



Test Report

NO.: ASZ0804020601C

Date: Apr 12, 2008

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Customer: ELMARK INDUSTRIES SC

Address: 2 "DOBRUDJA" BOULEVARD DOBRICH, BULGARIA

Report on the submitted sample said to be

Sample name: MOTOR PROTECTION BREAKER

Model: TM2-E01, 02, 03, 04, 05, 06, 07, 08, 10, 14, 16, 20, 21, 22, 32, TM3-E40, 63, 80

Item/Lot No.: /

Material: /

Buyer: /

Supplier: /

Manufacturer: /

Sample received date: Apr 02, 2008

Testing period: From Apr 02, 2008 to Apr 07, 2008

Testing Requested

As specified by client, to determine the Lead, Cadmium, Mercury, Hexavalent Chromium, PBB & PBDE content in the submitted sample in accordance with Directive 2002/95/EC (RoHS).

Testing method:

With reference to IEC 62321, 111/95/CDV

Testing Item	Pretreatment method	Measuring instrument	MQL
Lead (Pb)	IEC 62321, section 8/9	ICP-OES	2mg/kg
Cadmium (Cd)	IEC 62321, section 8/9	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321, section 7	CV-AAS	2 mg/kg
Chromium (Cr VI)	IEC 62321, Annex B/C	UV-VIS	2 mg/kg 0.02 mg/kg*
PBBs/ PBDEs	IEC 62321, Annex A	GC-MS	5 mg/kg

Note:

* 0.02 mg/kg refers to the MQL of sample extraction liquid.

Conclusion:

-When tested as specified the submitted sample complied with the requirements of commission Decision of 18 Aug 2005 amending Directive 2002/95/EC notified under document 2005/618/EC

*****FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)*****

Signed for AOV Ltd

Written by

Inspected by

Approved by



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AOV Testing Technology Co., Ltd.

Add: AOV building, Xueyuan Road East, university city, Shenzhen (Tanglang Village, XIII Town, Nanshan District)
Tel: +86(0)755 8600 8000 Fax: +86(0)755 8600 8282 Http: //www.aovt.com

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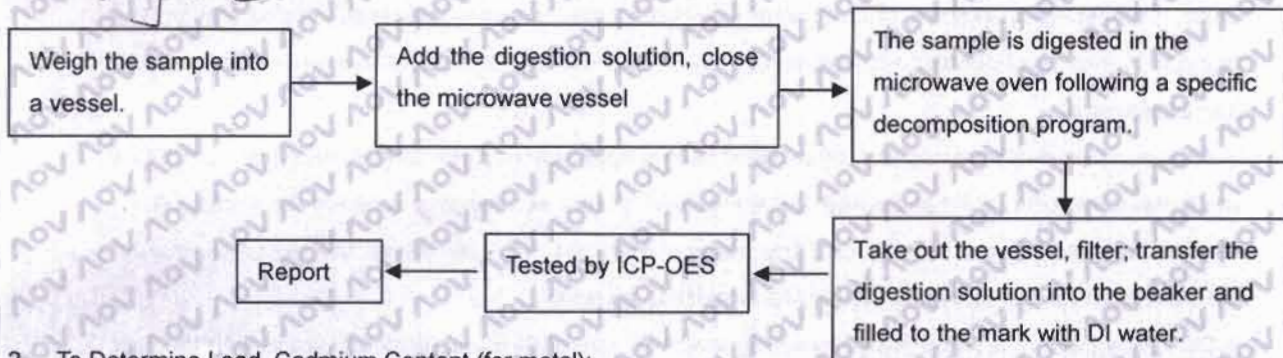
Date: Apr 12, 2008

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Test Flow:

