



HEAT SPEAKS, WE LISTEN...

Professional and Intelligent
Nondestructive Testing and Evaluation
Utilizing
Infrared Thermography
Thermal Analysis
Visual Inspection
Industrial Photography

www.redwavetechnologies.com

Red Wave Technologies Infrared Thermography

Red Wave Technologies is a Texas Sole Proprietorship, owned and operated by Don Bryant Hargis, Certified Professional Infrared Thermographer, Industrial Thermal Analyst, and Professional Industrial Photographer.

We are SBA classified as a veteran owned small business. Our DUNS is 612875414.
We are an Accredited Business Member of the Fort Worth Better Business Bureau (FWBB).

Red Wave Technologies' Mission is to improve the performance of the machinery and infrastructure that creates profitability for our clients, which ultimately improves the lives of our clients' stakeholders.

Training and Certification

Infrared and Nondestructive Testing:

Certified Level I, 02.2001, Advanced Infrared Resources,
Wayne Ruddock, Kamloops, BC
Certified Level II, 12.2004, 11.2007, Advanced Infrared Resources,
Wayne Ruddock, Kamloops, BC
Certified Level III, 02.2008, Red Wave Technologies
[Certified in Accordance with the ASNT Recommended Practice No. SNT-TC-1A]

Science and Technology:

M.A.M.S., (Dip.Ms), Registration Number 583, The Academy of Multi-Skills
Nondestructive Evaluation, Industrial Thermal Analysis
MIInst Sc, Design, Technology, and Management Society International
International Institute of Scientists -
Applied Technology and Engineering Sciences
MDTechMS, Design, Technology, and Management Society International
The Technological Chapter, Member No. 091/0362

Safety, Reliability, and Related:

OSHA 10, Industrial Safety Certification
Houston Area Safety Council,
Basic Plus, Site Specific, Houston, Texas
FEMA - Emergency Management Institute,
Certificate of Achievement, Professional Development Series
Electrical Safety and Hazard Communications,
University of South Carolina, Online Training
Total Quality Management, Six Sigma, Journey to Excellence,
Texas Manufacturers Assistance Center, Fort Worth, Texas
Certificate in Building Construction, NRI Schools, Washington, D.C.

Education and Present Goals

Student, M.S. / D.Sc, Industrial Engineering – Infrared, Digital and Thermal Technologies
Design Technology and Management Society International
Ladismith Cape, South Africa

Graduate Engineering and Math Courses, California National University, California
Science, Math, and Technology Courses, Tarrant Community College, Fort Worth, Texas
B.A., Southern Methodist University, Dallas, Texas



Our Infrared Thermography Summary

Red Wave Technologies' nondestructive evaluations are thorough and precise. And we thoroughly enjoy new projects with special thermal signatures and challenges. Our approach with infrared thermography inspections is scientific, investigative and forensic. Research into the causes of potential failure and the standards for appropriate applications are included at no additional charge.

Red Wave Technologies' nondestructive evaluations are rooted in thousands of hours of infrared technology field studies, report analyses and professional research into the issues that make infrared one of the most cost effective preventive maintenance tools on the market. Infrared thermography is our business and knowing every aspect of this radiant energy is our goal.

Red Wave Technologies' thermographers are qualified, certified and formerly educated. We are communicators and will work closely with your staff or designated representative to achieve your expectations.

Red Wave Technologies' final inspection report is comprehensive and informative. We do not settle for a purely computer generated report with static recommendations and 'canned' observations. You will appreciate the detail we deliver in our reporting.

Red Wave Technologies' pricing is competitive and flexible. We will give more value per dollar spent than any reputable, qualified competition.

Red Wave Technologies can offer full service and support if you are seriously considering implementing an in-house infrared thermography inspection program. We are able to provide unbiased (arms-length) assistance in the selection and purchase of a thermal imaging system (camera), classroom and field training, procedures and technical support following on-site training. Our due diligence is comprehensive and non-commission based.

Industrial Photography Summary

Red Wave Technologies' Industrial Photography approaches industrial photography and visual inspections with creative thinking, analytical rigor and technical skill.

