

G. 176 : Part 3, October, 1961

BRITISH STANDARDS INSTITUTION
BRITISH STANDARDS HOUSE, 2 PARK STREET, LONDON, W. 1

INCORPORATED BY ROYAL CHARTER
Telephone : MAYFAIR 9000
Telegrams : STANDARDS, AUDLEY, LONDON

BRITISH STANDARD SPECIFICATION FOR
CARTRIDGE FUSES FOR AIRCRAFT
Part 3. Cartridge Fuse-Links (Type B)

FOREWORD

Cartridge fuse-links complying with this Part of British Standard G. 176 are suitable for use on all types of aircraft electrical systems. They are intended to satisfy British Service and Civil airworthiness requirements.

Although fuse-links are detailed in this Part, the standard does not cover these items individually. Except for tag-type fuse-links designed for use as complete fuses, fuse-links and fuse-units are required to be tested as part of a complete fuse.

SPECIFICATION

SCOPE

1. This Part of British Standard G. 176 specifies the requirements for the dimensions and performance of a particular range of aircraft cartridge fuse-links (Type B), generally known as 'AS,' 'AST,' and 'UA' fuse-links.

GENERAL REQUIREMENTS

2. The fuse-links shall comply with the requirements of Part 1 of this British Standard, unless otherwise stated in this Part.

DIMENSIONS

3. The dimensions of the fuse-links shall be in accordance with those shown in Tables 2 or 3, as appropriate.

VOLTAGE, CURRENT RATINGS AND CATEGORY OF DUTY

4. The voltage, current ratings and category of duty of the fuse-links shall be in accordance with those listed in Table 1.

TIME/CURRENT CHARACTERISTICS

5. The time/current characteristics of the fuse-links shall be within the envelope curves shown in Appendix A.

TESTS

6. The fuse-links, suitably mounted, shall be tested in accordance with Part 1, Section Two, of this British Standard.

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TABLE 1.
RATINGS OF FUSE-LINKS

1	2	3	4	5	6	7	8	9
Fuse type	Continuous current rating		Type of end cap	Voltage rating and category of duty	Voltage drop (measured in accordance with Part 1, Appendix A)		Duration of test for minimum fusing current	Cables to be used during tests (to B.S. E.21).
	—65°C to +35°C	+35°C to +85°C			Mean value	Percentage tolerance on mean value		
B.1	amp	amp	} Ferrule or tag	250AC3 120DC3	millivolts	±	hours	}
	0.25	0.2			3050	15		
	0.5	0.4			2890	12½		
	1.0	0.8			620	10		
	2.5	2.0			296	7½		
	5.0	4.0			167	7½		
	7.5	6.0			110	7½		
	10.0	8.0			106	7½		
	12.5	10.0			99	7½		
	15.0	12.0			74	7½		
	20.0	16.0			62	7½		
B.2	30	24	} Tag only	250AC3 120DC3	—	—	1.5	} Unipren 35 Unipren 50
	40	32			—	—		
	50	40			—	—		
B.3	80	64	} Tag only	250AC3 120DC3	—	—	2.0	Unipren 70 Unipren 100
	100	80			—	—		
B.4	160	128	} Tag only	250AC3 120DC3	—	—	2.5	Unipren 150
B.5	200	160	} Tag only	250AC3 120DC3	—	—	2.5	Unipren 200 Unipren 280
	300	240			—	—		

Amendment No. 1, published 4 May, 1964

to British Standard G. 176: Part 3: 1961

Cartridge fuses for aircraft Part 3. Cartridge fuse-links (Type B)

Revision

The primary purpose of this amendment is to introduce a new range of fuse-links with physical dimensions similar to existing types, but with greater anti-surge electrical characteristics. Other performance criteria are unaltered.

The amendment also introduces provision for the use of Nyvin type cables in testing the fuse-links.

Clause 1. Scope. Line 4. Substitute 'UA and UAM' for 'and UA'.

(New) Clause 7. Marking. Insert the following new clause:

'MARKING'

7. In addition to the marking required by Part 1, Section One, of this British Standard, the relevant fuse type letter and number, e.g. 'G.176/B2', shall be marked either on the fuse-link or on the package.'

Table 1. Ratings of fuse-links.

Column 1. Replace: 'B.2' by '*B.2 and B.6'.
'B.3' by '*B.3 and B.7'.
'B.4' by '*B.4 and B.8'.
'B.5' by '*B.5 and B.9'.

