Certificate of Test

No. 1066

This is to certify that the construction described below was tested by the CSIRO Division of Building, Construction and Engineering in accordance with Australian Standard /New Zealand Standard 3013:1995, Electrical installations – classification of the fire and mechanical performance of wiring systems, Appendix A – Fire test method -Wiring systems, on behalf of:-

CCG Australia Pty Ltd
Unit 1/4 Lincoln Lane
JOONDALUP WA

A full description of the test specimen and the complete test results are detailed in the Division of Building, Construction and Engineering's report numbered FSP 0780.

Product Name: Posi-size 1 junction box.

Description: The specimen comprised three cables and three junction boxes attached to the underside of a 1150 mm x 1150 mm x 150 mm thick reinforced slab. The cables were Radox 2 Core + earth, 2.5 mm² control cables. The cables were fixed to the slab using 16 mm galvanised half saddles. The cable ties were earthed. The junction boxes were Posi-size 1, fitted internally with three ceramic terminals and having two external nickel-plated brass cable glands with internal butyl rubber seals. The boxes were secured to the slab with 6 mm dynabolts. Specimen detail is shown in:-

- Drawing number E.00.00.03.000/A, dated 23 January 1997, by CCG Systems.

The cable satisfied the following criterion for the fire test for the period stated:-

Circuit Integrity - 34 minutes

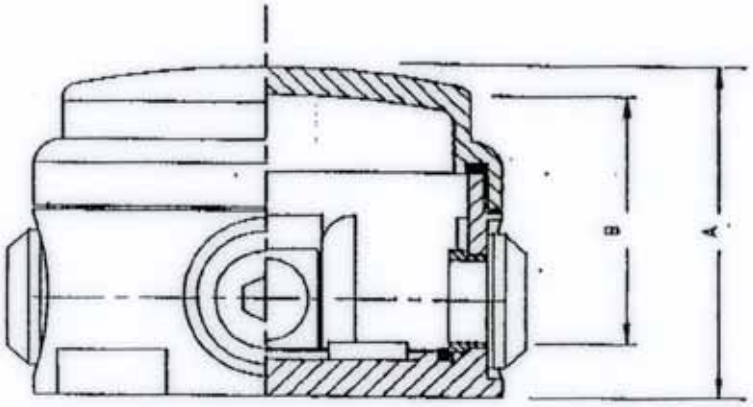
and therefore in terms of Australian Standard/New Zealand Standard 3013:1995, Electrical installations - Wiring systems for the specific applications, the circuit installation tested achieved the classification WS2X.

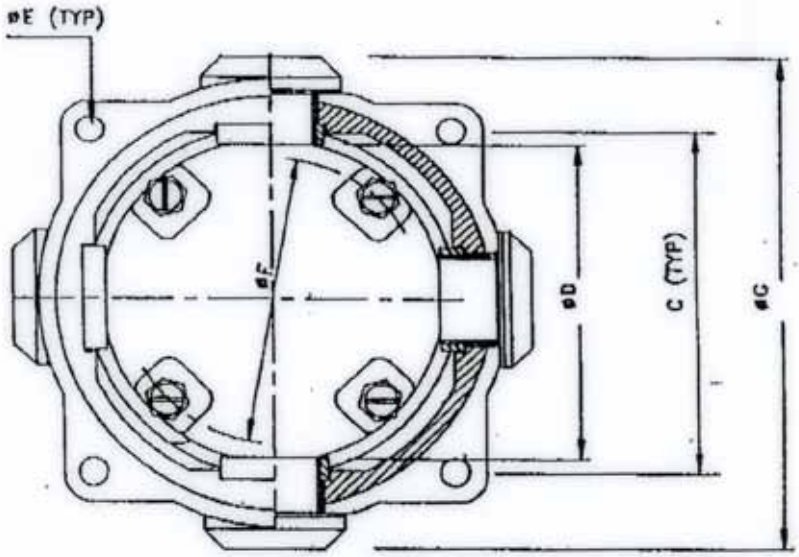
Testing Officer: Gary R G Everingham Date of Test: 20 July 2000

Issued on the 15th day of August 2000 without alterations or additions.

