TO 2014/04/10
	====	

**测试结果(Test Results)** : 請見下一頁 (Please refer to next pages).

 結論(Conclusion)
 · 根據客户所提供的樣品,其鎬、鉛、汞、六價鉻、多溴聯苯及多溴聯苯醚的測試結果符合 RoHS指令2002/95/EC的更新指令2011/65/EU之要求 (Based on the performed tests on submitted samples, the test results of Cadmium, Lead, Mercury, Hexavalent Chromium Cr(VI), PBBs and PBDEs comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.)



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#### <u>測試結果(Test Results)</u>

測試部位(PART NAME)No.1 : 金色金屬線鍍層 (PLATING LAYER OF GOLDEN COLORED METAL WIRE) 測試部位(PART NAME)No.2 : 金色金屬線底材 (BASE MATERIAL OF GOLDEN COLORED METAL WIRE) 測試部位(PART NAME)No.3 : 金色金屬線(含鍍層)(GOLDEN COLORED METAL WIRE (INCLUDING THE PLATING LAYER))

 測試項目
 單位
 測試方法
 方法偵測
 結果 (Result)
 法規

 (Track Idams)
 (Unit)
 (Weathed)
 極限值
 限值

(Test Items)	(Unit)	(Method)	極限值	No.1	No.2	No.3	┃ 限値 /、
			(MDL)		N0.2		(Limit)
鎬 / Cadmium (Cd)	mg/kg	酸洗脱鍍層,參考IEC 62321-	2	n.d.			100
		5:2013方法,以感應耦合電					
		浆原子發射光譜儀檢測./					
		IEC 62321-5: 2013					
		application of modified					
		digestion by surface					
		etching and performed by					
		ICP-AES.					
	mg/kg	參考IEC 62321-5: 2013方法,	2		n.d.		100
		以感應耦合電浆原子發射光譜					
		儀檢測. / With reference					
		to IEC 62321-5: 2013 and					
		performed by ICP-AES.					
鉛 / Lead (Pb)	mg/kg	酸洗脱鍍層, 參考IEC 62321-	2	30			1000
	0 0	5: 2013方法, 以感應耦合電					
		浆原子發射光譜儀檢測./					
		IEC 62321-5: 2013					
		application of modified					
		digestion by surface					
		etching and performed by					
		ICP-AES.					
	mg/kg	參考IEC 62321-5: 2013方法,	2		57		1000
		以感應耦合電漿原子發射光譜	<i></i>		0,		1000
		儀檢測. / With reference					
		to IEC 62321-5: 2013 and					
		performed by ICP-AES.					
		periormed by ICF AES.					



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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result)			法規 - 限值
				No.1	No.2	No.3	『尾伯旦 (Limit)
汞 / Mercury (Hg)	mg/kg	酸洗脱鍍層,參考IEC 62321- 4:2013方法,以感應耦合電 漿原子發射光譜儀檢測./ IEC 62321-4:2013 application of modified digestion by surface etching and performed by ICP-AES.	2	n.d.			1000
	mg/kg	參考IEC 62321-4: 2013方法, 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)	**	参考IEC 62321: 2008方法, 以沸水萃取法檢測. / With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative	Negative		#
六溴環十二烷及所有主要被辨别出的異 構物 / Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237- 52-8))		参考IEC 62321: 2008方法, 以氣相層析/質譜儀檢測. / With reference to IEC 62321: 2008 method. Analysis was performed by GC/MS.	5			n.d.	-
鄰苯二甲酸甲苯基丁酯 / BBP (Benzyl butyl phthalate) (CAS No.: 85-68- 7)	%	参考EN 14372,以氣相層析/ 質譜儀檢測之. / With reference to EN 14372. Analysis was performed by GC/MS.	0.003			n.d.	-

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# 卓新工業股份有限公司

EXCELLENCE WIRE IND CO., LTD.

