

# アルミへのフープめっき

Hoop plating on Aluminum

アルミは軽いけど、接触電気抵抗が高くて通電部品に使えない…

Aluminum is lightweight, but it cannot be used in current-carrying components due to high electrical contact resistance.

しかし、アルミ材にNiめっき、Snめっきをすることで通電部品に使えます。

However, Nickel and Tin-plated Aluminum can be used in current-carrying components.

## Niめっき

Nickel plating

## ボルト締結に最適!

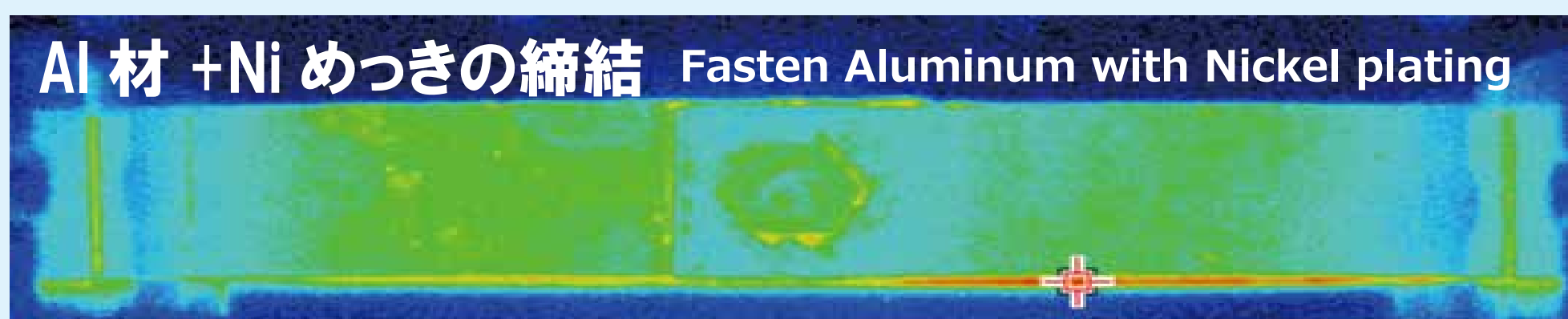
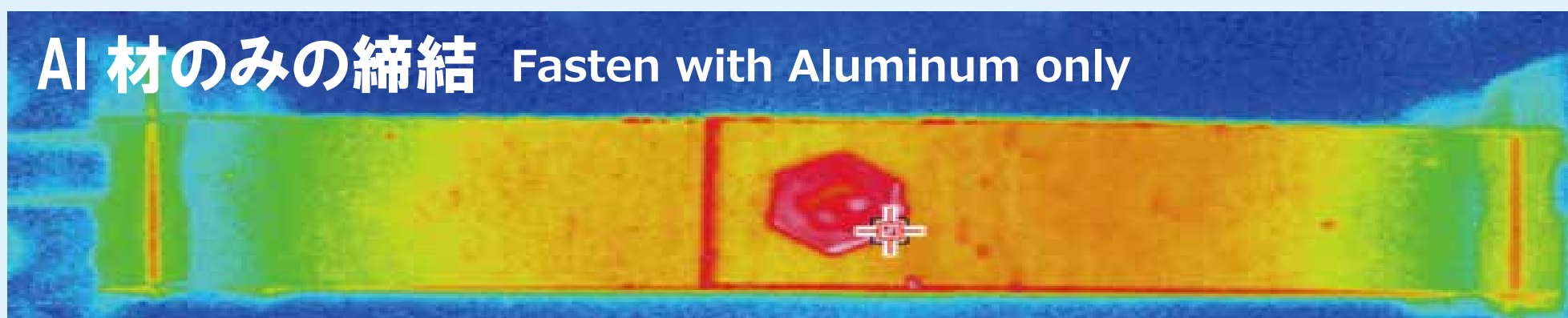
Perfect for bolt joints!

さらに!  
Furthermore!

ニシハラ理工独自の「**N-Ni**」は接触電気抵抗の上昇を抑えます。

Our unique Nickel-plating (N-Ni) could suppress the rise of electrical contact resistance.

### 発熱抑制 Reduce heat generation



### 接触電気抵抗値 Electrical contact resistance

環境条件: 60°C, 93%RH, 300Hr

Test conditions

単位: mΩ  
Unit

	初期 Initial		300Hr
Cu	25	→	9,310
Al	19,519	→	18,399
Ni(Cu材)	26	→	3,466
Ni(Al材)	23	→	2,415
N-Ni(Al材)	25	→	226

こんなにも接触電気抵抗値が低いのはニシハラ理工のめっきだけ!

Only our plating could achieve such low electrical contact resistance!

