

Standard Operating Procedure Bonding Procedure for PVDF Infrared 225 Fusion Method	SOP No. 5.032
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- 1 Purpose
 - 1.1 To establish a standard procedure for all Therma bonders performing polyvinylidene fluoride (PVDF) infrared (IR) 225 fusion method.
- 2 Scope
 - 2.1 This procedure applies to all Therma bonders performing the PVDF IR 225 fusion method.
- 3 Responsibility
 - 3.1 All bonders will be qualified under the direct supervision of the quality control department.
 - 3.2 Only qualified bonders are to perform the following procedures.
- 4 References
 - 4.1 ASME B31.3 - "Chemical Plant and Petroleum Refinery Piping," 1993 Edition.
- 5 Storage Requirements
 - 5.1 All PVDF material shall be isolated and stored in a clean dry storage area.
 - 5.2 The material in the storage area shall be sufficiently supported so as to prevent bowing.
- 6 Procedures
 - 6.1 Gowning
 - 6.1.1 Wear clean powder free gloves to handle all cleaned PVDF pipe and components.

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6.1.2 When fabricating in clean areas (i.e. Class 10 or 10,000), wear clean room garments.

6.1.3 Follow project specification for gowning procedure as required when performing this procedure in the field.

6.2 Tool Cleaning

6.2.1 Clean all hand tools (including pipe cutters, chamfering and peeling tools) with isopropyl alcohol (IPA).

6.2.2 Blow dry the hand tools with filtered nitrogen.

6.3 Material

6.3.1 Use only quality control released material.

6.4 Cleaning

6.4.1 Clean outside surface of pipe and face of fitting using IPA and clean room grade wipes.

6.5 Heating

6.5.1 Preset heat temperatures of heating tool from 200⁰C (392⁰F) to 231⁰C (448⁰F).

6.5.2 Undo the socket-headcap screws on the clamping devices.

6.5.3 Fit the clamping inserts of the required pipe size into the clamping devices (8 each per size).

6.5.4 Tighten the socket-headcap screws.

6.5.5 Follow manufacturers instructions for setting time and language.

6.5.6 Follow manufacturers instructions for selecting pipe data and overlap distance.

6.5.7 Follow manufacturers instructions for facing operation.

6.5.8 Follow manufacturers instructions for joining and heating.

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6.6 Completion

- 6.6.1 If required submit the test assembly to quality control department for bonding procedure qualification approval.

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Document Approval

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