Insert the following footnote:

* These fuse-links have different time/current characteristics, cf. Appendix A, Figs. 13 to 20 and Figs. 21 to 28.'

Column 9. Replace by the following:

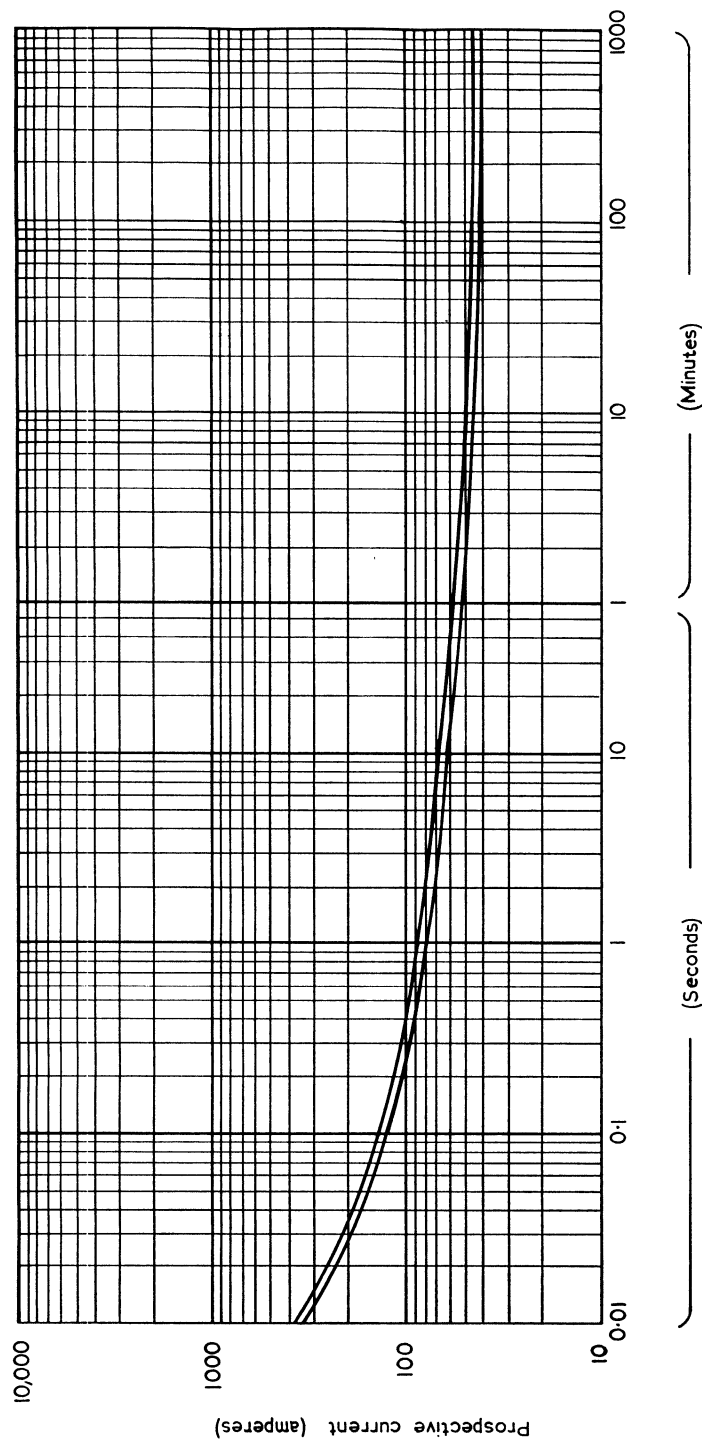
9	10
Cable to be used during tests	
B.S.E.21	B.S.G.177
Unipren 4	Uninyvin 22
Unipren 4	Uninyvin 22
Unipren 4	Uninyvin 22
Unipren 4	Uninyvin 22
Unipren 6	Uninyvin 20
Unipren 6	Uninyvin 20
Unipren 9	Uninyvin 18
Unipren 12	Uninyvin 16
Unipren 18	Uninyvin 14
Unipren 18	Uninyvin 14
Unipren 35	Uninyvin 10
Unipren 35	Uninyvin 10
Unipren 50	Uninyvin 8
Unipren 70	Uninyvin 6
Unipren 100	Uninyvin 4
Unipren 150	Uninyvin 1
Unipren 200	Uninyvin 00
Unipren 280	Uninyvin 0000

Table 3. Dimensions of size B tag-type fuse-links.

