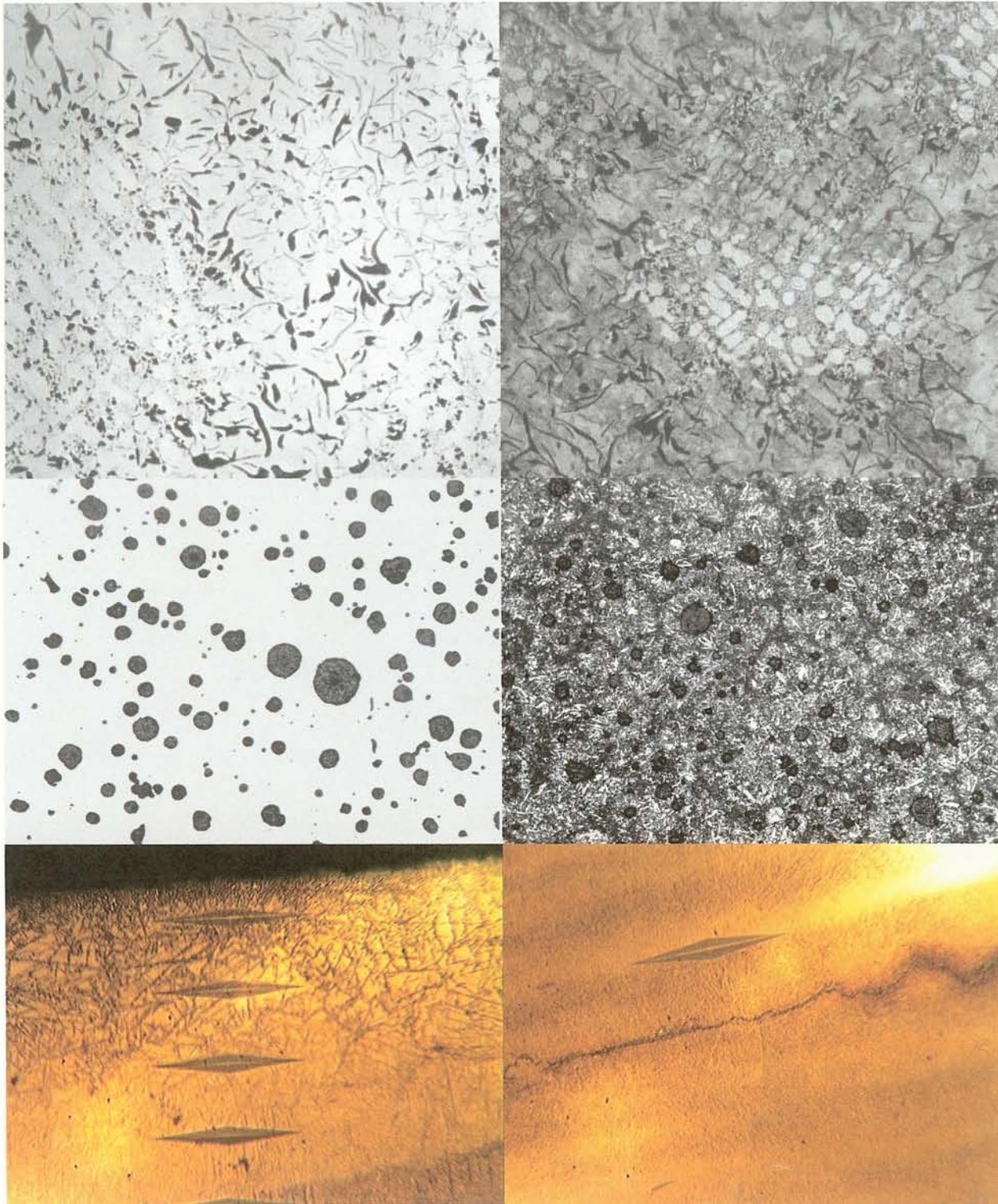


HARK LABORATORIES, INC.

SERVING INDUSTRY SINCE 1968

FERROUS AND NON-FERROUS METALLURGICAL TESTING



PRICE LIST SCHEDULE FOR 2008

HARK LABORATORIES, INC.

MECHANICAL TESTING

- * TENSILE TESTING TO 120 KSI
- * ELEVATED TEMPERATURE TENSILE
- * HIGH ENERGY IMPACT TESTING
- * DROP WEIGHT TESTING
- * BRINELL HARDNESS
- * ROCKWELL HARDNESS

METALLURGICAL - FAILURE ANALYSIS

- * SPECTROGRAPHIC CHEMISTRY
- * METALLOGRAPHY / CONSULTING
- * SALT SPRAY TESTING
- * MACRO/MICRO HARDNESS TESTING
- * FAILURE ANALYSIS

WELD PROCEDURE AND QUALIFICATION TESTING TO AWS - ASME - ODOT - NAVSEA

APPROVAL FOR NUCLEAR, AEROSPACE, AND AUTOMOTIVE TESTING

871 WOOSTER RD. W. / P.O. BOX 574

BARBERTON, OHIO 44203

PHONE: (330) 825-9931

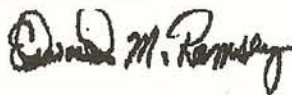
FAX: (330) 825-9932

24 HOUR SERVICE AVAILABLE

E-MAIL: HARKLABS.COM

LET OUR COMBINED 100 YEARS OF METALLURGICAL EXPERIENCE WORK FOR YOU!

