

**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**

434AR

Diameter (in.): 0.072	Current Type & Polarity: DC-	Volts: 20	Shielding Gas: Not Applicable
Code: 3A2GS	PHT (°F): 70	WFS (ipm): 110	Flow Rate (cfh): Not Applicable
Position: 1G	INT (°F): 200	Amps: 205	
Thickness (in.): 0.75		Avg HI (kJ/in): 25.3	
		ESO (in): 0.75	

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	66
	64
	61
70	90
	89
	89

**Tensile Test Results**

Aging	UTS (ksi)	YP (ksi)	YS (ksi)	EL (%)
48HRS@220F	90	75.7	71	25

**Chemical Test Results**

C	S	Mn	Si	P	Al	Ni
0.180	0.003	0.68	0.33	0.005	0.31	0.01

State of Ohio, County of Cuyahoga  
 Subscribed and sworn to before me this  
20th day of January, 2003  
Resident  
 Notary Public  
 My commission expires September 23, 2004

Donald L. Bill  
 Donald L. Bill, Certification Supervisor

David A. Fink  
 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.*