



Document No.	GP 12-10
Applicability	Group
Date	12 December 2003

Guidance on Practice for Switchgear and Controlgear

GP 12-10

BP GROUP
ENGINEERING TECHNICAL PRACTICES

Foreword

This is the first issue of Engineering Technical Practice (ETP) GP 12-10. This Guidance on Practice (GP) is based on parts of heritage documents from the merged BP companies as follows:

Amoco

A EL-SWC-SMCB-G	Electrical—Switching and Control—Switch Gear, Motor Control, & Bus Duct—Guide.
A EL-SWC-SMCB-E	Electrical—Switching and Control—Switch Gear, Motor Control, & Bus Duct—Engineering Specification
A EL-SG-LV-P	Electrical—Switchgear—Low-Voltage Metal-Enclosed—Supply Specification
A EL-SG-MV-P	Electrical—Switchgear—Medium-Voltage Metal-Enclosed—Supply Specification

ARCO

ES 405-90	Medium Voltage Motor Controllers (2400, 4160 and 4800 V)
ES 405-91	Medium Voltage Motor Controllers 5 kV Rated, Outdoor Class 1, Division 2 Type
ES 411-89	Low Voltage Switchgear
ES 412-90	Medium Voltage Switchgear

BP GOMDW

EL-SP-4024	Low Voltage Motor Control Centers
EL-SP-4032	Medium Voltage Metal Clad Switchgear and Bus Duct
EL-SP-4036	Medium Voltage Motor Control Center

BP Chemicals US

CP 17-5-2	Medium Voltage Vacuum Switchgear
CP 17-5-3	Low Voltage Switchgear
CP 17-6-1	Medium Voltage Motor Controllers
CP 17-6-2	Motor Control Centers 600 V Class
CP 17-25-1	Medium Voltage Metal Enclosed Switch (ME Switch)

British Petroleum

RP 12-6	Electrical Systems and Installations-High Voltage Switchgear
RP 12-7	Electrical Systems and Installations-Low Voltage Switchgear
GS 112-8	Guidance for Specification 112-8 Low Voltage Switchgear and Control Gear
GS 112-9	Guidance for Specification 112-9 High Voltage Switchgear and Control Gear

Copyright © 2003, BP Group. All rights reserved. The information contained in this document is subject to the terms and conditions of the agreement or contract under which the document was supplied to the recipient's organization. None of the information contained in this document shall be disclosed outside the recipient's own organization without the prior written permission of Manager, Standards, BP Group, unless the terms of such agreement or contract expressly allow.



Table of Contents

	Page
Foreword	2
1. Scope	4
2. Normative references.....	4
3. Design and installation requirements	5
3.1. General.....	5
3.2. Ratings	7
3.3. Low voltage motor control and contactor feeder units	8
3.4. Trip circuit supervision	9
3.5. Interlocks	9
3.6. Control.....	10
3.7. Protection relays and instrumentation	11
3.8. Earthing/grounding.....	11
4. International Electrotechnical Commission (IEC) standard requirements for switchgear and controlgear.....	11
4.1. IEC low voltage switchgear and controlgear.....	11
4.2. IEC high voltage switchgear and controlgear	11
5. American National Standards Institute (ANSI) standard requirements for switchgear and controlgear.....	11
5.1. ANSI low voltage switchgear.....	11
5.2. ANSI high voltage switchgear	11
5.3. ANSI low voltage motor control.....	11
5.4. ANSI high voltage motor control.....	11
Bibliography	12



1. Scope

This GP document provides guidance for the design, materials, fabrication, inspection, testing, documentation, and preparation for shipment of high and low voltage switchgear and controlgear.

2. Normative references

The following normative documents contain requirements that, through reference in this text, constitute requirements of this technical practice. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this technical practice are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

American National Standards

C37.16	Low-Voltage Power Circuit Breakers and AC Power Circuit Protectors, Preferred Ratings, Related Requirements and Application Recommendations
--------	---

BP

GIS 12-101	Guidance on Industry Standard for Low Voltage Switchgear and Controlgear Rated Below 1 kV (IEC)
GIS 12-102	Guidance on Industry Standard for Low Voltage Switchgear and Controlgear Rated Below 1 kV (ANSI)
GIS 12-103	Guidance on Industry Standard for High Voltage Switchgear and Controlgear (IEC)
GIS 12-104	Guidance on Industry Standard for High Voltage Metal Clad Switchgear and Controlgear (ANSI)
GIS 12-106	Guidance on Industry Standard for Low Voltage Motor Controllers and Motor Control Centers (ANSI)
GIS 12-108	Guidance on Industry Standard for High Voltage Motor Controllers and Motor Control Centers (ANSI)
GP 12-01	Guidance on Practice for Power System Design
GP 12-03	Guidance on Practice for Power System Protection and Control
GP 12-25	Guidance on Practice for Earthing/Grounding

International Electrotechnical Commission (IEC)

IEC 60529	Classification of degrees of protection provided by enclosures
IEC 60694	Common specifications for high-voltage switchgear and controlgear standards
IEC 60947-1	Low-voltage switchgear and controlgear — Part 1: General rules
IEC 62271-200	High-voltage switchgear and controlgear — Part 200: A.C. metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV

National Electrical Manufacturers Association (NEMA)

ICS 3	Industrial Control and Systems: Medium Voltage Controllers Rated 2001-7200 Volts A.C.
ICS 6	Industrial Control and Systems: Enclosures

