

# P1242

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**Submitter Email:** art@amtechnologygroup.com  
**Type of Project:** Revision to IEEE Standard 1242-1999  
**PAR Request Date:** 10-Sep-2010  
**PAR Approval Date:** 08-Dec-2010  
**PAR Expiration Date:** 31-Dec-2014  
**Status:** PAR for a Revision to an existing IEEE Standard  
**Root Project:** 1242-1999

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**1.1 Project Number:** P1242  
**1.2 Type of Document:** Guide  
**1.3 Life Cycle:** Full Use

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**2.1 Title:** Guide for Specifying and Selecting Power, Control, and Special-Purpose Cable for Petroleum and Chemical Plants  
**Old Title:** IEEE Guide for Specifying and Selecting Power, Control, and Special-Purpose Cable for Petroleum and Chemical Plants

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**3.1 Working Group:** Petrochemical Cables Working Group (IAS/PCI/P1242 WG)  
**Contact Information for Working Group Chair**

**Name:** Donald Voltz  
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**Contact Information for Working Group Vice-Chair**  
None

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**3.2 Sponsoring Society and Committee:** IEEE Industry Applications Society/Petroleum & Chemical Industry (IAS/PCI)  
**Contact Information for Sponsor Chair**

**Name:** William McBride  
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**Contact Information for Standards Representative**  
None

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**3.3 Joint Sponsor:** IEEE Power and Energy Society/Insulated Conductors (PE/IC)  
**Contact Information for Sponsor Chair**

**Name:** Rachel I Mosier  
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**Contact Information for Standards Representative**

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 09/2013

**4.3 Projected Completion Date for Submittal to RevCom:** 10/2014

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 30

**5.2 Scope:** This guide provides information on the specification and selection of power, control, and special-purpose cable, as typically used in petroleum, chemical, and similar plants. It addresses materials, design, testing, installations, and applications. More recent developments such as fire-rated circuit integrity cables have been included. This guide is not intended to be a design document, although many of the problems associated with the specification and selection of power, control, and special-purpose cable for petroleum and chemical plant

**Old Scope:** The scope of this project has been expanded to not only cover power and control cables (per original PAR) but many types of special purpose cables used in the petroleum and chemical industry. This Guide provides the user information on cable standards, specifications, applications, installations, testing and areas of interest on cable pertaining to the petrochemical industry. Special purpose cables such as Type PLTC, Tyhpe ITC Fiber Optic, voice and data, coaxial and others are addressed. Figures showing constructgion of the most commonly used cable

applications can be avoided by considering the information presented in this guide. It is recognized that there may be other types of cable used in the petroleum and chemical industries, especially considering the global marketplace. This guide should not be interpreted as precluding the use of such cables.

types are also included.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** The purpose of this guide is to provide the user with cable designs, applications, and test procedures that are common to the petroleum, chemical, or similar type of industry. It is intended as an informational tool for the new as well as the more seasoned engineer. In this capacity, it contains an extensive single-point reference and cross-reference list of standards as they apply to the wire and cable industry, including U.S. and Canadian standards. It provides application guidelines for the type of installations found in petroleum and chemical plants as they relate to electrical, mechanical, physical, thermal, and environmental properties of the cable. The use of this guide should help to eliminate premature cable failure due to improper specification, selection, and application of cable in petroleum and chemical plants.

**Old Purpose:** No specific guide currently exists for specifying and selecting power, control and special purpose cables for use in petroleum and chemical plants. This guide provides application guidelines for the type installations found in petroleum and chemical plants as they relate to electrical mechanical, physical, thermal and environmental properties of the cable. In doing so, it addresses those areas of concern including chemical atmospheres, contamination, corrosion, environmental effects, and fire retardant considerations. It is intended to help eliminate premature cable failure due to improper specifications, selection and application of cable in this industry.

**5.5 Need for the Project:** The purpose of this revision is to update this Guide to include the latest cable engineering technology, methods, materials, and installation practices designed to improve the performance of these cables. Each clause of the guide will be reviewed for correctness and additional clauses will be added to reflect the latest time-tested technology for cables used in petrochemical plants.

**5.6 Stakeholders for the Standard:** Petrochemical Plants and Refineries, Engineering Firms, Wire and Cable Manufacturers, Oil and Gas Companies

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## Intellectual Property

**6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?:** No

**6.1.b. Is the Sponsor aware of possible registration activity related to this project?:** No

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**7.1 Are there other standards or projects with a similar scope?:** No

## 7.2 Joint Development

**Is it the intent to develop this document jointly with another organization?:** Yes

**Organization:** IEEE

**Technical Committee Name:** WG Guide for Specifying and Selecting Power, Control, and Special-Purpose Cable for Petroleum and Ch

**Technical Committee Number:** D3W

**Contact Name:** Arturo Maldonado

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## 7.3 International Activities

### a. Adoption

**Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization?:** No

### b. Harmonization

**Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?:** No

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## 8.1 Additional Explanatory Notes (Item Number and Explanation):