

General Notes:

1. *This guide specification is to be inserted into an existing specification section.*
2. *Proposed modifications shall be reviewed by Harger Lightning and Grounding.*
3. *The finalized version shall be included in the project contract documents.*

Editing Notes:

1. *This specification section must only be altered by notation (i.e. deleted text with strikethrough and additional text with double underline). This shall be accomplished by using Tools / Track Changes / Highlight Changes, and select "Track changes while editing" in MS Word or equivalent.*
2. *The Review Submittal Specification section shall be provided in electronic form for Harger Review.*
3. *Leave the following note ("For Construction Document Review, Design Submittal") as part of the review submittal to aid any reviewer to understand WHY there are strikeouts and underlines.*
4. *After comments are received from Harger and incorporated, the strikeouts, underlines and reviewer notes are to be deleted before the spec is issued for Bidding.*

**SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS**

PART 2 - PRODUCTS

2.01 APPROVED MANUFACTURER



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2.02 ULTRASHOT® EXOTHERMIC WELDING SYSTEM

- A. Basis of Design: Subject to compliance with requirements, provide [UltraShot](#) welding system. The system supplied under this specification shall include weld metal, molds, electronic ignition controller, tools, and accessories as required.
- B. Components:
 1. Molds: Shall be made from a synthetic graphite material capable of withstanding high temperatures and provide an average life span of not less than one hundred connections. For quality assurance purposes, molds shall have a manufacturer's identification mark milled directly into the mold cavity which will leave an identifying mark on the finished connection.
 2. Mold Handles: Shall be modular in nature to allow for various support kits or clamps. Handle clamps with permanently attached support kits or clamps are cost prohibitive and shall not be used.
 3. Weld Metal: Shall be contained in consumable copper cartridges and shall contain a pure source of copper oxide. Copper oxide derived from copper mill scale shall not be used.
 4. Electronic Ignition Controller: Shall utilize a two button safety system with a one-two second delay to safely and efficiently ignite the weld metal. Capacitive discharge systems require up to 600V to ignite and are considered unsafe and shall not be used.

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

- A. The use of the UltraShot exothermic welding system shall require minimum training. Factory trained and certified instructors shall respond to field calls quickly and provide training for construction crews on the proper techniques to safely and efficiently produce an exothermically welded connection.

END OF SECTION