Garry E Collins
Manager, Fire Testing and Assessments

CSIRO
Improving the Built Environment
Building, Construction and Engineering
14 Julius Avenue, Riverside Corporate Park, Delhi Road, North Ryde NSW 2113 AUSTRALIA
Telephone: 61 2 9490 5444 Facsimile: 61 2 9490 5555





BOX SIZE	OVERALL HEIGHT A	INSIDE HEIGHT B	DISTANCE OF FIXING HOLES C	INSIDE SIZE D	BORE SIZE E	DISTANCE F	OUTSIDE DIMENSION G
1	86,0 ±1,0	64,5 ±0,5	90,8 ±0,5	66,0 ±1,0	7,0 ±0,5	80,0 ±1.0	123,0 ±1.0

No	Modifica	Date	Name		Date	Name
				Drawn	23/8/96	CS
				Designed		
				Checked		
1	DWG No. renumbered.	23/01/97	CS	Approved		

Qualified Name: CCG POSI HANDI-FIT Exe BOX

Drawing No: E.00.00.03.000/A

CUSTOM TOOLING COMPANY T/A CCG SYSTEMS
33-37 FORGE ROAD, SPARTAN, KEMPTON PARK
SOUTH AFRICA
TEL. (011) 394-2020

MATERIALS

Ell-dough A12/K200/C
GLASS REINFORCED POLYESTER (GRP) COMPOUND

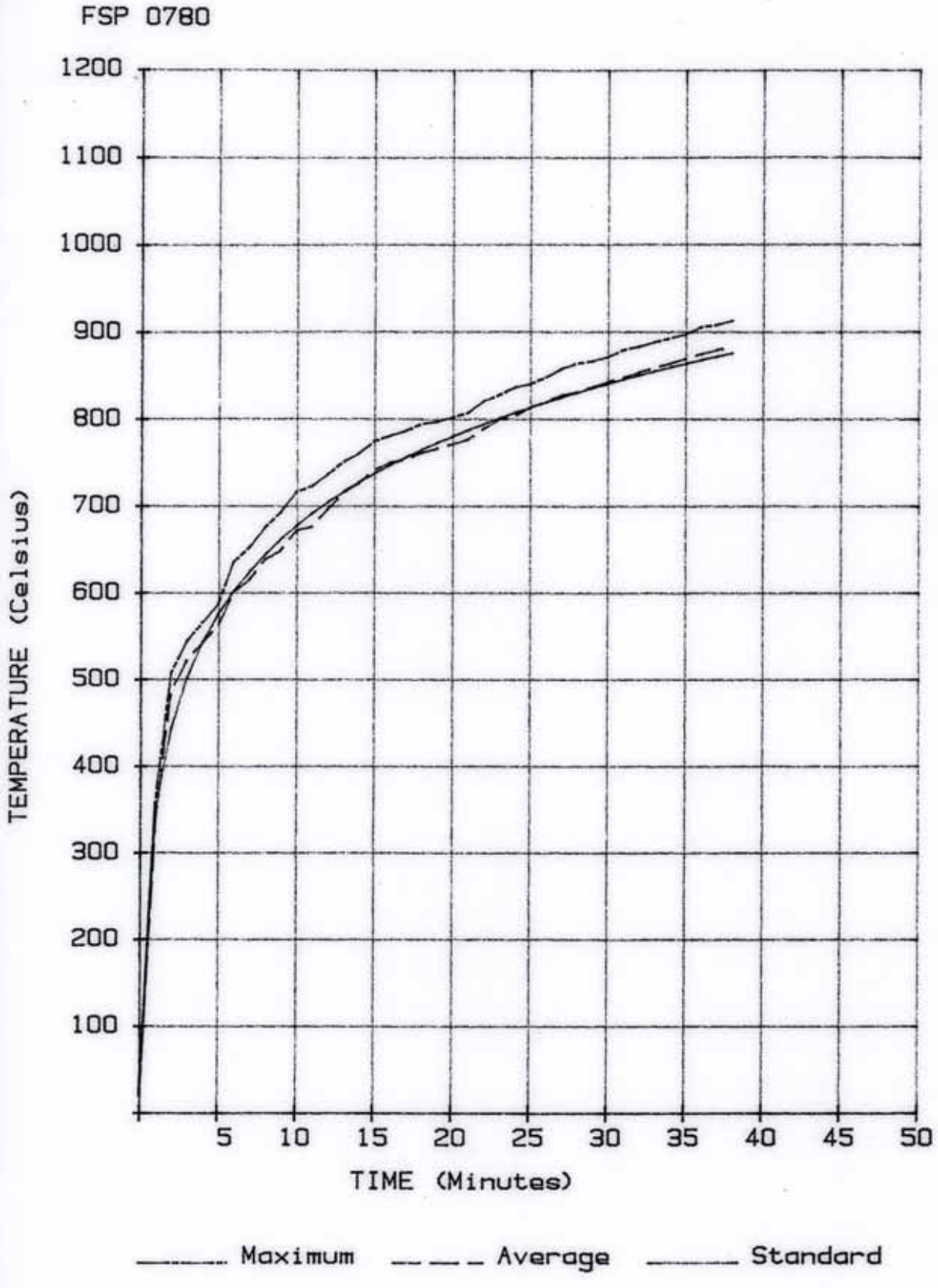


Fig. 1 - FURNACE TEMPERATURE

CSIRO

ATTACHMENTS:
(4 pages)

Figure 1. - FURNACE TEMPERATURE

Photograph 1. – SPECIMEN – Before testing.

