



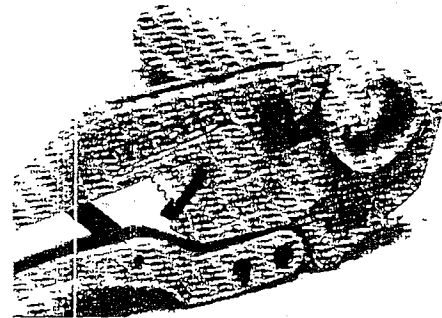
# Socket Fusion

## Procedures for Making Socket Fusion Joints

### Tools Required:

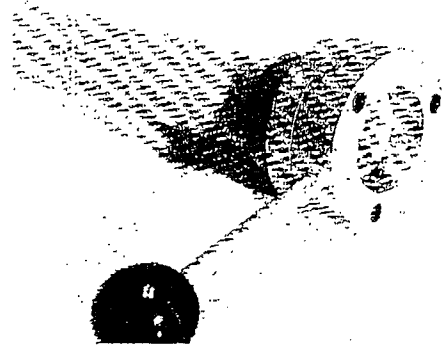
- 1- Pipe Cutters
- 2- Cold Ring
- 3- Depth Gauge
- 4- Chamfer Tool
- 5- Heating Tool
- 6- Socket Fusion Heater Faces

1. Square pipe ends.



Pipe cutters should be used to achieve a clean square cut.

2. Chamfer pipe ends.

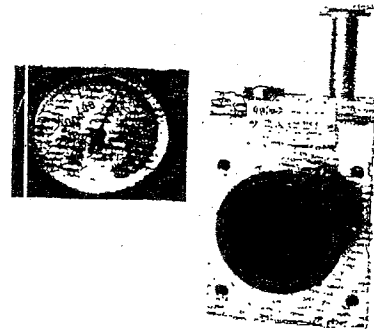


Place chamfer tool on pipe and rotate. Remove approximately 1/16" (1.58 mm) from the sharp outer edge of the pipe end. Note: Chamfer tools should only be used on 1 1/4" (42.16mm) or larger diameter pipe.

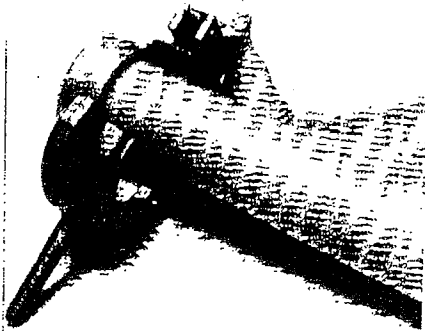
3. Clean pipe ends to remove any foreign substance.



5. Check heating tool to be sure heating surfaces are clean and undamaged.



4. Align cold ring on pipe end.

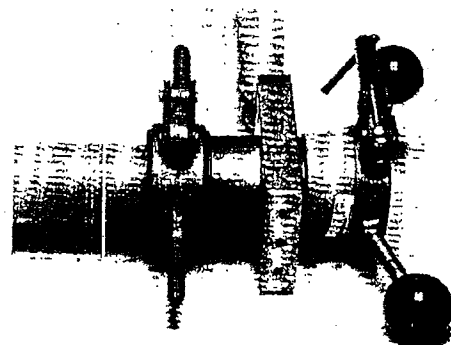


A depth gauge should be used to assure proper penetration depth. Place fitting into fitting holder and secure.

Be sure correct heating temperature has been obtained. The recommended heating temperature for Socket Fusion is  $500^{\circ}\text{F} \pm 10^{\circ}\text{F}$  ( $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ )

Note: Heating temperature may require adjustment for adverse weather conditions.

6. Heat fitting and pipe end simultaneously.

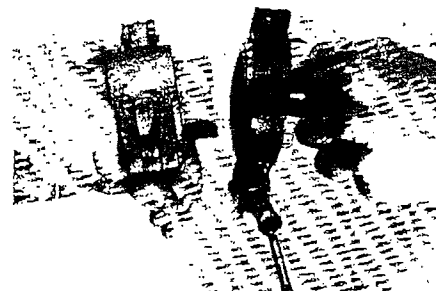


Position pipe and fitting squarely on the heating tool. Apply firm pressure until pipe and fitting are at full depth on heating tool. Heat for recommended times shown in Tables 6 and 7.

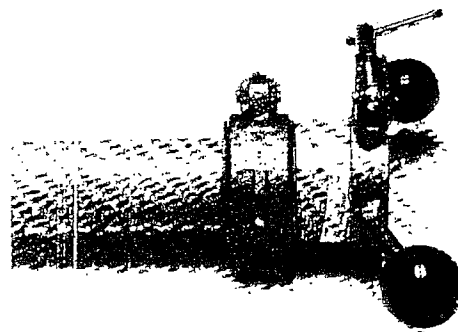
**Table 6 - Socket Fusion Time Cycles  
(PE2406 Fittings)**

Pipe Size	Heating Time (Sec.)	Cooling Time (Sec.)
1/2" CTS	6	20
3/4" IPS	8	20
1" CTS	9	20
1" IPS	10	20
1 1/4" IPS	12	30
1 1/2" IPS	14	30
2" IPS	16	30
3" IPS	20	30
4" IPS	24	30

Guideline only, exact time could vary depending on environmental conditions and condition of fusion equipment used.

**7. Inspect the melt.**

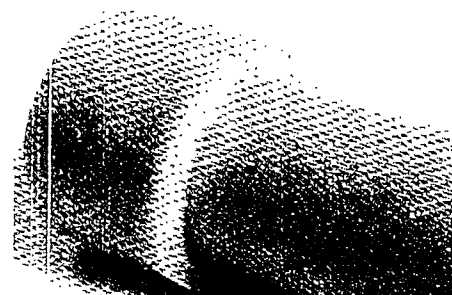
When heating cycle is complete, snap pipe and fitting from heating tool and quickly inspect the melt. If melt is not complete, cut off molten pipe and repeat steps 1-7 using a new fitting.

**8. If melt is satisfactory, quickly push fitting over pipe end until leading edge is firm against cold ring.****Table 7 - Socket Fusion Time Cycles  
(PE3408 Fittings)**

Pipe Size	Heating Time (Sec.)	Cooling Time (Sec.)
1/2" CTS	9	30
3/4" IPS	12	30
1" CTS	14	30
1" IPS	15	30
1 1/4" IPS	18	40
1 1/2" IPS	20	40
2" IPS	24	40
3" IPS	30	60
4" IPS	34	60

Guideline only, exact time could vary depending on environmental conditions and condition of fusion equipment used.

Hold firm pressure for the recommended cooling times shown in Tables 6 and 7.

**9. Allow an additional 3 minute cooling time before removing the cold ring and inspecting the joint.****10. On completion of specified cooling time, remove cold ring and visually inspect joint for quality. Melt should be pressed against socket fitting with no voids or gaps.****11. Joint should cool for additional 10 minutes before subjecting it to testing or stress.**