**Visual Inspection of Crimped Terminals**

**Open Barrel Terminals**

- **Accept**: Proper Insulation Crimp
- **Reject**: Insulation Pierced or Crushed

- **Accept**: Slight Scratch or Scrape but No Visual Dents
- **Reject**: Contact Area Damaged

- **Accept**: Wire Stop
- **Reject**: No Wire Stop Do Not Use

- **Accept**: Wire Flush
- **Reject**: Wire Not Flush

- **Accept**: Wire Visible
- **Reject**: Wire Not Visible

**Crimp Types**

- **F CRIMP FOR OPEN BARREL TERMINALS**

- **INDENTOR CRIMP FOR CLOSED BARREL TERMINALS**

- **CONFINED CRIMP FOR CLOSED BARREL TERMINALS**

**Technical Wire Information**

- **CMIA**: CMIA is used to denote wire area expressed in Circular MI. One Circular MI is equal to cross-sectional area of a wire one MI in diameter.

**AWG-CMA Table**

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**Butt Splices**

- 10 to 18 AWG

**Technical Wire Information**

- **CMIA**: CMIA is used to denote wire area expressed in Circular MI. One Circular MI is equal to cross-sectional area of a wire one MI in diameter.

- **Computation of CMIA**

- \( D = \text{Diameter in mils} \)
- \( \text{Round Solid Conductor}: \text{Change diameter from inches to mils, then multiply the diameter in mils by itself.} \)
- \( \text{CMIA} = D \times D \text{ mils} \)
- \( \text{Stranded Conductor}: \text{Find CMIA of a single strand and multiply the result by the total number of strands.} \)
- \( \text{CMIA} = (D \text{ of one strand}) \times (D \text{ of one strand}) \times \text{Number of Strands} \)

**Closed Barrel Terminals**

- **Accept**: Bell Mouth
- **Reject**: No Bell Mouth

- **Accept**: Wire Flush or Greater (Brush)
- **Reject**: Wire Not Visible

- **Accept**: Insulation Indent Formed Wire Secure In Insulation Crimp
- **Reject**: Insulation Indent Not Formed Wire Moves In Insulation Crimp

- **Accept**: Contact Area Free
- **Reject**: Wire in Contact Area

**Technical Wire Information**

- **CMIA**: CMIA is used to denote wire area expressed in Circular MI. One Circular MI is equal to cross-sectional area of a wire one MI in diameter.
VISUAL INSPECTION OF CRIMPED TERMINALS

Examples

REJECT
Insulation Under Conductor Crimp

REJECT
Short or no conductor brush

REJECT
Insulation too short

REJECT
Pierced Insulation

Measurement of Crimp Height

ACCEP'T
Optimal Crimp

Insulation Crimp
Insulation Position
Extrusions
Terminal Cross Section

Crimp Height Testing
1. Complete tool set-up procedure.
2. Crimp a minimum of 5 samples.
3. Place the flat blade of the crimp micrometer across the center of the dual radii of the conductor crimp.
4. Rotate the micrometer dial until the point contacts the bottommost radial surface. If using a caliper, be certain not to measure the extrusion points of the crimp.
5. Record crimp height readings. A minimum of 5 crimp height readings are necessary to confirm each set-up. A minimum of 50 readings are necessary to determine capability.
6. Check crimp height every 250 to 500 parts throughout the run.

Examples

REJECT
No Bellmouth

REJECT
Conductor brush too long

REJECT
Excessive Cut-off Tab

REJECT
No cut-off tab

REJECT
Irregular Insulation Cut

REJECT
Cut Strands

REJECT
Pulled Strands

REJECT
Inconsistent Strip Length

Examples

REJECT
No Bellmouth

REJECT
Conductor brush too long

REJECT
Excessive Cut-off Tab

REJECT
No cut-off tab

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