Photograph 2. – SPECIMEN – After testing.

Drawing number E.00.00.03.000/A, dated 23 January 1997, by CCG Systems.

A copy of Certificate of Test No. 1066.

TESTED BY:

Gary R G Everingham
Testing Officer

Garry E Collins
Manager, Fire Testing and Assessments

15 AUGUST 2000

DIVISION OF BUILDING,
CONSTRUCTION AND ENGINEERING

EQUIPMENT:

FURNACE
The furnace has a nominal opening of 1000 mm x 1000 mm for attachment of vertical or horizontal specimens.

The furnace is lined with refractory bricks and materials with the thermal properties as specified in AS 1530.4-1997 and is heated by combustion of a mixture of natural gas and air.

TEMPERATURE
The temperature in the furnace chamber was measured by four type K, 3 mm diameter, 310 stainless steel Mineral Insulated Metal Sheathed (MIMS) thermocouples. Each thermocouple was housed in high-nickel steel tubes opened at the exposed end.

MEASUREMENT SYSTEM
The primary measurement system comprised a multiple-channel datalogger scanning at one minute intervals during the test.

After each scan the information was stored on magnetic disc by the computer controller.

MONITORING PANEL:

The panel comprises one circuit for each cable incorporating a 60 W incandescent lamp to load and monitor the integrity of each cable. Each circuit is protected by a 4 amp HRC fuse with a parallelled neon lamp to indicate fuse rupture.

AMBIENT TEMPERATURE:

The temperature of the furnace chamber was 20°C at the commencement of the test.

TEST RESULTS:

CRITICAL OBSERVATIONS

5-30 minutes - All circuits intact.
34 minutes - 5 and 6 light off, neon on. phase to phase short.

FURNACE TEMPERATURE
Figure 1 shows the standard curves of temperature versus time for heating the furnace chamber and the actual curves of average and maximum temperature versus time recorded during the heating period.

PERFORMANCE
Performance observed in respect of the following criteria:

Circuit Integrity - 34 minutes.

CLASSIFICATION:

In terms of Australian Standard/New Zealand Standard 3013:1995, the circuit installation achieves classification: WS2X.

FIRE TEST ON WIRING SYSTEMS

SPONSORED INVESTIGATION No. FSP 0780

IDENTIFICATION OF SPECIMEN: The sponsor identified the specimen as Posi-size 1 junction box with cable.

SPONSOR:
CCG Australia Pty Ltd
Unit 1/4 Lincoln Lane
JOONDALUP WA

MANUFACTURER:
CCG South Africa
33-37 Forge Road
Spartan, Kempton Park
SOUTH AFRICA

TEST STANDARDS: Australian Standard/New Zealand Standard 3013:1995 Electrical Installations – Classification of the fire and mechanical performance of wiring systems, Appendix A – Fire test method – Wiring systems.

TEST NUMBER: FS 3308/2059

TESTED: The fire test was conducted on 20 July 2000.

DESCRIPTION OF SPECIMEN:

GENERAL
The specimen comprised three cables and three junction boxes attached to the underside of a 1150 mm x 1150 mm x 150 mm thick reinforced slab.

The cables were Radox 2 Core + earth, 2.5 mm² control cables.

The cables were fixed to the slab using 16 mm galvanised half saddles. The cable ties were earthed.

The junction boxes were Posi-size 1, fitted internally with three ceramic terminals and having two external nickel-plated brass cable glands with internal butyl rubber seals. The boxes were secured to the slab with 6 mm dynabolts.

DOCUMENTATION: The following documents were supplied by the sponsor as a complete description of the specimen and should be read in conjunction with this report:

Drawing number E.00.00.03.000/A, dated 23 January 1997, by CCG Systems.

Confidential information about the test specimen has been submitted and is retained at the Division of Building Construction and Engineering.

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FSP 0780

FIRE TEST ON WIRING SYSTEMS

In confidence to
CCG AUSTRALIA PTY LTD

15 AUGUST 2000

CSIRO – Division of Building, Construction and Engineering
14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113
Ph: 02 9490 5444 Fax: 02 9490 5528

CONDITIONS APPLYING TO SPONSORED INVESTIGATIONS

In these conditions "report" means "report and/or certificate".

