International Standard

ISO 11782-2

# Corrosion of metals and alloys — Corrosion fatigue testing —

## Part 2: Crack propagation testing using precracked specimens

## AMENDMENT 1

*Corrosion des métaux et alliages — Essais de fatigue-corrosion —*

*Partie 2: Essais d'amorce de rupture sur des éprouvettes préfissurées*

*AMENDEMENT 1*



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# Corrosion of metals and alloys — Corrosion fatigue testing —

# Part 2:
# Crack propagation testing using precracked specimens

# AMENDMENT 1

*4.2.2*

Move Table 1 at the end of last paragraph, as follows:

Specimen geometries which are frequently used for corrosion fatigue crack growth rate testing include the following:

a) three-point single edge notch bend (SENB3);

b) four-point single edge notch bend (SENB4);

c) compact tension (CT);

d) centre-cracked tension (CCT).

Details of standard specimen designs for each of these types of specimen are given in Figures 3 to 6 and permitted notch geometries are given in Figure 7. Suitable machining tolerances are given in Table 1.



**Table 1 — Dimensions of specimens with tolerances**

| Dimension | Tolerances | Surface finish, squareness and parallelism |
|---|---|---|
| $L$<br>$G$<br>$H$<br>$F_1$ | ±0,01 $W$ | Surfaces shall be perpendicular and parallel as applicable to within 0,002 $W$ (Total indicator reading)<br>Surface finish of faces perpendicular to the line of the notch root to be $Ra$ 0,8 µm |
| $F$ | ±0,004 $W$ | Notch to be equidistant about centre-line to within 0,01 $W$ |
| $D$ | +0,004 $W$ | Holes to be square to faces within ±0,007 5 $W$ and parallel within ±0,000 5 $W$<br>Surface finish $Ra$ 0,4 µm |



4.2.3

Move Table 2 to Table 5 at the end of last paragraph, as follows:

The values of $Y$ appropriate to the four specimen geometries discussed above are given in Tables 2 to 5.

