RoofScanIR™ Course Description:
RoofScanIR™ Training is an intensive course that will prepare you to perform on-roof infrared surveys of flat and low-sloped roofing systems. The course curriculum includes technical, practical and business aspects of roof moisture surveying. The course includes classroom instruction in chemistry, physics, thermo-dynamics of roofs, industry standard applications of commercial and industrial roofing, in-class labs and hands-on experiences on test roofs. The course materials have been developed over many years of technical, legal and field experience with instructors experienced in both roofing and infrared thermography.

IMPORTANT: Bring your infrared camera, flashlight, moisture meter, appropriate cool weather clothing, boots, and a laptop, pre-loaded with IR reporting software. If you have no equipment available or want to discuss the course, call Greg Stockton at 336-689-3658 and/or email to: Greg@UnitedInfrared.com.

Course Dates:
October 24-26, 2013

Location: Irvine, CA
Hotel: TBA
UI's Preferred Airline Agency: Corporate Traveler, 4660 La Jolla Village Dr., San Diego. Main Contact: Michelle Williford, Office: 858-500-4699/Cell: 206-467-5722 **Michelle.Williford@corporatetraveler.us.** Typically, Corporate Traveler finds flights based on your personal preferences that will end up saving you money.

Website: RoofScanIR.com
Curriculum: Roofscanir.com/training/
Notes: Reserve your seat now with a $500 deposit. Balance can be paid just prior to class… **www.unitedinfrared.com/reservation.** *Make sure to click the drop down box for appropriate module.*

Public Web Site:
www.RoofScanIR.com

Cost: $2495

To purchase with a credit card, go to our Web Site:
www.UnitedInfrared.com/store

Or send check to:
Attn: Accounting Department
United Infrared, Inc.
PO. Box 1403
Bonsall, CA 92003
888-722-6447

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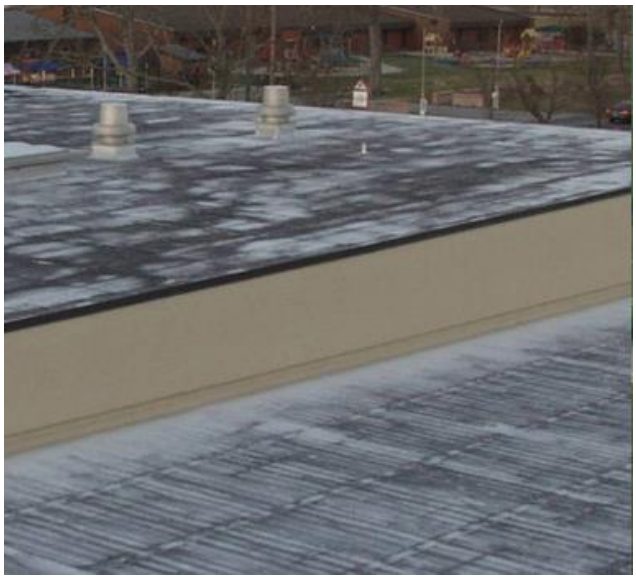
ON-ROOF INFRARED MOISTURE SURVEYS

Training

RoofScanIR™ Module Training is an intensive professional course spread out over three days, that will prepare you to perform on-roof infrared surveys of flat and low-sloped roofing systems.



Roof Maintenance

Waterproofing problems manifest themselves in two ways: leakage and entrained moisture contamination.

Leakage is pretty simple, although the leak inside the building rarely directly relates to the exact spot on the roof because the water flows down the slope of the roof to a spot that is not sealed and into the building at that point. Most leaks occur where the waterproofing termination is sealed or where there is a penetration of the roof.

Roof Maintenance Surveys

There are three types of surveys that are used to find water in a roof. Nuclear gauges - which count neutrons, capacitance meters - which measure resistance, and infrared - which measures heat. Both nuclear gauges and capacitance meters are used to take spot readings on a 5’ X 5’, 10' X 10' or 20' X 20' grid on the roof. These measurements are used to extrapolate where the water is from the readings obtained from the gauges. These surveys are very labor-intensive and therefore expensive and offer a relatively small sample of the total roof area, whereas IR is offer 100% coverage. They are good for types of roofs that do not gain or lose much solar energy and therefore, do not lend themselves to infrared.

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Training

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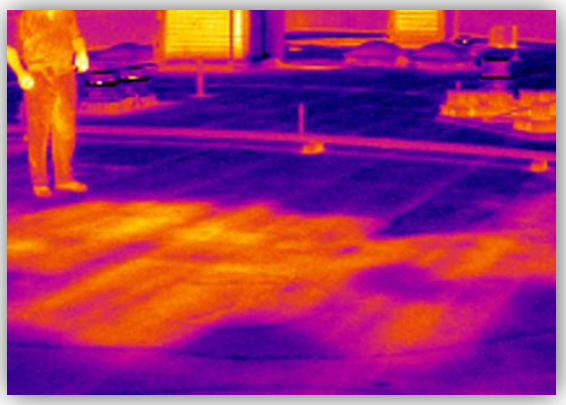
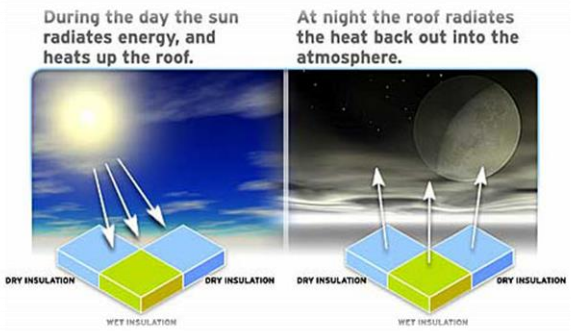
Why use Infrared Thermography

By using infrared thermography, we find the trapped moisture and mark the wet areas so that repairs can be made surgically. By marking paint directly on the roof, repair areas can be seen by anyone standing on the roofs after the survey is performed.