11. Provided the sponsor is the proprietor, manufacturer or accredited agent of the proprietor or manufacturer of the specimen, the sponsor may:

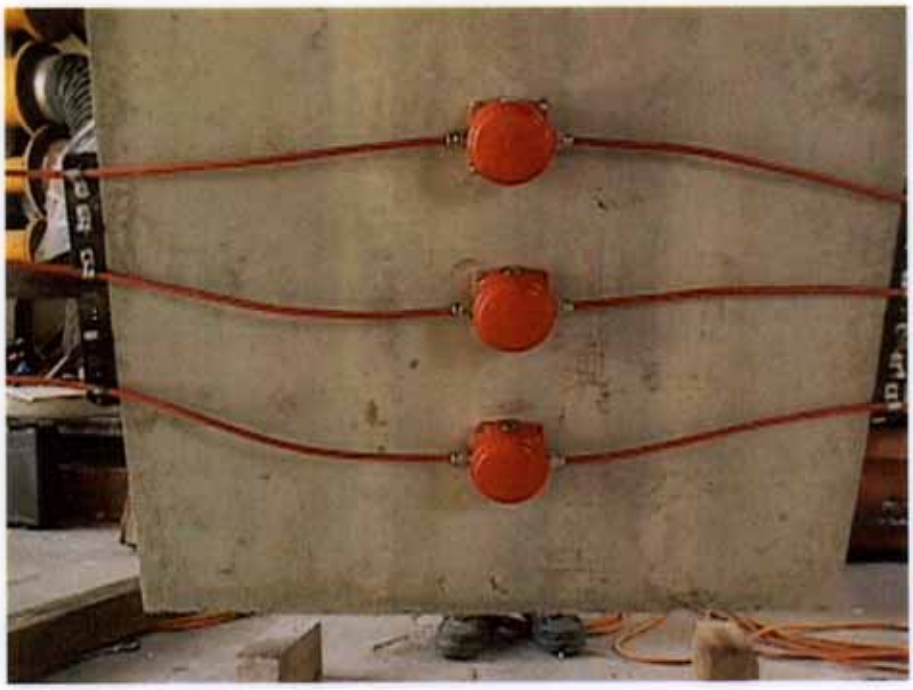
(a) publish the report verbatim and in full as to text, diagrams, photographs and captions, with an added statement that the publication is a copy of the report issued by the Division; and,

(b) refer to the investigation in an advertisement or publish a statement that the specimen has been investigated by the Division, provided the statement includes the report number and nominates an address where the report can be inspected and obtained.

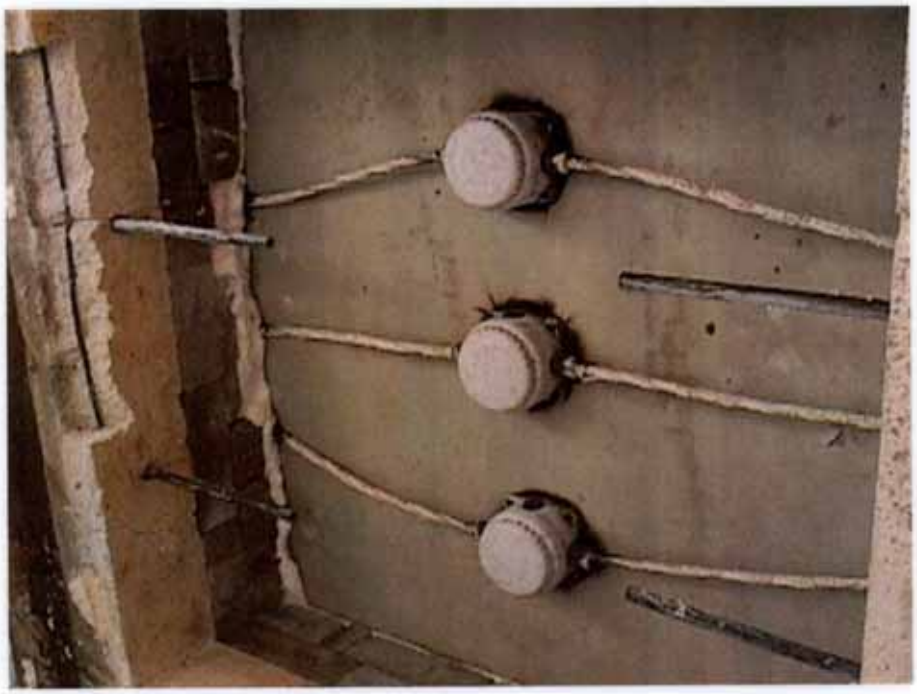
12. Any sponsor who is not the proprietor, manufacturer or accredited agent of the proprietor or manufacturer of the specimen, shall not cause to be published or advertised, a statement that the specimen has been investigated by the Division, a reference to the report, or the report in full without prior written consent of the Division.

13. The sponsor shall not cause to be published or advertised any statement that asserts or implies approval by CSIRO.

14. An extract or abridgment of any report shall not be published in any circumstances without prior written consent of the Division.



Photograph 1. Specimen before testing.



Photograph 2 . Specimen after testing.

DIVISION OF BUILDING,
CONSTRUCTION AND ENGINEERING