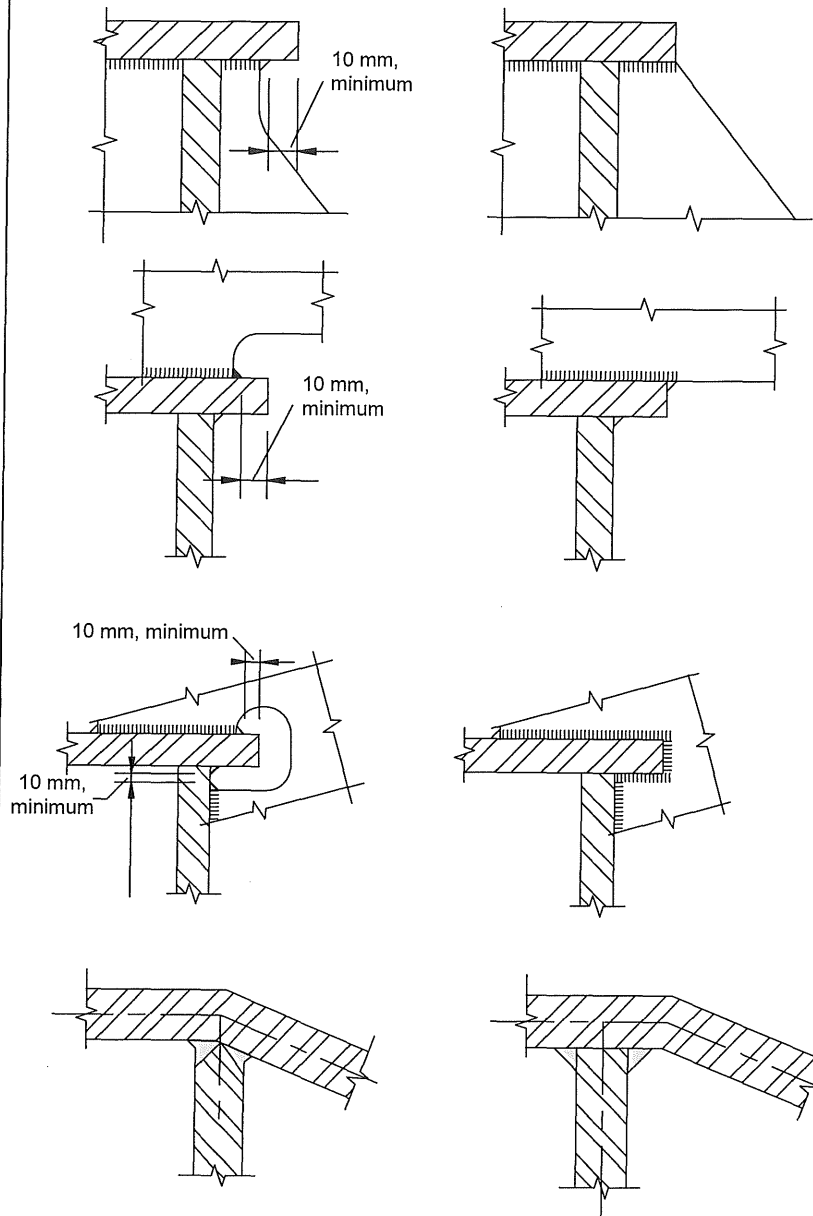


FATIGUE DETAIL GUIDELINES

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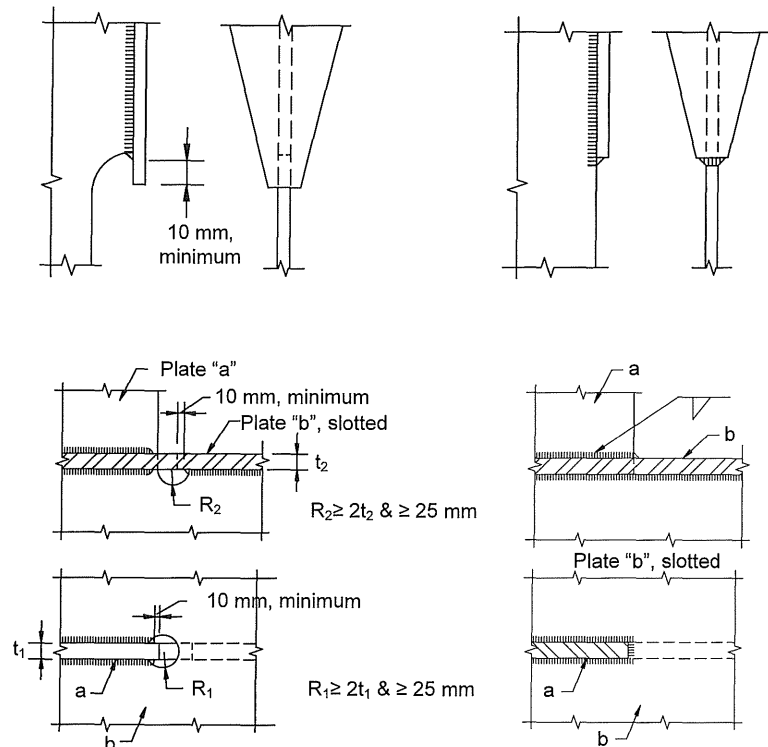
Acceptable