## Ni, Snめっき

Nickel, Tin plating

## 抵抗溶接・レーザー溶接用めっき

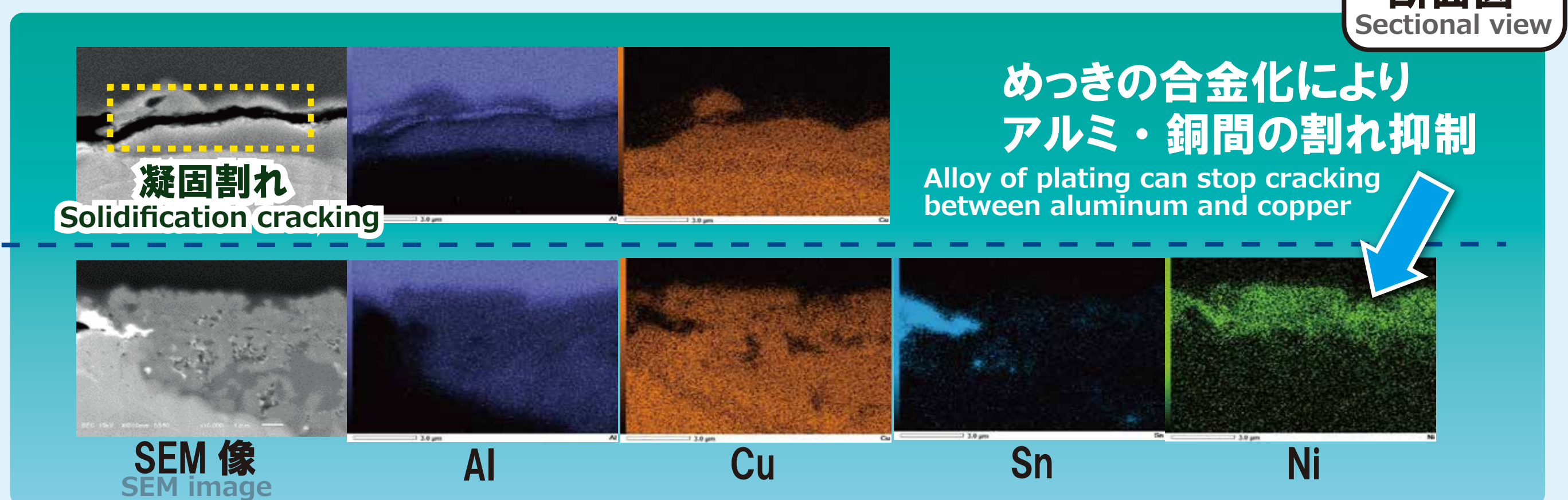
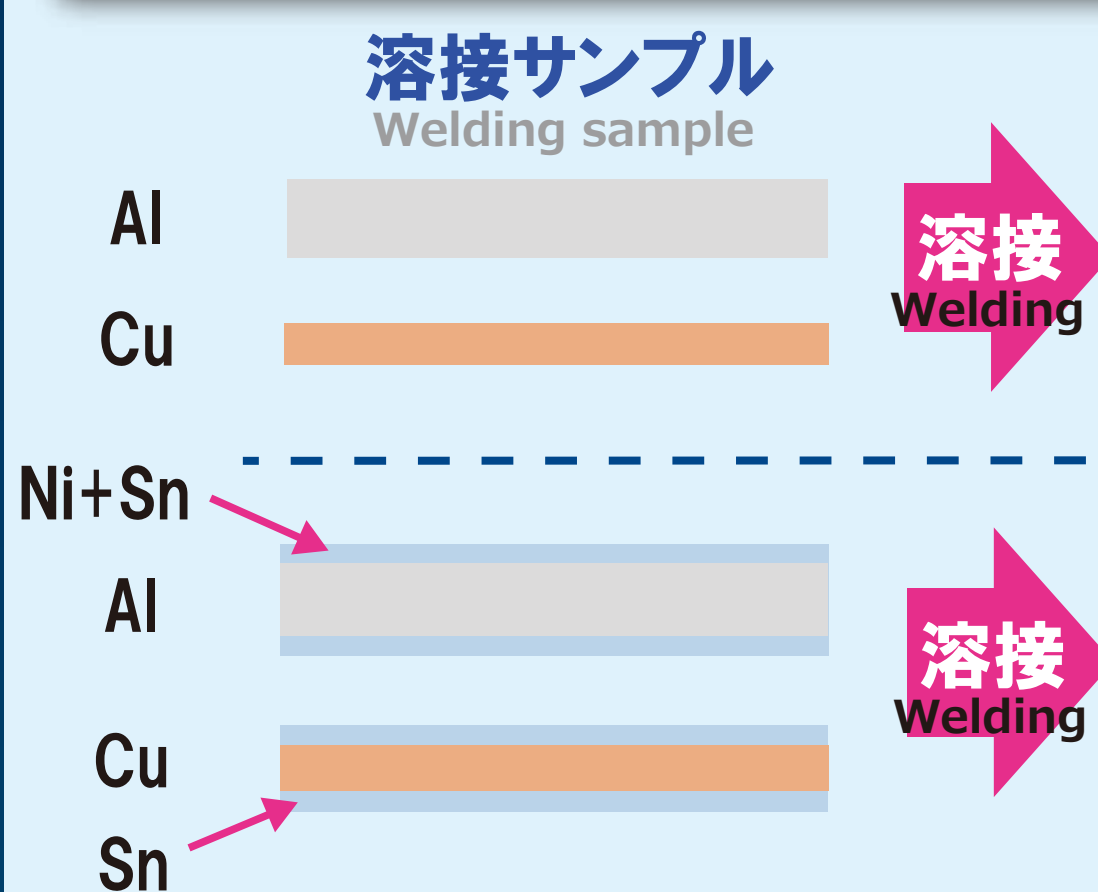
Electroplating for Resistance welding and laser welding

### 抵抗溶接 (Cu×Al)

Resistance welding

Cu 材と Al 材の抵抗溶接にめっきを利用して強度確保

Ensure strength of resistance welding by electroplating on Cu and Al



### レーザー溶接 (Al×Al)

Laser welding

Ni めっきによりレーザー溶接の品質向上

Improve quality of laser welding by Nickel plating

- 溶接強度の安定化  
Stabilize welding strength
- 電気抵抗値の安定化  
Stabilize electrical resistance