First column. Replace: 'B.2' by 'B.2 and B.6'.
'B.3' by 'B.3 and B.7'.
'B.4' by 'B.4 and B.8'.
'B.5' by 'B.5 and B.9'.

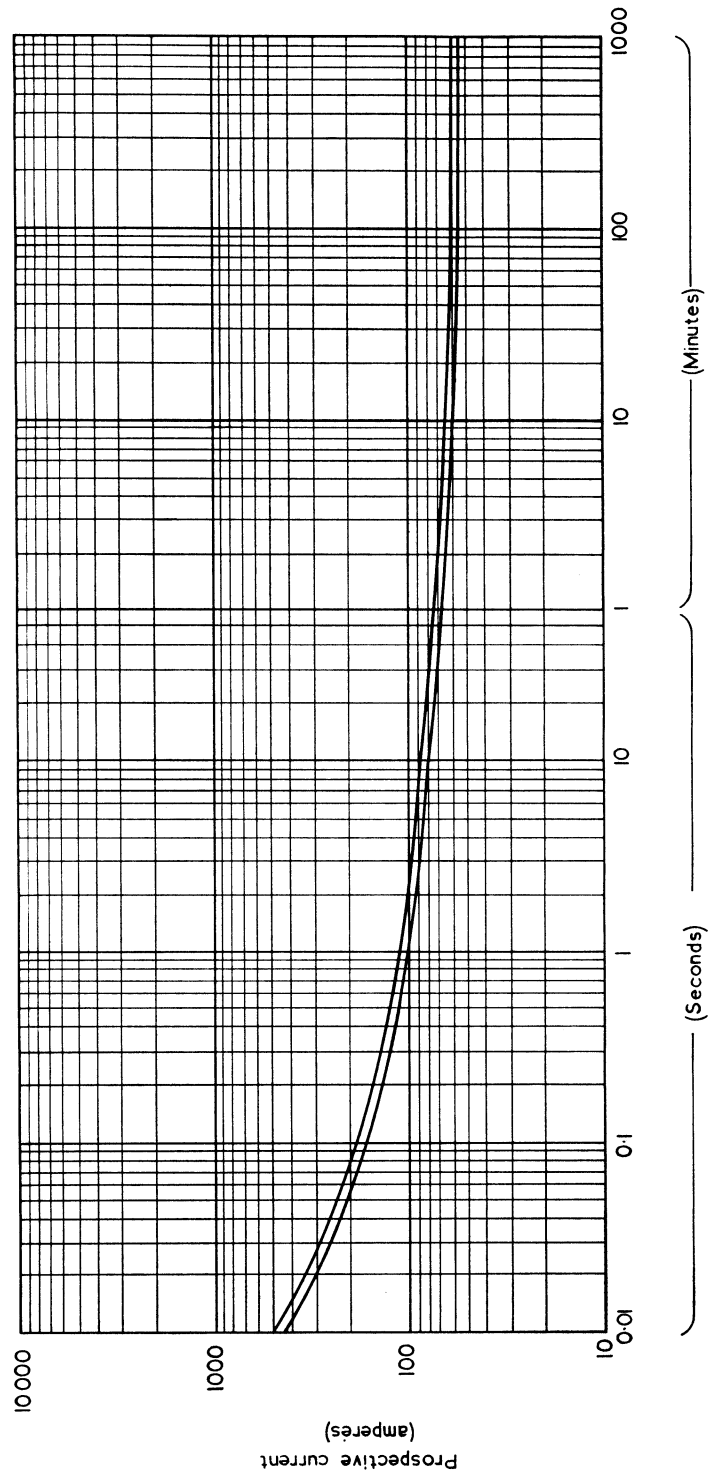
Thirteenth column. Correct dimension J max. for fuse type B.1 to 0.313 in.

Appendix A. Envelope curves of time/current characteristics of fuse-links. Insert new Figs. 21 to 28, attached.



