# **TROUBLE SHOOTING** FOR ACID TIN

## DEFECT

Dull deposits at low

current density range

1.

3.

### CAUSE

**Deficiency of Brightener** 

High Tin metal content (above 20 g/ltr)

High Operating temperature (above 35°C)

Plating at too low current Density

Overdosage of Brightener

2. Streaky deposition in high density current range, highly levelled deposit

**Deficiency of Carrier Additive** 

Temperature too low

Current Density too high

Insufficient cathode movement

- Brightener
- Overall bath dullness or 4. haze

tin deposition

Dark deposit and in

some case even no

Strong over-dosage of

Low concentration of Brightener

Very high bath temperature

#### REMEDY

Add Brightener

Reduce the anode area or dilute the bath

Cool the bath to operating temperature

Increase the current density

Dummy plating

Add Carrier Additive

Increase the temperature (20 – 35 °C)

Reduce current density

Improve cathode movement

Dummy plating and then add Carrier Additive

Add Brightener

Reduce to optimum level

DEFECT

Carrier Additive

# CAUSE

#### REMEDY

| 5. | Pitting                                                                                                            | Operating at too high current<br>density    | Reduce the current density                                                                                          |
|----|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|    |                                                                                                                    | Excess of Brightener                        | Add Carrier Additive                                                                                                |
|    |                                                                                                                    | Insufficient Agitation                      | Improve agitation                                                                                                   |
| 6. | Poor Solderability                                                                                                 | Poor rinsing                                | Improve rinsing by adopting<br>counter flow rinse or employ<br>special rinse to neutralize<br>the residual acidity. |
|    |                                                                                                                    | Metallic contamination<br>(Nickel, Iron)    | Remove source of<br>contamination and dummy or<br>dilute the bath                                                   |
|    |                                                                                                                    | Excess Brightener                           | Add Carrier Additive                                                                                                |
| 7. | Uneven partly matt<br>deposit and the defect<br>is different from the<br>normal imbalance of<br>the Brightener and | Ripple factor of the rectifiers is too high | Change to new rectifiers.                                                                                           |

For getting best results, using Hull-cell tests in all steps of plating is highly recommended