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PROGRAM INFORMATION BULLETIN NO. P07-07

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SUBJECT: MSHA Evaluation of Non-MSHA Product Safety Standards for Explosion-proof Enclosures

**Who needs this information?**

Mine equipment manufacturers, mine equipment rebuild facilities, miners' representatives, underground coal and gassy metal and nonmetal mine operators, Mine Safety and Health Administration (MSHA) enforcement personnel, and other interested parties should have this information.

**Why is MSHA issuing this Program Information Bulletin ?**

The purpose of this Program Information Bulletin (PIB) is to inform interested parties that flameproof enclosures that meet the International Electrotechnical Commission's (IEC) Standards, with certain modifications, can meet MSHA approval. MSHA reviewed the requirements of the IEC Standards for Electrical Apparatus for Explosive Gas Atmospheres to determine if they are equivalent to the Agency's product approval requirements or can be modified to provide at least the same degree of protection as those requirements. MSHA has determined that explosion-proof (flameproof)

enclosures and electric motor assemblies that are designed and tested according to IEC 60079-0 (Fourth Edition, 2004-01) and IEC 60079-1 (Fifth Edition, 2003-11), with certain modifications, provide at least the same degree of protection as MSHA's applicable product approval requirements. MSHA's equivalency determination for IEC flameproof (explosion-proof) enclosures and electric motor assemblies was published on May 17, 2006 (71 FR 28581).

**What are MSHA's approval requirements for explosion-proof enclosures and electric motors built and tested according to the IEC standards?**

Enclosures (motors) designed and tested according to the IEC Standards, with the modifications specified in the May 17 Federal Register Notice, are required to be as strong and rugged in construction as explosion-proof enclosures (motors) approved under MSHA standards (30 CFR Parts 7 and 18) and be capable of preventing ignition of the atmosphere surrounding the enclosure when internal ignitions occur. Details of MSHA's equivalency determination for IEC flameproof enclosures (motors), including the necessary modifications, can be viewed on the World Wide Web by accessing the MSHA home page (http://www.msha.gov) and choosing "Part 6 Single Source" and then choosing "06-4391 - Evaluation of International Electrotechnical Commission's Standards for Explosion-Proof Enclosures."

**How can products approved under non-MSHA product safety standards be identified in the field?**

In 2003, MSHA published PIB No. P03-22, *Change to Format for MSHA Approval Numbers* to differentiate between products approved under current MSHA regulations and products approved under non-MSHA product safety standards. Under that numbering system, products approved under MSHA standards contain a single "A" in the standard numbering sequence PP-**AAA**YYXXXX-0 (example: 07-J**A**YYXXXX-0 or 18-XP**A**YYXXXX-0). Products approved under non-MSHA product safety standards contain a letter other than "A" in this sequence. The relevant CFR part is identified in the first two digits of the number ("PP" digits). MSHA accepted the IEC Standards for Flameproof (Explosion-proof) Enclosures, as modified, both for Part 7 and for Part 18. For this reason, any particular equivalency determination approval number will be formatted as either 07-J**B**YYXXXX-0 or 18-XP**B**YYXXXX-0, depending upon the part under which the product was approved. The approval number contains the letter "B" in the "**AAA**" field because these IEC standards, as modified, constitute the first non-MSHA product standards accepted under each of these parts.

**How will inspection procedures for explosion-proof enclosures and electric motors approved according to these non-MSHA product safety standards differ?**

MSHA does not anticipate major changes to procedures currently used for the inspection of explosion-proof enclosures and electric motor assemblies. Flame arresting path and gap clearance requirements for equipment approved with non-MSHA product safety standards remains as those specified in current MSHA regulations. Lead

entrance designs and the methods of securing unused lead entrances and removable covers may be different from those currently approved under 30 CFR Parts 7 and 18. There may also be deviations from existing designs in bolt size and spacing and for minimum wall, cover, and flange thicknesses. Existing inspection procedures covering these areas may need to be adjusted accordingly. MSHA intends to publish a compliance guide that will address changes to inspection procedures. This compliance guide, when available, may be obtained on the World Wide Web by accessing the MSHA home page (http://www.msha.gov) and choosing "Part 6 Single Source."

**What is the background for this PIB?**

On June 17, 2003, MSHA published a final rule, Testing and Evaluation by Independent Laboratories and Non-MSHA Product Safety Standards (68 FR 36407). The final rule established alternate requirements for testing, evaluation, and approval of products used in gassy underground mines under 30 CFR Parts 7, 18, 19, 20, 22, 23, 27, 33, 35, and 36. The final rule permitted manufacturers seeking MSHA approval of their products to use an independent laboratory to test their products in accordance with Agency standards. The final rule also allowed manufacturers to test their products in accordance with non-MSHA product safety standards once the Agency had determined that the non-MSHA standards were equivalent to MSHA's applicable product approval requirements or could be modified to provide at least the same level of protection.

The final rule requires that MSHA publish in the Federal Register a listing of all equivalency determinations in 30 CFR Part 6 and in the applicable approval parts of 30 CFR. A listing of the equivalency determination for electric motor assemblies is included in 30 CFR 7.10(c). The listing of the equivalency determination for explosion-proof enclosures is included in 30 CFR 18.6(a)(3).

**What is MSHA's authority for this PIB?**

The Federal Mine Safety and Health Act of 1977, as amended, 30 U.S.C. § 801 et seq.; 30 CFR §§ 6.20, 7.10(c), and 18.6(a)(3).

**Is this PIB on the Internet?**

This PIB may be viewed on the World Wide Web by accessing the MSHA home page (http://www.msha.gov) and choosing "Compliance Assistance" and then choosing "Program Information Bulletins."

**Who is the MSHA contact person for this PIB?**

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**Who will receive this PIB?**

MSHA Program Policy Manual Holders
Underground Mine Operators
Manufacturers of Mine Equipment and Mining Products
Repair and Rebuild Facilities
Miners' Representatives