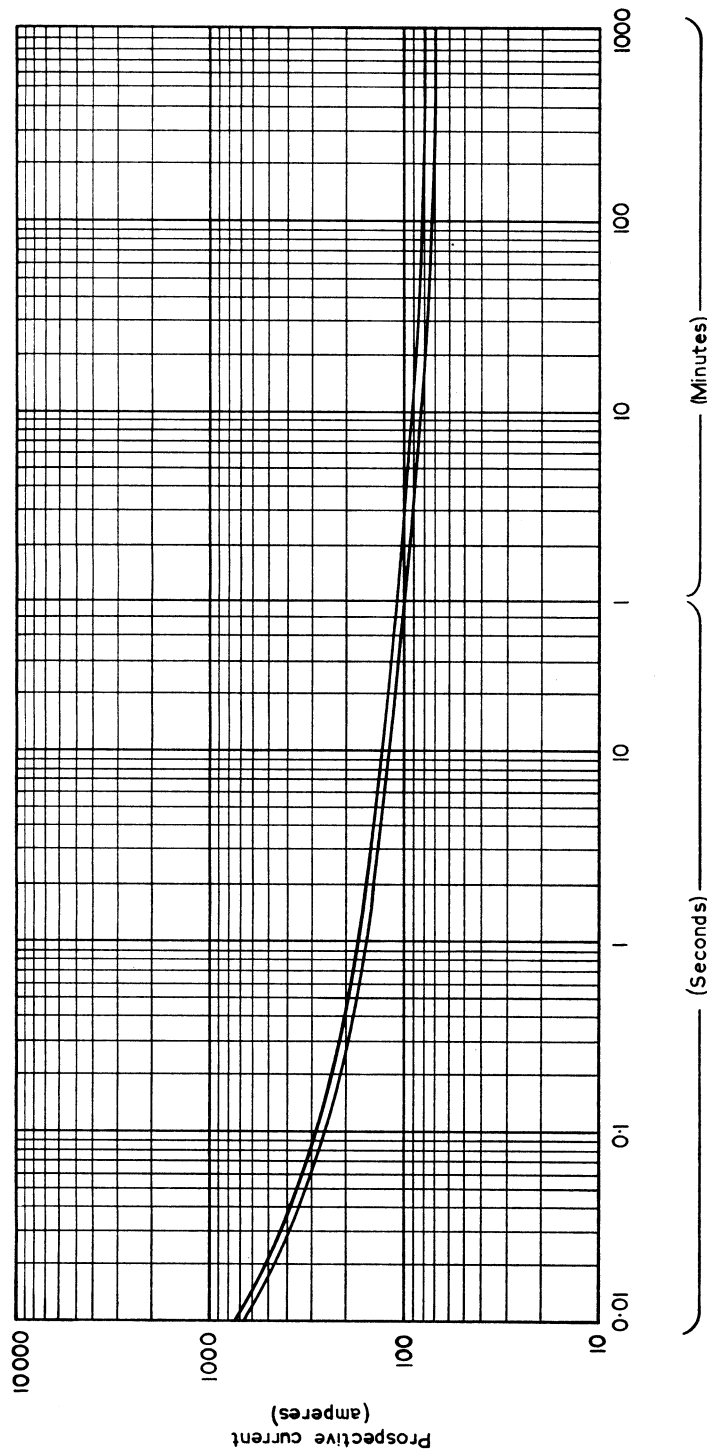
Pre-arcing time

Fig. 21. Size B.6, 30 amp.



