

REPAIR PROCEDURE FOR CRACKS IN VARIOUS PARTS*

1. REMOVE ALL PAINT AND GREASE 4" FROM AROUND THE CRACK.
2. DETERMINE THE LIMITS OF THE CRACK BY MEANS OF "NON-DESTRUCTIVE TESTING" AND DRILL A 1/4" STOP HOLE AT (EACH) END OF THE CRACK.
3. AIR-CARBON ARC 2" BEYOND (EACH) END OF THE CRACK.
4. PREHEAT THE REPAIR AREA AS REQUIRED. (SEE PREHEAT CHART BELOW FOR A36 STEEL ONLY. FOR OTHER MATERIALS SEE A.W.S. D1.1-94).
5. APPLY NEW WELD MATERIAL USING E-7018 ELECTRODES AND FULL PENETRATION WELD.
6. PROTECT WELDED AREA FROM RAPID COOLING.
7. INSPECT REPAIR WELD BY MEANS OF "NONDESTRUCTIVE TESTING".
8. PREPARE AND PAINT THE REPAIRED AREA AS PER USS PAINT SPECIFICATIONS.

NOTE: ALL WELDING PROCEDURES MUST CONFORM TO A.W.S. D1.1-LATEST EDITION AND A.W.S. D14.1-LATEST EDITION.

WELDING SHALL NOT BE DONE WHEN THE TEMPERATURE IN THE IMMEDIATE AREA OF THE WELD IS BELOW 0°F (-18°C).

* THIS PROCEDURE IS AN OUTLINE ONLY. A MORE IN DEPTH ENGINEERING PROCEDURE MAY BE REQUIRED BY SPECIFIC MATERIAL AND EQUIPMENT CONFIGURATION.

PREHEAT AND INTERPASS TEMPERATURE FOR A36 STRUCTURAL STEEL

| THICKEST DIMENSION OF THICKEST PART TO BE WELDED | OTHER THAN LOW- HYDROGEN ELECTRODES | LOW-HYDROGEN ELECTRODES |
|---|--|----------------------------|
| UP TO 3/4" | 70° F MIN. | 70° F MIN. |
| OVER 3/4" TO 1 1/2" | 150° F MIN. | 70° F MIN. |
| OVER 1 1/2" TO 2 1/2" | 225° F MIN. | 150° F MIN. |
| OVER 2 1/2" | 300° F MIN. | 225° F MIN. |