EDWARD M. RAMSEY



OWNER AND PRESIDENT

JERRY D. RATLIFF



V.P. / GENERAL MANAGER
CHIEF METALLURGIST

SPECTROGRAPHIC CHEMICAL ANALYSIS

WHEN DRILLINGS, CHIPS, OR TURNINGS ARE SUBMITTED, TWO OUNCES OF CLEAN MATERIAL IS REQUIRED FOR ARGON ATMOSPHERIC MELTING: \$32.00 EACH

CAST AND DUCTILE IRON

\$65.00 PER SAMPLE

IF UNCHILLED IRON SAMPLE IS SUBMITTED, A LECO ANALYSIS WILL BE REQUIRED: \$45.00 EACH

10 TO 13 STANDARD ELEMENTS IN LOW ALLOY IRON AND STEEL: \$65.00 EACH

EXAMPLES OF STANDARD ELEMENTS AND THEIR SYMBOLS:

CARBON (C)	NICKEL (Ni)
MANGANESE (Mn)	CHROMIUM (Cr)
PHOSPHOROUS (P)	MOLYBDENUM (Mo)
SULFUR (S)	COPPER (Cu)
SILICON (Si)	ALUMINUM (Al)
TIN (Sn)	VANADIUM (V)

12 STANDARD ELEMENTS IN ALUMINUM ALLOYS: \$75.00 EACH

EXAMPLE OF STANDARD ELEMENTS AND THEIR SYMBOLS:

SILICON (Si)	MANGANESE (Mn)
COPPER (Cu)	LEAD (Pd)
MAGNESIUM (Mg)	TIN (Sn)
TITANIUM (Ti)	NICKEL (Ni)
ZINC (Zn)	CHROMIUM (Cr)
IRON (Fe)	ALUMINUM (Al)

HIGH ALLOY IRON, STEEL, STAINLESS, NICKEL, COBALT BASE, AND TOOL STEELS: \$95.00 EACH

BRASS, BRONZE, OR COPPER: \$95.00 EACH

LECO CARBON, NITROGEN, SULFUR, AND OXYGEN ANALYSIS: \$47.00 EACH

FERRITE ANALYSIS: \$60.00 EACH

ADDITIONAL COST FOR ELEMENT(S) REQUESTED AFTER REPORT IS ISSUED.

ASBESTOS TESTING: \$100.00 EACH

MECHANICAL TESTING

THE PRICES SHOWN BELOW ARE BASED ON A SPECIMEN SUBMITTED WITH A MINIMUM AMOUNT OF MACHINING, SAWING, AND/OR SAMPLE PREPARATION TIME. ADDITIONAL MACHINING, SAWING, AND/OR SAMPLE PREPARATION ON A TIME BASIS: **\$30.00 PER HOUR**

ELEVATED TEMPERATURE TENSILE (.505): **\$90.00 EACH**
ELEVATED TEMPERATURE TENSILE (.250): **\$100.00 EACH**
STANDARD (.505) DIAMETER TENSILE: **\$36.00 EACH**
STANDARD (.750) DIAMETER TENSILE: **\$40.00 EACH**
STANDARD (1.250) DIAMETER TENSILE: **\$65.00 EACH**
STANDARD (.350) DIAMETER TENSILE: **\$40.00 EACH**
STANDARD (.250) DIAMETER TENSILE: **\$47.00 EACH**
SUB SIZE TENSILE TESTING: **\$60.00 EACH**
FLAT TENSION TEST: **\$50.00 EACH**
PROOF LOAD TESTING: **\$65.00 TO \$90.00 EACH**
BEND TEST: **\$50.00 EACH**

BASED ON SPECIMEN SIZE OF 1" DIAMETER BY 6" IN LENGTH.