Not Acceptable



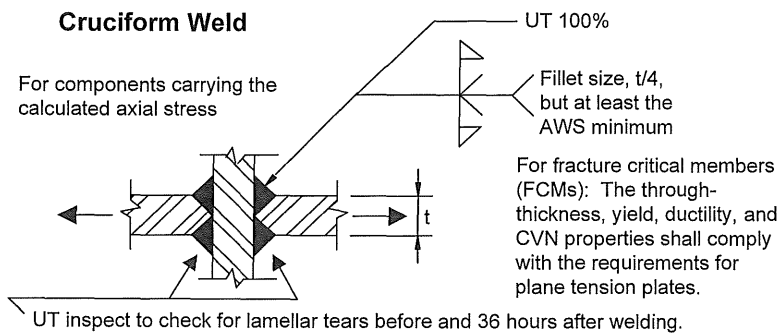
Acceptable

Not Acceptable



Cruciform Weld

For components carrying the calculated axial stress



Relative Fatigue Life

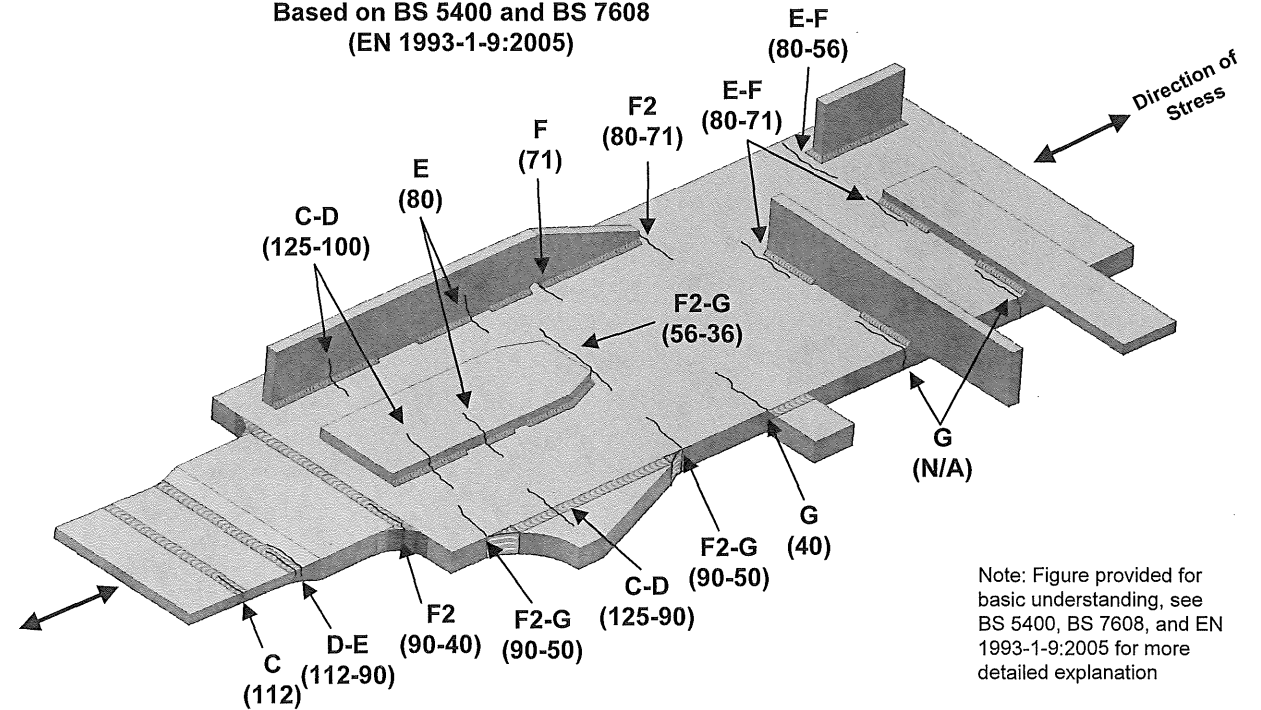
Compared to Class

| Class | D | E | F | F2 | G |
|-------|------|------|------|------|------|
| D | 1.00 | 1.46 | 2.41 | 3.35 | 6.08 |
| E | 0.68 | 1.00 | 1.65 | 2.42 | 4.16 |
| F | 0.41 | 0.61 | 1.00 | 1.47 | 2.52 |
| F2 | 0.28 | 0.41 | 0.68 | 1.00 | 1.71 |
| G | 0.16 | 0.24 | 0.40 | 0.58 | 1.00 |

Note: Based on BS 5400, BS 7608, and reliability of 97.8%

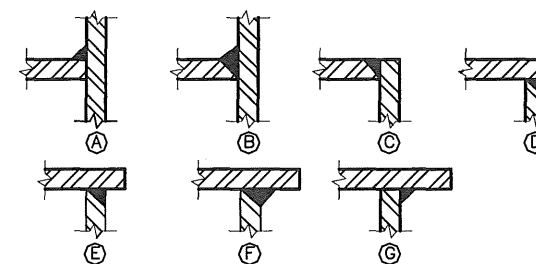
