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Guidance on Industry Standard for Low Voltage Metal-Enclosed Switchgear (IEEE C37.20.1)

GIS 12-102

BP GROUP
ENGINEERING TECHNICAL PRACTICES

Foreword

This Guidance on Industry Standard (GIS) is based on parts of heritage documents from the merged BP companies as follows:

Amoco

A EL-SG-LV-P Electrical—Switchgear—Low Voltage Metal-Enclosed—Supply Specification

ARCO

ES 411-89 Low Voltage Switchgear

BP Chemicals - Nitriles

CP 17-5-3 Low Voltage Switchgear

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Introduction

- a. Guidance for low-voltage ac metal-enclosed switchgear is based on IEEE C37.20.1-2002, *IEEE Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear*, as amended by C37.20.1a-2005.
- b. Guidance statements of this GIS are modifications to IEEE C37.20.1.
- c. Modifications to IEEE C37.20.1 are identified as Add, Modify to Read, or Delete.
- d. Paragraph numbers in this GIS correspond to IEEE C37.20.1.
- e. Paragraphs of IEEE C37.20.1 as amended by C37.20.1a-2005 that are not revised by this GIS remain applicable.



1 Scope

Add

The Supplier shall be knowledgeable of the requirements of this Standard and those referenced in Section 2. Any changes or alterations to the equipment to make it meet these requirements shall be solely at the expense of the Supplier.

Whenever proposed equipment cannot fully meet the requirements of this Standard, such exceptions shall be clearly stated in writing. No exceptions shall be allowed, unless approved by the BP Electrical Engineer.

2 References

Add

BP DS 12-102, Data Sheet for Low-Voltage Metal-Enclosed Switchgear (IEEE C37.20.1)

ANSI C37.17-1997, American National Standard for Trip Devices for AC and General Purpose DC Low Voltage Power Circuit Breakers

ANSI/IEEE C37.90-1989, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus

UL 1558, Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear

3 Definitions

3.1 General

Add

3.1.16 spare: A completely ready-to-operate unit, including the drawout breaker and all required secondary devices, fully wired.

3.1.17 fully equipped space: Same as a spare, except without a breaker.

3.1.18 blank space: A cubicle with main bus, blank door and no secondary devices. Steel work shall be done so the blank space can be equipped in the field without cutting or welding.

3.1.19 main bus: Group of conductors that serves as a common connection for all power circuits in the assembly. This includes all interconnections to and between the Main Breaker(s) and the Tie Breaker(s).

5. Ratings

5.4 Rated current

5.4.1 Rated continuous current

Add

The continuous current rating of any circuit breaker shall not be based on forced air cooling.

The continuous current rating of the main bus shall be as shown on the data sheet.

Add

5.4.5 Short circuit bracing

The minimum main bus bracing shall be 100,000 amps.