**Table 2 — Stress intensity factor function values for SENB3 specimens**

| $a/W$ | 0,000 | 0,001 | 0,002 | 0,003 | 0,004 | 0,005 | 0,006 | 0,007 | 0,008 | 0,009 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0,10 | 3,39 | 3,40 | 3,42 | 3,43 | 3,45 | 3,46 | 3,48 | 3,49 | 3,50 | 3,52 |
| 0,11 | 3,53 | 3,55 | 3,56 | 3,58 | 3,59 | 3,60 | 3,62 | 3,63 | 3,64 | 3,66 |
| 0,12 | 3,67 | 3,69 | 3,70 | 3,71 | 3,73 | 3,74 | 3,75 | 3,77 | 3,78 | 3,79 |
| 0,13 | 3,81 | 3,82 | 3,83 | 3,85 | 3,86 | 3,87 | 3,89 | 3,90 | 3,91 | 3,93 |
| 0,14 | 3,94 | 3,95 | 3,96 | 3,98 | 3,99 | 4,00 | 4,02 | 4,03 | 4,04 | 4,05 |
| 0,15 | 4,07 | 4,08 | 4,09 | 4,11 | 4,12 | 4,13 | 4,14 | 4,16 | 4,17 | 4,18 |
| 0,16 | 4,19 | 4,21 | 4,22 | 4,23 | 4,25 | 4,26 | 4,27 | 4,28 | 4,30 | 4,31 |
| 0,17 | 4,32 | 4,33 | 4,35 | 4,36 | 4,37 | 4,38 | 4,40 | 4,41 | 4,42 | 4,43 |
| 0,18 | 4,45 | 4,46 | 4,47 | 4,48 | 4,50 | 4,51 | 4,52 | 4,54 | 4,55 | 4,56 |
| 0,19 | 4,57 | 4,59 | 4,60 | 4,61 | 4,62 | 4,64 | 4,65 | 4,66 | 4,67 | 4,69 |
| 0,20 | 4,70 | 4,71 | 4,72 | 4,74 | 4,75 | 4,76 | 4,78 | 4,79 | 4,80 | 4,81 |
| 0,21 | 4,83 | 4,84 | 4,85 | 4,87 | 4,88 | 4,89 | 4,90 | 4,92 | 4,93 | 4,94 |
| 0,22 | 4,96 | 4,97 | 4,98 | 5,00 | 5,01 | 5,02 | 5,03 | 5,05 | 5,06 | 5,07 |
| 0,23 | 5,09 | 5,10 | 5,11 | 5,13 | 5,14 | 5,15 | 5,17 | 5,18 | 5,19 | 5,21 |
| 0,24 | 5,22 | 5,23 | 5,25 | 5,26 | 5,27 | 5,29 | 5,30 | 5,32 | 5,33 | 5,34 |
| 0,25 | 5,36 | 5,37 | 5,38 | 5,40 | 5,41 | 5,43 | 5,44 | 5,45 | 5,47 | 5,48 |
| 0,26 | 5,49 | 5,51 | 5,52 | 5,54 | 5,55 | 5,57 | 5,58 | 5,59 | 5,61 | 5,62 |
| 0,27 | 5,64 | 5,65 | 5,67 | 5,68 | 5,69 | 5,71 | 5,72 | 5,74 | 5,75 | 5,77 |
| 0,28 | 5,78 | 5,80 | 5,81 | 5,83 | 5,84 | 5,86 | 5,87 | 5,89 | 5,90 | 5,92 |
| 0,29 | 5,93 | 5,95 | 5,96 | 5,98 | 5,99 | 6,01 | 6,02 | 6,04 | 6,05 | 6,07 |
| 0,30 | 6,08 | 6,10 | 6,12 | 6,13 | 6,15 | 6,16 | 6,18 | 6,20 | 6,21 | 6,23 |
| 0,31 | 6,24 | 6,26 | 6,28 | 6,29 | 6,31 | 6,32 | 6,34 | 6,36 | 6,37 | 6,39 |
| 0,32 | 6,41 | 6,42 | 6,44 | 6,46 | 6,47 | 6,49 | 6,51 | 6,52 | 6,54 | 6,56 |
| 0,33 | 6,57 | 6,59 | 6,61 | 6,63 | 6,64 | 6,66 | 6,68 | 6,69 | 6,71 | 6,73 |
| 0,34 | 6,75 | 6,77 | 6,78 | 6,80 | 6,82 | 6,84 | 6,85 | 6,87 | 6,89 | 6,91 |
| 0,35 | 6,93 | 6,95 | 6,96 | 6,98 | 7,00 | 7,02 | 7,04 | 7,06 | 7,08 | 7,09 |
| 0,36 | 7,11 | 7,13 | 7,15 | 7,17 | 7,19 | 7,21 | 7,23 | 7,25 | 7,27 | 7,29 |
| 0,37 | 7,31 | 7,33 | 7,34 | 7,36 | 7,38 | 7,40 | 7,42 | 7,44 | 7,46 | 7,48 |
| 0,38 | 7,51 | 7,53 | 7,55 | 7,57 | 7,59 | 7,61 | 7,63 | 7,65 | 7,67 | 7,69 |
| 0,39 | 7,71 | 7,73 | 7,75 | 7,78 | 7,80 | 7,82 | 7,84 | 7,86 | 7,88 | 7,91 |
| 0,40 | 7,93 | 7,95 | 7,97 | 7,99 | 8,02 | 8,04 | 8,06 | 8,08 | 8,11 | 8,13 |
| 0,41 | 8,15 | 8,17 | 8,20 | 8,22 | 8,24 | 8,27 | 8,29 | 8,31 | 8,34 | 8,36 |
| 0,42 | 8,38 | 8,41 | 8,43 | 8,46 | 8,48 | 8,50 | 8,53 | 8,55 | 8,58 | 8,60 |
| 0,43 | 8,63 | 8,65 | 8,68 | 8,70 | 8,73 | 8,75 | 8,78 | 8,80 | 8,83 | 8,85 |
| 0,44 | 8,88 | 8,90 | 8,93 | 8,96 | 8,98 | 9,01 | 9,04 | 9,06 | 9,09 | 9,12 |
| 0,45 | 9,14 | 9,17 | 9,20 | 9,22 | 9,25 | 9,28 | 9,31 | 9,33 | 9,36 | 9,39 |
| 0,46 | 9,42 | 9,45 | 9,47 | 9,50 | 9,53 | 9,56 | 9,59 | 9,62 | 9,65 | 9,68 |
| 0,47 | 9,70 | 9,73 | 9,76 | 9,79 | 9,82 | 9,85 | 9,88 | 9,91 | 9,94 | 9,97 |
| 0,48 | 10,01 | 10,04 | 10,07 | 10,10 | 10,13 | 10,16 | 10,19 | 10,22 | 10,26 | 10,29 |
| 0,49 | 10,32 | 10,35 | 10,38 | 10,42 | 10,45 | 10,48 | 10,52 | 10,55 | 10,58 | 10,62 |
| 0,50 | 10,65 | 10,68 | 10,72 | 10,75 | 10,79 | 10,82 | 10,86 | 10,89 | 10,93 | 10,96 |
| 0,51 | 11,00 | 11,03 | 11,07 | 11,10 | 11,14 | 11,18 | 11,21 | 11,25 | 11,29 | 11,32 |
| 0,52 | 11,36 | 11,40 | 11,43 | 11,47 | 11,51 | 11,55 | 11,59 | 11,63 | 11,68 | 11,70 |
| 0,53 | 11,74 | 11,78 | 11,82 | 11,86 | 11,90 | 11,94 | 11,98 | 12,02 | 12,06 | 12,10 |