

### 5.2.1 General

a. The supplier shall use in preference high SCC resistance alloys listed in Table 5-1.

NOTE Selecting an alloy from this table avoid the need to perform a stress corrosion evaluation

### 5.2.2 High SCC resistance alloys

#### 5.2.2.1 Surface treated materials

a. Alloys which are surface treated shall be evaluated according to 5.1.3a.

NOTE 1 For example:

- Metals having been treated with surface treatments such as nitriding and carburising.
- A low-strength plain carbon steel, carburised on the surface to a hardness corresponding to a tensile strength above 1 370 MPa (200 ksi).

NOTE 2 Surface treatment such as nitriding and carburising can make a stress-corrosion evaluation necessary for a material not normally considered susceptible.

### 5.2.3 Moderate SCC resistance alloys

#### 5.2.3.1 Coated and plated materials

a. Alloys with moderate SCC resistance and coated or plated with materials with a high SCC resistance shall be evaluated according to 5.1.3a.

NOTE 1 For example: Even though 2024-T6 aluminium is anodised, this material has moderate resistance to stress corrosion.

NOTE 2 All electroplated, anodised and chemical-conversion coatings on otherwise acceptable materials are excluded from the requirements of this specification

#### 5.2.3.2 Thin materials (alloy or temper of metal)

a. Sheet material less than 6,5 mm (0,250 inch) thick of the aluminium alloys listed in Table 5-2 do not require a SCEF according to Annex C.

b. Alloys used for electrical wiring, thermocouple wires, magnet windings and similar non-structural electrical applications do not require a SCEF according to Annex C.

#### 5.2.3.3 Others

a. Alloys and tempers listed in Table 5-2 shall only be considered for use when a suitable alloy cannot be found in Table 5-1.

b. Materials listed in Table 5-2 shall not be used for applications involving high installation stress.

NOTE Examples of application involving high stress are springs or fasteners

### 5.2.4 Low SCC resistance alloys

a. Alloys and tempers listed in Table 5-3 shall only be considered for use in applications where the probability of stress-corrosion is remote.

#### 5.2.4.2 Coated and plated materials

a. Alloys with low SCC resistance and coated or plated with materials with a high SCC resistance shall be evaluated according to 5.1.3a.

NOTE 1 For example: Even 440C stainless steel is chrome plated, this material has low resistance to stress corrosion.

NOTE 2 All electroplated, anodised and chemical-conversion coatings on otherwise acceptable materials are excluded from the requirements of this specification