

# Maintenance and Repair Alloys – Typical Operating Parameters

| Product  | Size (Inches) | Current <sup>(1)</sup> | Voltage <sup>(1)</sup> | Wire Stick-Out (Inches) | Shielding Gas <sup>(2)</sup> | Polarity | Wire Feed Speed IPM |
|--|---------------|------------------------|------------------------|-------------------------|------------------------------|----------|---------------------|
| <b>Flux-Cored Wires for Build-Up and Joining</b> |               |                        |                        |                         |                              |          |                     |
| 211M-FC  | .035          | 150 – 180              | 26 – 28                | 3/8 – 1/2               | 98% Ar, 2% O <sub>2</sub>    | DCEP     | 200 – 400           |
|  | .045          | 220 – 250              | 27 – 29                | 3/8 – 1/2               | 98% Ar, 2% O <sub>2</sub>    | DCEP     | 220 – 250           |
|  | .062 (1/16)   | 280 – 320              | 28 – 30                | 1/2 – 5/8               | 98% Ar, 2% O <sub>2</sub>    | DCEP     | 260 – 300           |
| 311M-FC<br>(701 FCG)                             | .035          | 130 – 280              | 20 – 30                | 3/8 – 3/4               | 75% Ar, 25% CO <sub>2</sub>  | DCRP     | 300 – 375           |
|  | .045          | 150 – 290              | 23 – 30                | 3/8 – 3/4               | 75% Ar, 25% CO <sub>2</sub>  | DCRP     | 275 – 300           |
| 331M-FC  | .062 (1/16)   | 180 – 375              | 25 – 34                | 1/2 – 3/4               | 75% Ar, 25% CO <sub>2</sub>  | DCRP     | 275 – 300           |
| 375M-FC<br>(704M-FC)                             | .035          | 140 – 250              | 23 – 29                | 3/8 – 3/4               | 75% Ar, 25% CO <sub>2</sub>  | DCRP     | 320 – 680           |
|  | .045          | 150 – 290              | 23 – 30                | 3/8 – 3/4               | 75% Ar, 25% CO <sub>2</sub>  | DCRP     | 380 – 460           |
|  | .062 (1/16)   | 180 – 375              | 25 – 34                | 1/2 – 3/4               | 75% Ar, 25% CO <sub>2</sub>  | DCRP     | 180 – 340           |
| 376M-FC<br>331M-FCX                              | .030          | 50 – 100               | 13 – 16                | 1/4 – 1/2               | None                         | DCSP     | 180 – 205           |
|  | .035          | 70 – 200               | 13 – 18                | 3/8 – 5/8               | None                         | DCSP     | 165 – 185           |
|  | .045          | 80 – 225               | 14 – 19                | 3/8 – 5/8               | None                         | DCSP     | 100 – 225           |
|  | .062 (1/16)   | 110 – 275              | 14 – 20                | 1/2 – 3/4               | None                         | DCSP     | 160 – 180           |
|  | .093 (3/32)   | 150 – 300              | 17 – 22                | 5/8 – 1                 | None                         | DCSP     | 190 – 200           |
| 329M-FC  | .035          | 100 – 170              | 23 – 26                | 1/2 – 3/4               | 75% Ar, 25% CO <sub>2</sub>  | DCRP     | 265 – 530           |
| 3880M-FC   | .045          | 135 – 250              | 24 – 32                | 1/2 – 3/4               | 75% Ar, 25% CO <sub>2</sub>  | DCRP     | 227 – 567           |

|   |             |           |           |           |  |           |           |
|---|-------------|-----------|-----------|-----------|--|-----------|-----------|
| <b>Flux-Cored Wires for Build-Up or Hardfacing</b>            |             |           |           |           |  |           |           |
| 7000M-FC,<br>7001M-FC   | .062 (1/16) | 150 – 200 | 22 – 26   | 1/2 – 3/4 | 75% Ar, 25% CO <sub>2</sub>                                | DCRP      | 110 – 265 |
| 7109M-FC*<br>(282 FC)*  | .109 (7/64) | 350 – 500 | 24 – 32   | 1-1/2 – 2 | None   | DCRP      | 120 – 300 |
|   | .045        | 100 – 250 | 15 – 26   | 3/4 – 1   | 75% Ar, 25% CO <sub>2</sub>                                | DCRP      | 150 – 230 |
|   | .062 (1/16) | 225 – 400 | 23 – 29   | 1 – 1-1/2 | None   | DCRP      | 110 – 265 |
| 7310M-FC*<br>7540M-FC*<br>(246 FC)*<br>(281 FC)*<br>(284 FC)* | .045        | 100 – 250 | 15 – 26   | 3/4 – 1   | None   | DCRP      | 150 – 230 |
| 7500M-FC  | .062 (1/16) | 225 – 400 | 23 – 29   | 1 – 1-1/2 | None   | DCRP      | 110 – 265 |
|   | .035        | 90 – 150  | 17 – 22   | 3/8 – 3/4 | 75% Ar, 25% CO <sub>2</sub><br>or Straight CO <sub>2</sub> | DCRP      | 100 – 200 |
|   | .045        | 100 – 250 | 16 – 20   | 3/8 – 3/4 |  | DCRP      | 150 – 230 |
| .062 (1/16)   | 150 – 350   | 28 – 32   | 1/2 – 3/4 | DCRP      |  | 120 – 230 |           |
| 7770M-FC*<br>(706 FC)*  | .045        | 120 – 160 | 18 – 29   | 3/8 – 3/4 | None   | DCRP      | 225 – 400 |
|   | .062 (1/16) | 150 – 275 | 26 – 32   | 1/2 – 1   | None   | DCRP      | 150 – 275 |
|   | .093 (3/32) | 225 – 350 | 26 – 32   | 1 – 1-1/2 | None   | DCRP      | 225 – 350 |
| 7940M-FC*   | .109 (7/64) | 350 – 500 | 24 – 32   | 1-1/2 – 2 | None   | DCRP      | 125 – 325 |

\*If additional gas is required, use 75% Ar, 25% CO<sub>2</sub>

( ) = Certanium® Alloys

(1) Normal starting point will be mid-range.

(2) Typical gas flow rate 30 – 40 CFH (if required).

(3) For short arc use the the lower end of parameters (amps, volts), for spray arc use the higher end.