

| Usage   | Application                 | Maximum value of $f_y$ or $f_{yt}$ permitted for design calculations, psi | Deformed Wires | Welded Deformed Wire Reinforcement |
|---|-----------------------------|---|----------------|------------------------------------|
| Flexure; axial force; and shrinkage and temperature           | Special seismic systems     | Special moment frames   | 80,000         |                                    |
|   |                             | Special structural walls  | 100,000        |                                    |
|   | Other                       | 100,000   |                |                                    |
| Lateral support of longitudinal bars; or concrete confinement | Special seismic systems     | 100,000   |                | (1)                                |
|   | Spirals                     | 100,000   |                | (2)                                |
|   | Other                       | 80,000  |                |                                    |
| Shear   | Special seismic systems     | Special moment frames   | 80,000         | (1)                                |
|   |                             | Special structural walls  | 100,000        |                                    |
|   | Spirals                     | 60,000  |                | (2)                                |
|   | Shear friction              | 60,000  |                |                                    |
|   | Stirrups, ties, hoops       | 60,000<br>80,000  |                |                                    |
| Torsion   | Longitudinal and transverse | 60,000  |                |                                    |
| Anchor reinforcement  | Special seismic systems     | 80,000  | (3)            | (3)                                |
|   | Other                       | 80,000  |                |                                    |
| Regions designed using strut-and-tie method                   | Longitudinal ties           | 80,000  |                |                                    |
|   | Other                       | 60,000  |                |                                    |

- (1) ASTM A1064 welded wire reinforcement is not permitted if the weld is required to resist stresses in response to confinement, lateral support of longitudinal bars, shear, or other actions. The easiest design and manufacturing solution here is to simply not rely on the weld, and instead fabricate the welded wire reinforcement with hooked terminations.
- (2) Equipment used to produce ASTM A1064 welded wire reinforcement mats can't physically form spiral/helical geometry.
- (3) Insufficient test data