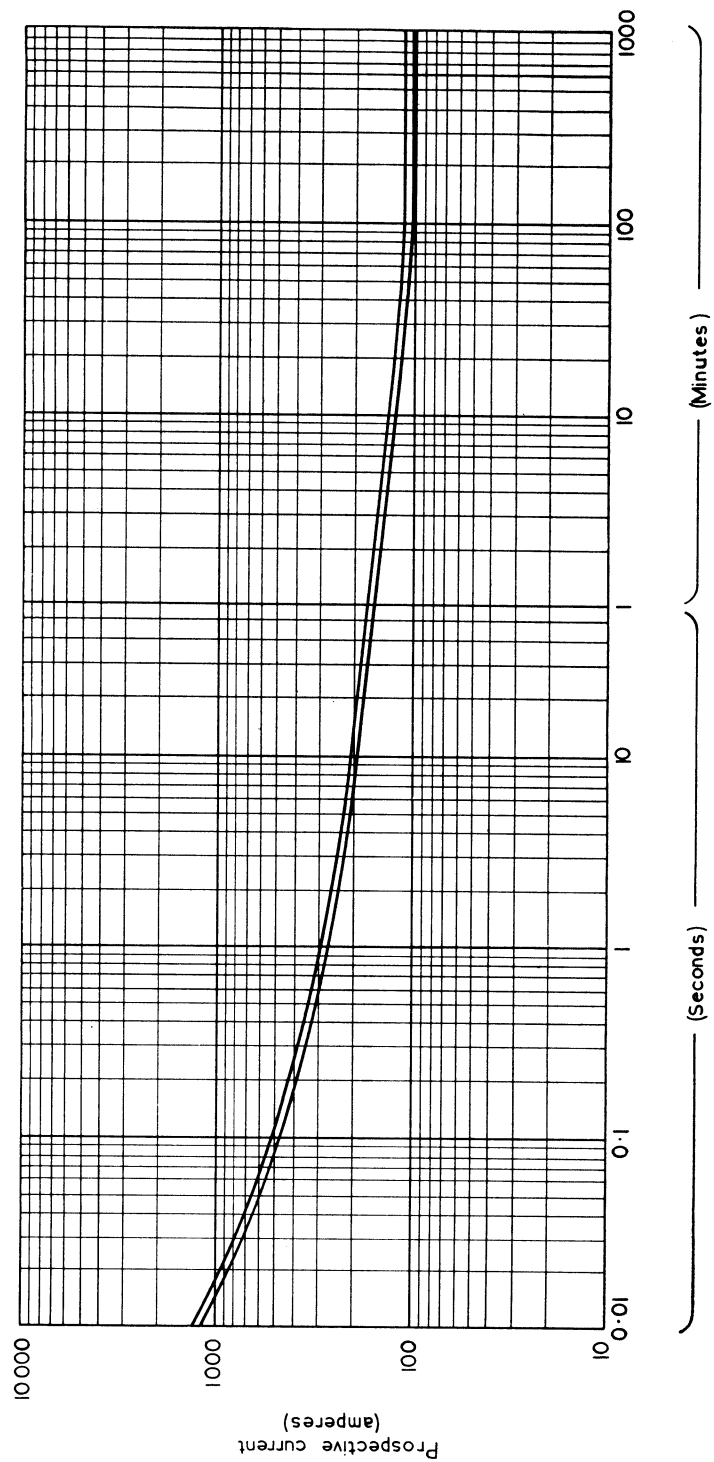
Pre - arcing time

Fig. 22. Size B.6, 40 amp.