Red Wave Technologies' Industrial Photography offers the advantages of detailed visual inspections with professional digital representations of assets and projects.

Industrial Photography and Visual Inspections can be utilized individually or together and with varying emphasis on the service of greatest benefit.

View some of our work at: redwave.photoworkshop.com

Professional References

Wayne Elliott
281-428-7520
wayne@elliottservices.com
Elliott Services, Inc.
2815 N. Main
Baytown, TX 77521

Ernie Watson
940-328-1047
ewatson8@yahoo.com
Cable Tech Global
3800 Industrial
Mineral Wells, TX 76067

John Morgan
817-215-7000
dirutil@cantexinc.com
Cantex, Inc.
301 Commerce, Suite 2700
Fort Worth, TX 76102



Equipment and Field Experience

IR and Thermal Instrumentation Experience

ISG Infrared K6800 IR Imaging Radiometer
Jenoptik VarioCam HiRes, 640x480 Research IR Imaging Radiometer
ThermaCAM SC100, IR Imaging Radiometer
Mikron 7515 IR Imager
TVS-620, Indigo-Raytheon, Uncooled Radiometric Imaging Camera
FLIR ThermaCam 400 Series
Optical Energy Technologies - BlackBody Source with Optical Chopper
Kestrel 4000 Weather Condition Monitor/Meter
Sper Scientific 850071 Environmental Quality Meter

IR and Thermal Software

ISG SpectraScan Thermal Analysis and Report
Thermoteknix TherMonitor 95 and 23 Versions
MikroSpec Thermal Imaging
ThermaGram 2000

Visual Inspection and Industrial Photography Equipment

Sigma SD14 Digital Single Lens Reflex (DSLR)
Sigma 18 – 200mm DC EX Optical Stabilization Lens,
Sigma 105 mm f 2_8 EX Macro Zoom Lens
Sigma 10-20 mm F4-5.6 EX DC HS Wide Angle Lens
Konica Minolta Maxxum 7D Digital Single Lens Reflex (DSLR)
Minolta AF 28-80/3.5-5.6 Lens
Tokina 100-300mm Telephoto Lens
Nikon S50, CoolPix Digital Camera
Canon ZR500 Digital Video Camera

Industrial Photography Digital Imaging Software

Adobe PhotoShop CS2
Adobe Raw Converter/DNG Converter
Sigma Photo Pro 3

Infrared Thermography Field Experience

Red Wave Technologies has performed professional infrared thermographic electrical inspections of industrial and commercial enterprises including manufacturing plants, commercial buildings, chemical processing plants, petrochemical refineries, food processing plants, feed mills, telecommunications and utilities' substations, and high voltage power generation systems.

Red Wave Technologies has performed professional infrared thermographic thermal patterns and analysis inspections of furnace tubes and refractory linings; thermal oxidizers, scrubbers, boilers, pipelines, exchangers, reformers, reactors, incinerators, liquid gas turbines, chillers, motors, generators and transformers.

Red Wave Technologies has performed professional infrared thermographic leak and moisture intrusion inspections of flat roofs, concrete flooring, and structural integrity for commercial and residential clients.



Red Wave Technologies Current and Former Clients

Chemical/Refinery:

Rohm and Haas, Deer Park, Texas (Elliott Services)
Chemical Lime Group, Marble Falls and Clifton, Texas (Elliott Services)
Lubrizol, Deer Park, Texas (IES)

Manufacturing:

Cantex Inc, Mineral Wells, Texas, Reno, Nevada, and Aurora, Ohio
Cable Tech Global, Mineral Wells, Texas
Dallas Woodcraft, Dallas, Texas
Morrison Products, Mesquite, Texas
Drill Master International (Sandvik), Mansfield, Texas
Baker Hughes / INTEQ, Houston, Texas (Treadwell Electric)
FlowServe, Deer Park, Texas (IES)
IPSCO Steel, Houston, Texas (IES)

Electrical Inspections:

Cafe Pacific, Dallas, Texas
Treadwell Electric – Commercial Property Clients, Houston, Texas
Boeing, Houston, Texas (TE)
Parkway Properties, Houston, Texas
Transwestern Commercial Services, Houston, Texas
J Miller Electric – Commercial Property Clients, Houston, Texas
Lincoln Properties, Houston, Texas (JME)
IGC Electrical – Commercial Property Clients, Houston and Area, Texas
Necessary Electric – Commercial Property Clients, Houston, Texas
Bass Pro Shops, Katy, Texas (IES)

Roofing Inspections:

Guaranteed Commercial Roofing, Fort Worth, Texas
Quest TruTec - Commercial Property Clients, Houston, Texas
Decatur Convention Center, Decatur, Texas (RBR Construction)
Midlothian Methodist Church, Midlothian, Texas (RBR Construction)

Utilities:

TXU- Generation and Delivery, East and Central Texas (S & C Electric)
Weatherford Electric, Weatherford, Texas
Sprint Local Phone Service, South and East Texas (RBR)

Professional Membership

Design, Technology, and Management Society International
International Institute of Scientists
The Academy of Multi-Skills - The Group of International Professional Bodies
American Society for Nondestructive Testing
American Standards Testing and Measurement
Professional Photographers of America
International Industrial Photographers Association
International Freelance Photographers Organization



Red Wave Technologies – Current Product/Services List

IR Chemical/Refinery/Manufacturing Electrical Equipment – Full Day	975.00
IR Chemical/Refinery/Manufacturing Electrical Equipment – Half Day	575.00
IR Chemical/Refinery Process Equipment – Full Day	1,075.00
IR Chemical/Refinery Process Equipment – Half Day	675.00
IR Electrical Inspection Full Day	825.00
IR Electrical Inspection Half Day	525.00
IR Electrical Inspection Full Day (with Baseline on all Equipment)	1,325.00
IR Electrical Inspection Half Day (with Baseline on all Equipment)	995.00
IR Chemical/Refinery Report Fee Hourly Rate	85.00
IR Report Printing, CD copies and Shipping (Additional to two (2) provided)	35.00

Approximate Building Structure and Roofing Thermal Evaluations:

Up to 100,000 square feet	0.03 to 0.06 (per sq ft)
100,000 to 1,000,000 square feet	0.02 to 0.04 (per sq ft)
Over 1,000,000 square feet	0.15 to 0.75 (per sq ft)

Infrared Thermography Price Notes:

The price rates for products and services are negotiable for special projects and/or upon the customer's request for pricing evaluation. Call or email us with your request.

When considering full and half day rates, the time necessary for preparing the IR report is included in the calculation of time. In other words., a full 8 hour day will typically be 5 hours of inspection / IR scanning and 3 hours of report preparation and generation. A half 4 hour day will typically be 3 hours of inspection / IR scanning and 1 hour of report preparation and generation.

The cost and time of generating, printing and shipping two (2) reports is included in the Full and Half Day prices unless special requests require additional time, then the Report Fee Hourly Rate will be applied. Example, company requests specialized analysis with technical research on equipment under inspection. This additional rate would be negotiated prior to performance of a project.

Each inspection (Full and/or Half Day) includes two (2) comprehensive and informative – timely, pragmatic, analytical and results-oriented – thermal analysis report copies. The reports are delivered through email as a PDF (portable document file format), printed and bound in three (3) ring binders, and on CD. The CD will contain the final PDF report, digital reference images and infrared images in JPEG format and supplementary information about inspection guidelines, equipment specifications and industry information.

Clients are provided an online dedicated and secure storage area for all reports, lists, and supplementary materials. This online storage area is included in the price of an inspection.

The variable price of building structure and roofing thermal inspections derives from the complexity and diverse nature of the thermal scans and final report. Each project will be approached individually and the price determined individually with the above prices per square foot as a foundation.

Industrial Photography Full Day	675.00
Industrial Photography Half Day	375.00

All industrial photography and/or visual inspection services include a comprehensive and detailed report when request, containing the project portfolio, image information, CD and any ancillary documents necessary for completion of the project (included in the location and assignment fees). Industrial photography and visual inspection can be combined without additional service charges.

