



## Multi-Metals in Agriculture

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### STRUCTURAL TRANSITION JOINT OVERVIEW

Transition joints are composite inserts that make it possible to permanently join dissimilar metals that otherwise cannot be combined by fusion welding. Thanks to a wide array of compatible metal combinations, NobelClad can provide metal components for structural, electrical or thermal applications.



### BENEFITS TO DESIGNING WITH MULTI-METALS

- Eliminate bolt and rivet connections for long-lasting and more robust machinery
- Ensure unrivaled corrosion and abrasion resistance from weather and chemical exposure
- Enhance thermal and electrical conductivity
- Reduce the use of high-cost alloys

**NobelClad offers off-the-shelf structural transition joints and can tailor width, length, thickness and material combination to customer needs.**

**STANDARD GRADES AND DIMENSIONS**

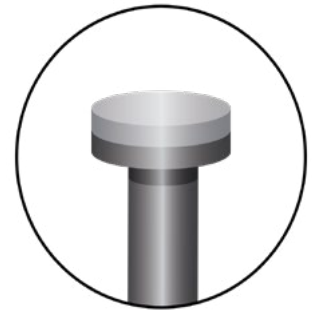
STEEL	INTERLAYER	AL ALLOY	NOM. THICKNESS (IN)	MAXIMUM BAR LENGTH (IN)	BAR WIDTH (IN)
A516 gr.55	Al 1100	Al 5086	0.75 (0.375+0.25+0.125)	144	0.75 to 36
		Al 5456	1.375 (0.75+0.375+0.25)		0.75 to 48
316L	Al 1100 Titanium Ni 200	Al 5083	0.953 (0.375+0.25+0.078+0.125+0.125)	110	0.75 to 40
		Al 5456	1.578 (0.75+0.375+0.078+0.125+0.25)		

**SUGGESTED APPLICATIONS**

*Examples of various length, width and thicknesses that are currently used in applications.*

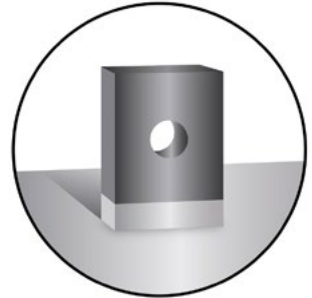
**Structural**

- Minimize equipment weight by replacing carbon steel components with high-strength, low weight aluminum alloys
- Reduce manufacturing man-hours by replacing complex, bolted connections with low cost welded joints
- Minimize maintenance costs associated with bolted designs
- Better control on serviceability of equipment



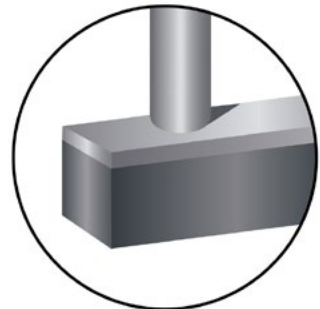
**Electrical**

- By combining copper and aluminum, for example, designs offer enhanced conductivity and better thermal dissipation. Common applications for this multi-metal component are battery bus bars or grounding straps.



**Clad Linings**

- Reduce equipment weight by incorporating abrasion resistant materials only where required.



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