#### 桃園縣蘆竹鄉長安路二段39巷13號

NO. 13, LANE 39, SEC. 2, CHANG AN RD., LUCHU HSIANG, TAOYUAN HSIEN 338, TAIWAN

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結	法規		
				No.1	No.2	No.3	- 限値 (Limit)
鄰苯二甲酸二 (2-乙基己基)酯 / DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	參考EN 14372, 以氣相層析/ 質譜儀檢測之. / With reference to EN 14372. Analysis was performed by GC/MS.	0.003			n.d.	-
鄰苯二甲酸二異癸酯 / DIDP (Di- isodecyl phthalate) (CAS No.: 26761-40-0)	%	参考EN 14372,以氣相層析/ 質譜儀檢測之./With reference to EN 14372. Analysis was performed by GC/MS.	0.01			n.d.	-
鄰苯二甲酸二異壬酯 / DINP (Di- isononyl phthalate) (CAS No.: 28553-12-0)	%	參考EN 14372,以氣相層析/ 質譜儀檢測之. / With reference to EN 14372. Analysis was performed by GC/MS.	0.01			n.d.	-
鄰苯二甲酸二正辛酯 / DNOP (Di-n- octyl phthalate) (CAS No.: 117-84- 0)	%	參考EN 14372,以氣相層析/ 質譜儀檢測之. / With reference to EN 14372. Analysis was performed by GC/MS.	0.003			n.d.	-
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	參考EN 14372, 以氣相層析/ 質譜儀檢測之. / With reference to EN 14372. Analysis was performed by GC/MS.	0.003			n.d.	-

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測試項目 (Test Items)	單位	测試方法	方法偵測 極限値 (MDL)	結	法規		
	(Unit)	(Method)		No.1	No.2	No.3	- 限値 (Limit)
多溴聯苯總和 / Sum of PBBs	mg/kg		-	n.d.	n.d.		1000
一溴聯苯 / Monobromobiphenyl	mg/kg		5	n.d.	n.d.		-
二溴聯苯 / Dibromobiphenyl	mg/kg		5	n.d.	n.d.		-
三溴聯苯 / Tribromobiphenyl	mg/kg		5	n.d.	n.d.		-
四溴聯苯 / Tetrabromobiphenyl	mg/kg		5	n.d.	n.d.		-
五溴聯苯 / Pentabromobiphenyl	mg/kg		5	n.d.	n.d.		-
六溴聯苯 / Hexabromobiphenyl	mg/kg		5	n.d.	n.d.		-
七溴聯苯 / Heptabromobiphenyl	mg/kg		5	n.d.	n.d.		-
八溴聯苯 / Octabromobiphenyl	mg/kg		5	n.d.	n.d.		-
九溴聯苯 / Nonabromobiphenyl	mg/kg	參考IEC 62321: 2008方法,	5	n.d.	n.d.		-
十溴聯苯 / Decabromobiphenyl	mg/kg	以氣相層析/質譜儀檢測./	5	n.d.	n.d.		-
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.	n.d.		1000
一溴聯苯醚 / Monobromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
二溴聯苯醚 / Dibromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
三溴聯苯醚 / Tribromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
四溴聯苯醚 / Tetrabromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
五溴聯苯醚 / Pentabromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
六溴聯苯醚 / Hexabromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
七溴聯苯醚 / Heptabromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
八溴聯苯醚 / Octabromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
九溴聯苯醚 / Nonabromodiphenyl ether	mg/kg		5	n.d.	n.d.		-
十溴聯苯醚 / Decabromodiphenyl ether	mg/kg		5	n.d.	n.d.		-



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#### 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. "---" = Not Conducted (未測項目)
- 6. \*\*= Qualitative analysis (No Unit) 定性分析(無單位)
- 7.# = a. Positive means the presence of CrVI on the tested areas
   (Positive表示測試區域偵測到六價路)
  - b. Negative means the absence of CrVI on the tested areas (Negative表示測試區域未偵測到六價鉻)

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> tested areas. / 該溶液濃度 $\geq$ 0.02 mg/kg with 50 cm<sup>2</sup> (tested areas)

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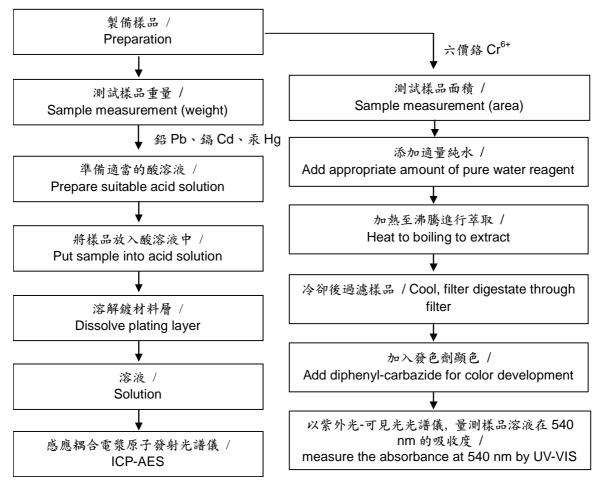
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上北一北田八二四八寸

