

**Toughness Verification Test**

This is to state that the product indicated was tested according to the procedures shown. Mechanical properties and chemical analysis of the weld deposit were as shown.

**Innershield NR-232**

433AR4

Diameter (in.): 0.072	Current Type & Polarity: DC-	Volts: 19	Shielding Gas: Not Applicable
Code: 3A2GS	PHT (°F): 300	WFS (ipm): 140	Flow Rate (cfh): Not Applicable
Position: 3G-UP	INT (°F): 400	Amps: 235	
Thickness (in.): 0.75	Yes Mechanized?	Avg HI (kJ/in): 56.05	
		CTWD (in): 0.625	

This product satisfies the requirements of FEMA 353, Appendix D after exposure for 1 week at 80°F, 80%RH.

**Charpy V-notch Test Results**

Temp. (°F)	Energy (ft-lbf)
0	50
	50
	50
70	85
	85
	85

**Tensile Test Results**

Aging	UTS (ksi)	YP (ksi)	YS (ksi)	EL (%)
48HRS@220F	87	65.3	61.7	29

**Chemical Test Results**

C	S	Mn	Si	P	Al	Ni
0.206	<0.003	0.74	0.34	0.005	0.41	0.01

State of Ohio, County of Cuyahoga  
 Subscribed and sworn to before me this  
10th day of April, 2002  
Britisa K. Lesiacsek  
 Notary Public  
 My commission expires September 23, 2004

Dennis K. Hartman, Certification Supervisor

David A. Fink, Manager, Mature Products Consumable R&D

*This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of The Lincoln Electric Company affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.*