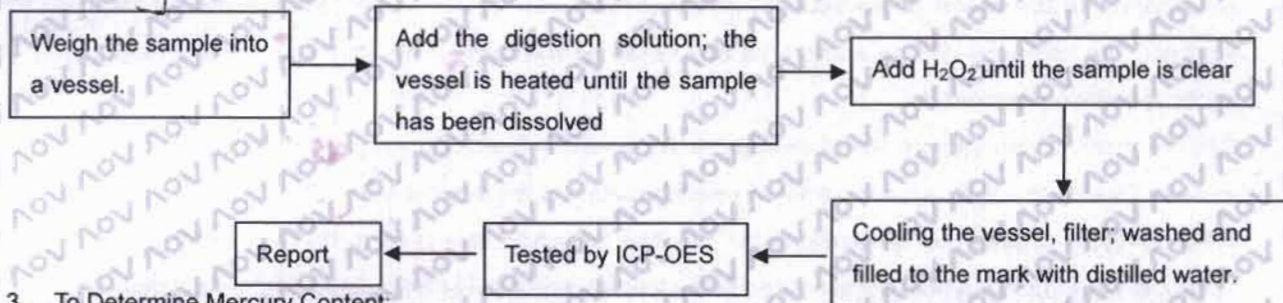
1. To Determine Lead, Cadmium Content (for Polymer);

Tested by: *JURE*



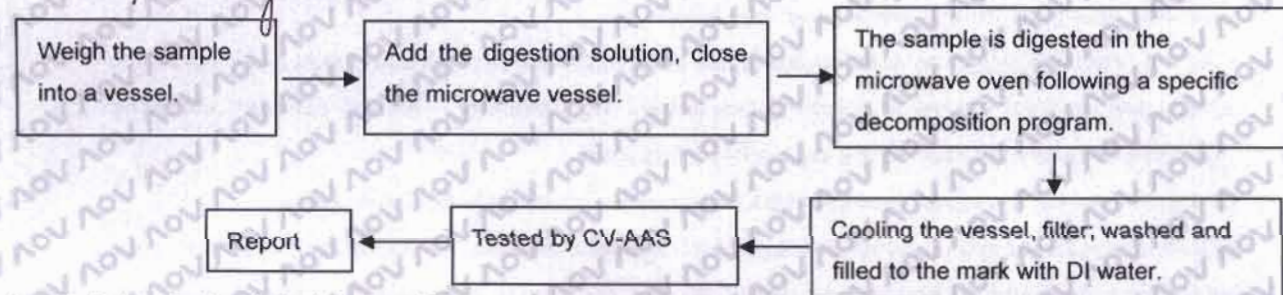
2. To Determine Lead, Cadmium Content (for metal);

Tested by: *JURE*



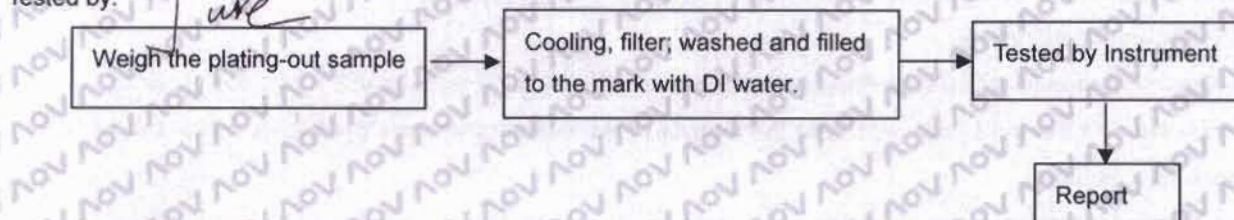
3. To Determine Mercury Content:

Tested by: *ROSAM*



4. To Determine Lead, Cadmium and Mercury Content: (for plating layer)

Tested by: *JURE*

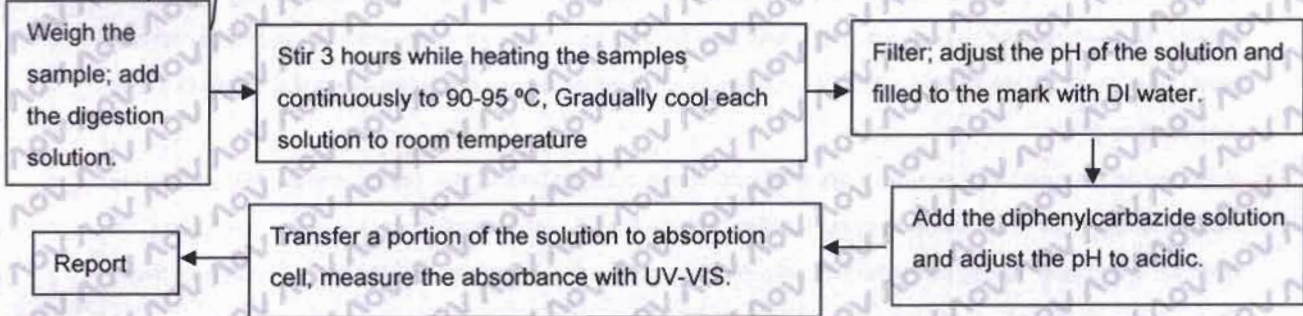


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5. To Determine Hexavalent Chromium Content (for Polymer):

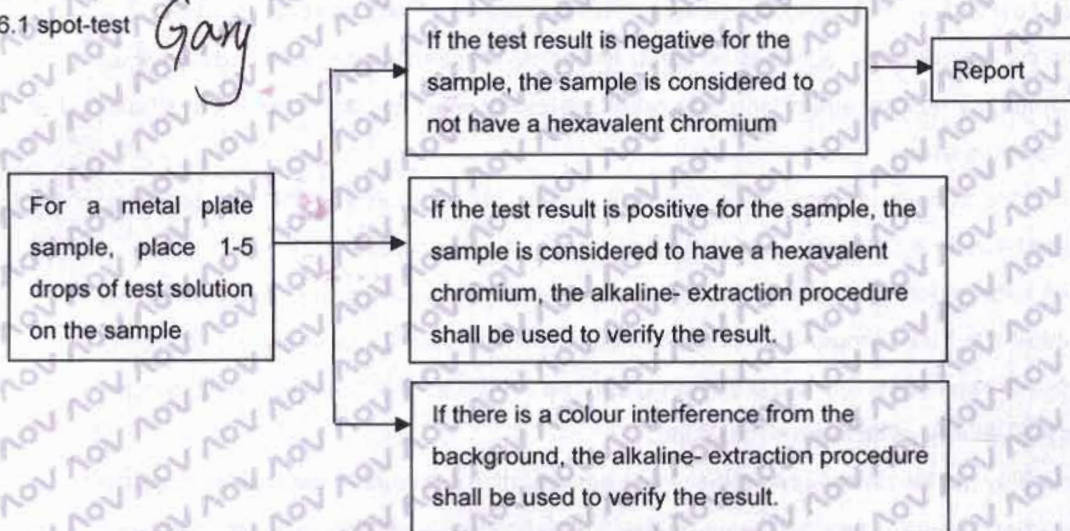
Tested by: *Gary*



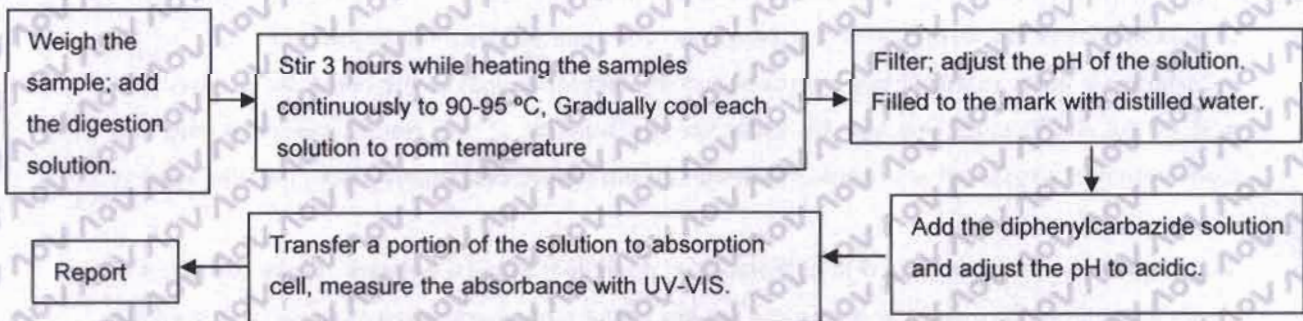
6. To Determine Hexavalent Chromium Content in metals:

Tested by:

6.1 spot-test *Gary*



6.2 alkaline- extraction Method



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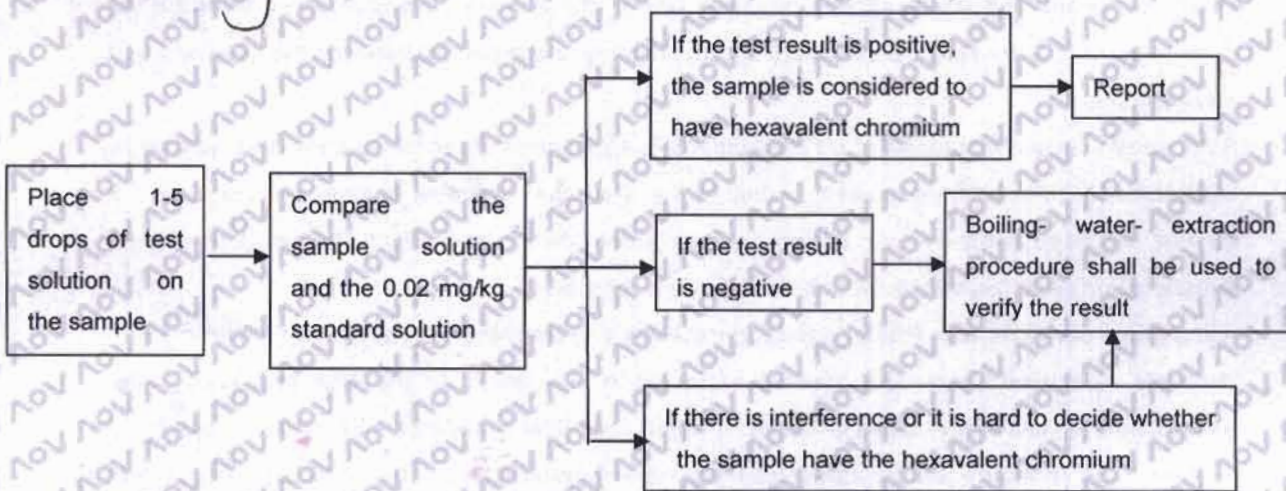


7. To Determine Hexavalent Chromium Content in colorless and colored chromate coating on metals:

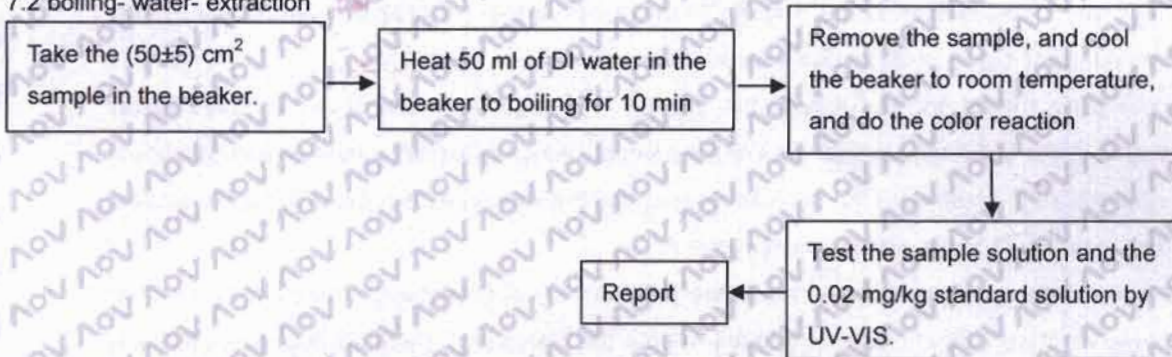
Tested by:

Gary

7.1 spot-test



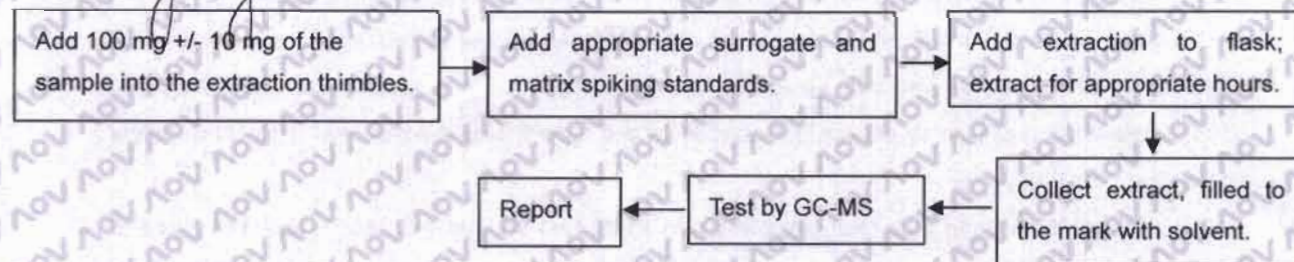
7.2 boiling- water- extraction



8. To Determine PBBs/PBDEs Content:

Tested by:

Young



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Test Results:

Item	Unit	RoHS Limit	1	2	3	4	5	6
Lead (Pb)	mg/kg	1000	N.D.	N.D.	211.4	164.2	42.6	13.5
Cadmium (Cd)	mg/kg	100	N.D.	N.D.	5.9	N.D.	12.2	N.D.
Mercury (Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(CrVI) by spot test	/	/	/	/	/	/	/	Negative
Chromium(CrVI) by boiling water extraction	/	/	/	/	/	/	/	/
Chromium (CrVI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Item	Unit	RoHS Limit	7	8	9	10	11	12
Lead (Pb)	mg/kg	1000	31.3	125.0	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)	mg/kg	100	N.D.	11.0	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(CrVI) by spot test	/	/	Negative	Negative	Negative	Negative	Negative	Negative
Chromium(CrVI) by boiling water extraction	/	/	/	/	/	/	/	Negative
Chromium (CrVI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	/

Item	Unit	RoHS Limit	13	14**	15	16
Lead (Pb)	mg/kg	1000	26.0	24.1	17.6	31.8
Cadmium (Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.
Chromium(CrVI) by spot test	/	/	/	Negative	Negative	Negative
Chromium(CrVI) by boiling water extraction	/	/	/	/	/	Negative
Chromium (CrVI)	mg/kg	1000	N.D.	N.D.	N.D.	/

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Flame Retardants	Unit	RoHS Limit	1	2	3	4	5	13
PBBs	mg/kg	1000	--	--	--	--	--	--
MonoBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DiBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
TriBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
TetraBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PentaBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
HexaBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
HeptaBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
OctaBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
NonaBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DecaBB	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PBDEs	mg/kg	1000	--	--	--	--	--	--
MonoBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DiBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
TriBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
TetraBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PentaBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
HexaBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
HeptaBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
OctaBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
NonaBDE	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DecaBDE	mg/kg	/	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*

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Specimen Description:

No.	Sample name	Material
1	Base (middle seat)	/
2	Base (nether seat)	/
3	Cover	/
4	Adjust tray	/
5	Loop framework	/
6	Loop	/
7	Move contact head Rest contact head	/
8	Move contact board	/
9	Hot element	/
10	Spring	/
11	Iron core	/
12	Iron core plating layer	Zinc
13	Arcing chamber piece	/
14**	Arcubg cganber board	/
15	Junction screw body	/
16	Junction screw plating layer	/

Note:

-Specimens, which requested to determine Cadmium, Mercury and Lead Content, have been dissolved completely.

-mg/kg=ppm

- N.D.=not detected(<MQL)

- MQL=Method Quantitation Limit

- Spot-test:

Negative=Absence of Cr(VI);

-(Deca BDE) In polymeric applications is exempted by commission Decision of 13 Oct 2005 amending directive 2002/95/EC notified under document 2005/717/EC

(The tested sample should be further verified by boiling-water-extraction method if the spot test result is uncertain or negative.)

-**The admixture of specimen 14 is tested as a whole (part) which according to the applicant's request, the result of report as a average value because of the whole specimen is regarded as constituting from the homogeneous material. If according to the provision of RoHS, the testing of specimen 14 may have the obvious difference, and the result may exceed the number in this report. The applicant will undertake all differences and risk.

- Photo is included

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Photographs of Samples



MOTOR PROTECTION BREAKER

End of Report

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