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No.1 根據以下的流程圖之條件,樣品之外部鍍層已完全溶解。( 六價鉻測試方法除外 ) / The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded )

- 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



<u>鍍層重金屬測試流程圖 / Flow Chart of Stripping method for metal analysis</u>



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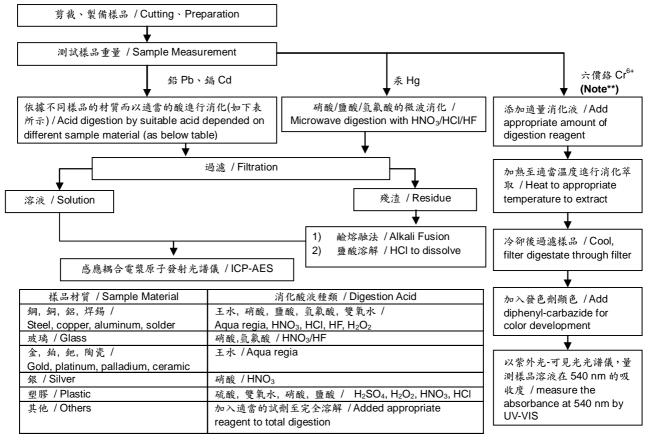
No.2

 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)

2) 测试人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang

NO. 13, LANE 39, SEC. 2, CHANG AN RD., LUCHU HSIANG, TAOYUAN HSIEN 338, TAIWAN

3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



Note\*\*: (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,加熱至沸腾萃取. / For metallic material, add pure water and heat to boiling.



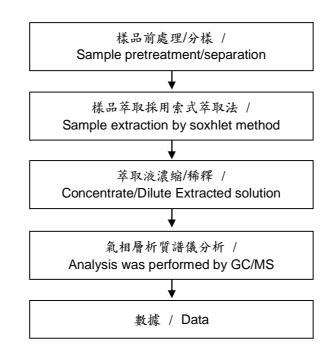
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#### 六溴環十二烷分析流程圖 / HBCDD analytical flow chart

■ 測試人員:翁賜彬 / Name of the person who made measurement: Roman Wong

■ 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang





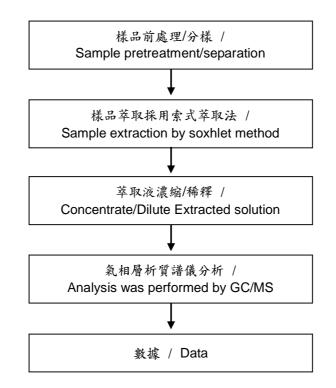
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#### 可塑劑分析流程圖 / Analytical flow chart of phthalate content

■ 测試人員:翁賜彬 / Name of the person who made measurement: Roman Wong

■ 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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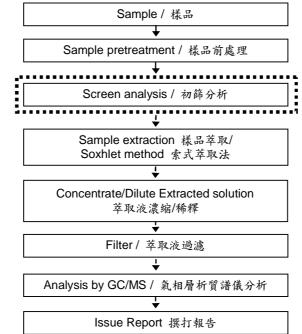


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#### 多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

測試人員:翁賜彬 / Name of the person who made measurement: Roman Wong
 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang 初次測試程序 / First testing process →
 選擇性篩檢程序 / Optional screen process ----- 確認程序 / Confirmation process ------>





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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/2014/40607 NO.1



## CE/2014/40607 NO.2



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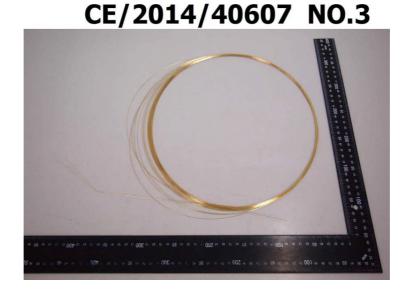


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\*\* 報告結尾 (End of Report) \*\*