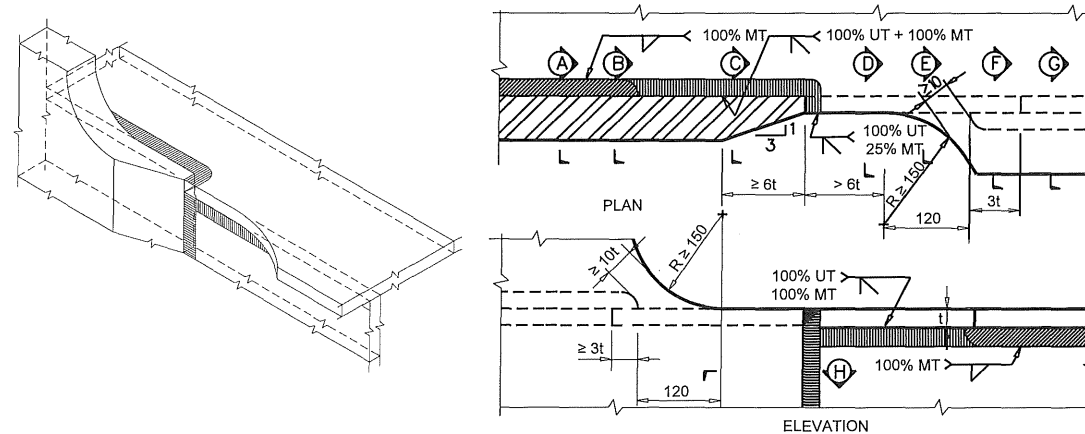
Example: For a given location on a crane, the fatigue life of a class F detail is expected to be 2.52 times that of a class G detail

Classification of Select Fatigue Details Based on BS 5400 and BS 7608 (EN 1993-1-9:2005)



Note: Figure provided for basic understanding, see BS 5400, BS 7608, and EN 1993-1-9:2005 for more detailed explanation

Avoidance of Wraparound Weld



Note: Welds shall conform to the most recent edition of AWS D1.1, including the requirements for cyclically loaded structures.

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