



WESTERN MICHIGAN UNIVERSITY

Bronco Construction Research Center

Item Code	Description	Quantity	\$ Each	Amount
Staff Compensation				
Center Director	Director	1	\$72.84/hour	
Labor- Research Associate	R3 Research Associate	1	\$33.76/hour	
Labor- Carpenter	Carpenter/General Labor	1	\$30.00/hour	
Labor- Mechanical Engineer	\$30/hour	1	\$30.00/hour	
Student Worker	\$20/hour	1	\$20.00/hour	
Impact				
Charpy Notched bar impact testing of metallic materials	ASTM E23 Notched bar impact testing of metallic materials	EA	\$26.80/each*	
Impact testing of welding procedures	ASME VIII UCS-67 rules for construction of pressure vessels division – impact testing of welding procedures	EA	\$26.80/each*	
Fusion Welding of Steel	CSA W47.1 fusion welding of steel	EA	\$53.60/each*	
Steel Products	ASTM A370 steel products	EA	\$69.68/each*	
Optional Vee-notch		EA	\$5.36/each*	
Facility Operating Expenses (Daily)				
Facility Operating Expenses	Daily Rate	1	\$75.51/day	
Equipment Costs				
Equipment Costs (10-year depreciation)	Daily Rate	1	\$155.80/day	
TOTAL				

Above tests entail producing a data set and graphs, no analysis. Tests requiring machining, sample preparation, fixturing, or significant setup time will be charged by the hour at applicable rates plus materials costs. An estimate will be given upon receipt of samples

*specimen preparation and fixturing is additional via Staff Compensation + Facility Operating Expenses