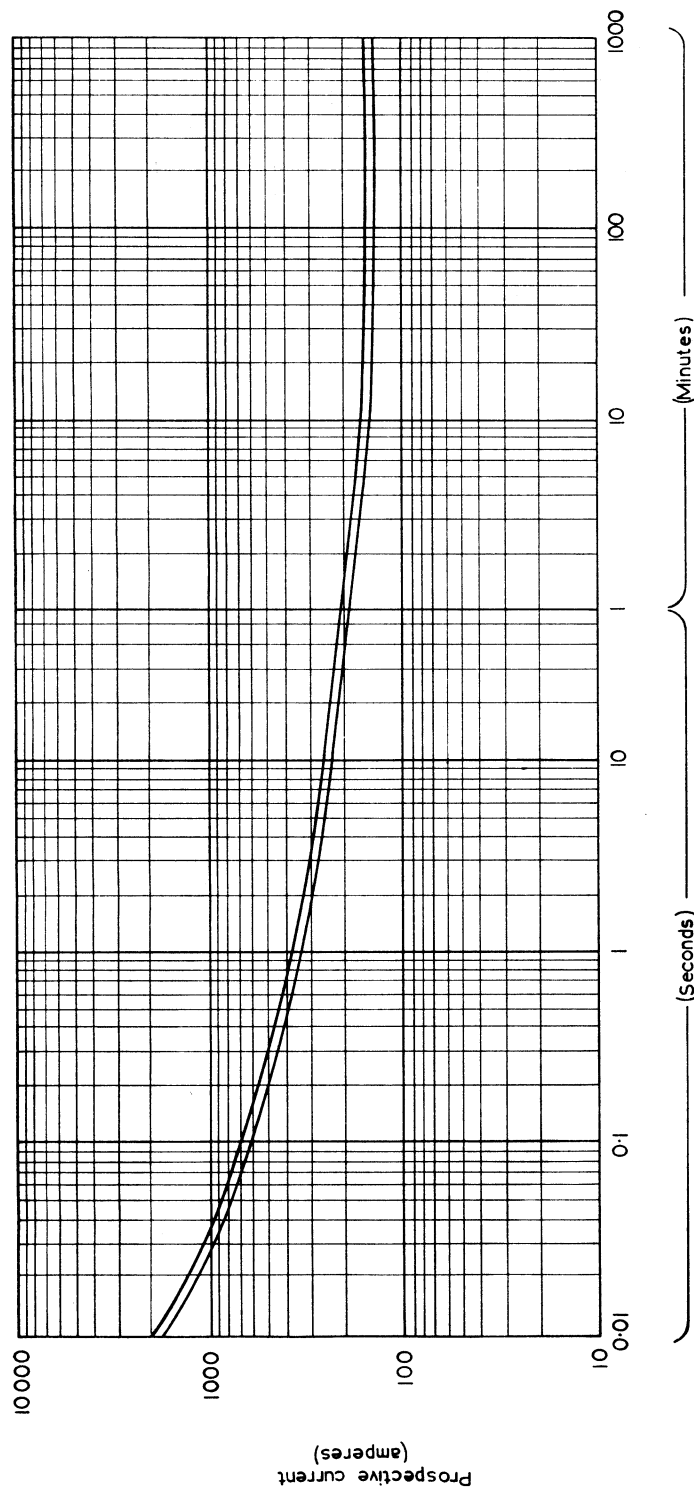
Pre - arcing time

Fig. 23. Size B.6, 50 amp.



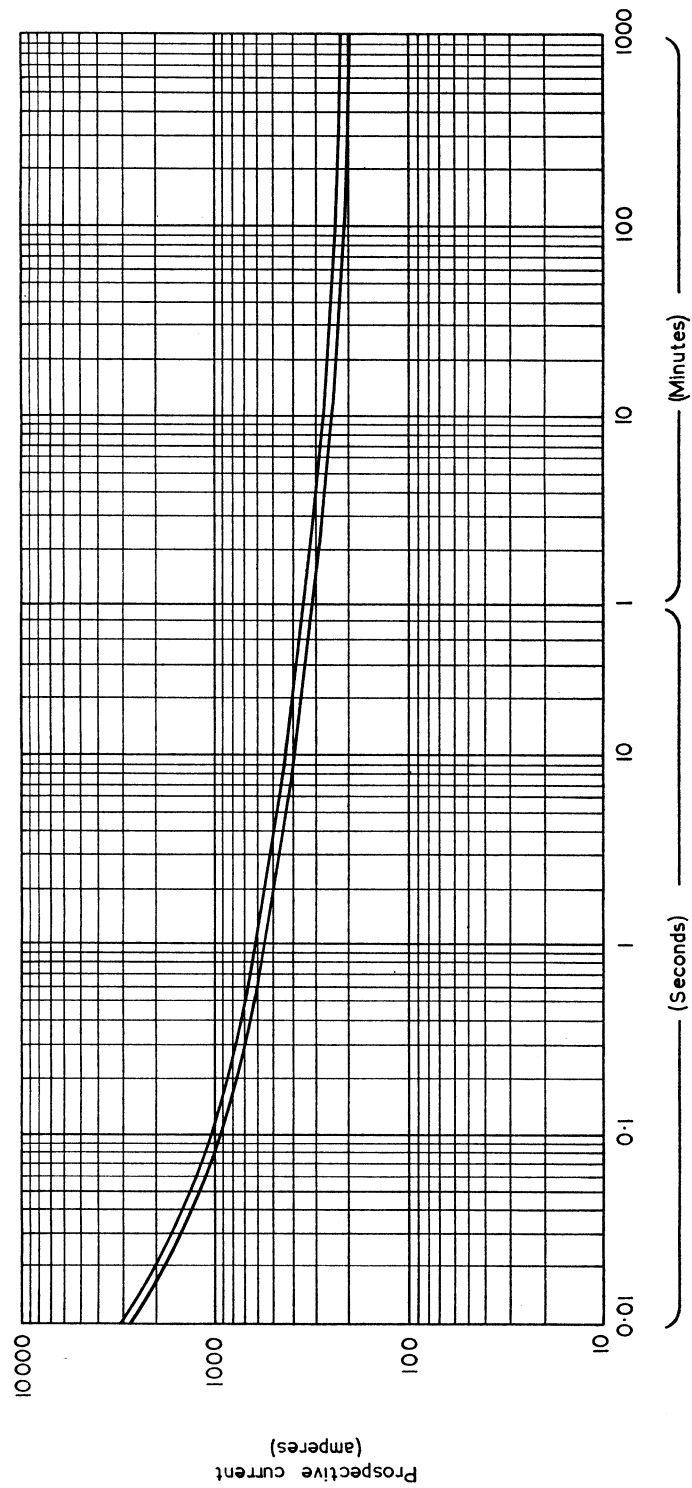
Pre - arcing time

Fig. 24. Size B.7, 80 amp.



Pre - arcing time

Fig. 25. Size B.7, 100 amp.



Pre - arcing time

Fig. 26. Size B.8, 160 amp.