IMPACT TESTING

DROP WEIGHT TEST: **\$140.00 EACH**
DYNAMIC TEAR TEST: **\$140.00 EACH**

CHARPY V-NOTCH IMPACT TESTING

MINIMUM MACHINING AND BREAKING IN SETS OF THREE AT ROOM TEMPERATURE AND SOFTER THAN 38 ROCKWELL "C":

ROOM TEMPERATURE TEST: **\$120.00 EACH SET** (SUBSIZE SPECIMEN) **\$140.00 EACH SET**
TEMPERATURE OF 68F TO -120F TEST: **\$150.00 EACH SET** (SUBSIZE SPECIMEN) **\$160.00 EACH SET**
TEMPERATURE BELOW -120F TEST: **\$180.00 EACH SET** (SUBSIZE SPECIMEN) **\$180.00 EACH SET**

WELD CERTIFICATION TESTING

WELD CERTIFICATION OR WELDER PERFORMANCE TESTS ARE CONDUCTED IN ACCORDANCE WITH ASME, AWS, MILITARY, OR INDUSTRIAL CODES. COSTS ARE DEPENDANT ON CODE REQUIREMENTS, MATERIAL, AND NUMBER OF SPECIMENS SUBMITTED. STANDARD 2 TENSILES AND FOUR BENDS: **\$300.00 EACH**

SALT SPRAY OR HUMIDITY TESTING

FIRST 24 HOUR OR LESS DAY (QUANTITY OF SAMPLES DEPENDS ON SPECIMEN(S) SIZE TO FIT INTO TESTING UNIT (PER BATCH): **\$75.00 DAY**

EACH ADDITIONAL 24 HOUR PERIOD OR LESS DAY: **\$75.00 DAY**

NOTICE: SHIPPING AND HANDLING CHARGES FOR RETURNED SAMPLES WILL BE FORWARDED TO CUSTOMER.

METALLURGICAL AND MECHANICAL TESTING

ROUTINE METALLOGRAPHIC EXAMINATION

THE FOLLOWING TESTS REPRESENT TYPICAL CLASSIFICATIONS OF ROUTINE MACRO AND MICRO EXAMINATIONS: BRIEF EVALUATION OF ONE OR MORE FROM LIST BELOW (CUSTOMER TO SPECIFY TYPE) ON STRUCTURE OF SINGLE SAMPLE OF FERROUS OR NON-FERROUS METAL WITH BRIEF DESCRIPTIVE REPORT - INCLUDING MINIMUM SAMPLE PREPARATION, MOUNTING, POLISHING, AND ETCHING: **\$160.00 EACH**

GRAIN SIZE

CASE DEPTH

DECARBURIZATION

MACRO EVALUATION

GRAPHITE CLASSIFICATION

PLATING THICKNESS

BASIC MICROSTRUCTURE

MICRO EVALUATION

IN-DEPTH METALLURGICAL EXAMINATION AND EVALUATION

INVESTIGATION WITH REPORT: **\$130.00 HOUR**. (APPROXIMATE COST: **\$500.00 TO \$1500.00** OR MORE DEPENDING ON QUANTITY AND TYPE OF INVESTIGATION).

CONSULTING

IN OUR FACILITY OR ON TELEPHONE: **\$130.00 HOUR**

IN YOUR FACILITY: **\$200.00 HOUR**

HARDNESS TESTING

1 SAMPLE MINIMUM HARDNESS TESTING CHARGE: \$30.00 EACH

BRINELL AVERAGE OF 3 IMPRESSIONS: \$30.00 EACH

ROCKWELL AVERAGE OF 3 IMPRESSIONS: \$30.00 EACH

MACROVICKERS AVERAGE OF 3 IMPRESSIONS: \$45.00 EACH

MICROHARDNESS TESTING

MOUNT, POLISH, ETCH, AND 3 IMPRESSIONS: \$160.00 EACH

ADDITIONAL HARDNESS TESTS: \$20.00 EACH

JOMINY HARDENABILITY TESTING

16 TO 24 POSITIONS: \$160.00 SAMPLE AUSTENIZING

HEAT TREATMENT (TESTING PURPOSES ONLY)

1 HEAT TREATMENT FIRST 24 HOURS OR LESS DAY (QUANTITY OF SAMPLES DEPENDS ON SPECIMEN(S) SIZE TO FIT IN FURNACE: \$90.00 DAY

ADDITIONAL 24 HOURS OR LESS DAY: \$90.00 DAY

TESTS NOT LISTED IN THIS BROCHURE CAN BE QUOTED UPON CUSTOMER REQUEST.

HARK LABORATORIES, INC. IS SINCERELY COMMITTED TO SUPPLYING ALL OUR CUSTOMERS METALLURGICAL TESTING SERVICES OF THE HIGHEST QUALITY AND INTEGRITY. OUR LABORATORY SERVICES SHALL COMPLY WITH CURRENT NATIONAL AND INTERNATIONAL STANDARDS AND REGULATIONS.

THE MANAGER OF QUALITY HAS THE AUTHORITY TO ESTABLISH, DIRECT, AND IMPLEMENT THE QUALITY PROGRAM. HE IS CHARGED WITH THE RESPONSIBILITY TO INSURE THAT ALL OF OUR SERVICES ARE IN COMPLIANCE BASED ON OUR CUSTOMER SPECIFICATIONS AND OUR INTERNAL OPERATING STANDARD.