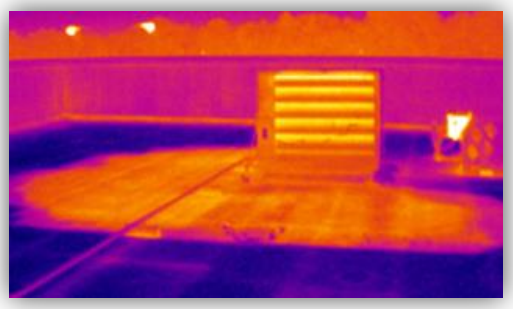
How it works…

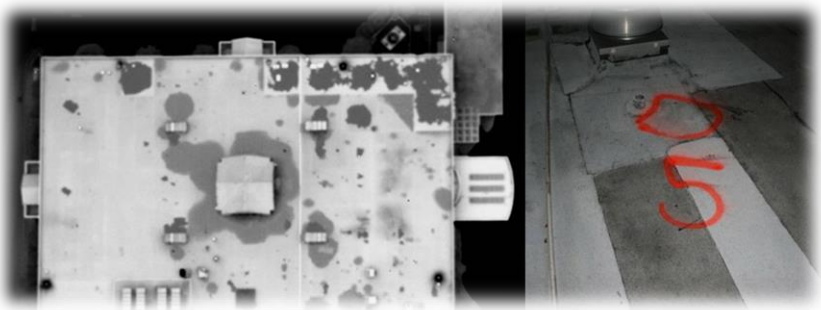
During the day, the sun radiates energy onto the roof and into the roof substrate, and then at night, the roof radiates the heat back into outer space. This is called radiational cooling.

Areas of the roof that are of a higher mass (wet) retain this heat longer than that of the lower mass (dry) areas.

Infrared imagers can detect this heat and "see" the warmer, higher mass areas, during the "window" of uneven heat dissipation. Heat loss and other IR services can be performed at the same time.

By using the information generated by a RoofScanIR™ report, the roofing professional can recommend cost-effective removal and replacement of wet components and draw documents to prepare an adequate roofing substrate to receive a recover installation to extend the satisfactory roofing system's service life .





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Training

Instructors

RoofScanIR

Ben Hixson, CIT, RCI, CCCA, CCS

President of Hixson Consultants, Inc.

Ben T. Hixson is a roofing, wall systems & waterproofing expert. He formed Hixson Consultants, Inc. to provide expert roofing, architectural sheet metal, glazing, wall system and waterproofing consulting services. He has over 33 years of experience in roof, wall and waterproofing condition analysis, life-cycle cost analysis, budgeting, design specification writing, CAD detailing management, and component selection and systems which are designed to remedy building moisture problems. Ben received a B.A. in Chemistry from Vanderbilt University in 1973 and is uniquely able to correlate product chemistry to predictable field performance.

Greg Stockton, CIT

President of United Infrared, Inc., Stockton Infrared, & RecoverIR, Inc.

Gregory R. Stockton Gregory R. Stockton is a principal in three infrared companies. He is a certified infrared thermographer with thirty years of experience in the construction industry, specializing in maintenance and energy-related technologies. Mr. Stockton has published many technical papers on the subject of infrared thermography and numerous articles about applications for infrared thermography in trade publications. He is a member of SPIE (Society of Photo-Optical Instrumentation Engineers), a member of the Program Committee, Chairman of the Buildings & Infrastructures Session and Co-Chairman of Thermosense, at the Defense and Security Symposium.

Peter Hopkins, CIT, CEI

Vice President United Infrared, Owner of InspecDoc Inspection Services, President of SoCAL Infrared Thermal Imaging Services

Peter Hopkins has operated a successful home inspection company since 1996 and has personally performed over 6,000 property inspections. His company expanded into infrared in 2005, with the opening of SoCal Infrared and has found success in many applications for infrared thermography. Peter is an ICC Code Certified Building Inspector and Certified HERS Energy Rater. Peter has been trained in Equine Thermography and is licensed with the California Horse Racing Board as an Assistant to Veterinarians.

Tyler Hixson, CIT, CMI, CRM

VP Operations of Hixson Consultants, Inc.

Tyler Hixson joined Hixson Consultants, Inc. full-time in 2002. He is a certified Mold Inspector and a certified Mold Remediator. He directs both Hixson's Non-destructive Thermographic and Dielectric Capacitance Roofing, and Wall Concealed Moisture Detection surveys. Additionally, Tyler is a key individual in HCI's Quality Assurance program, performing quality assurance monitoring for specialty contractor compliance with specifications and details, and in keeping with generally accepted good industry practice.

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Training

Schedule

Day	Time	Info
OCT 24th	8:00am-9:00am	Orientation, Introductions
	9:00am-10:00am	Roof Infrared Surveying - The Need and the Market
	10:00am-10:30am	Infrared Imager Use and Practices - In-Class Lab
	10:30am-11:30am	"All Things Infrared"
	11:30am-12:30pm	Lunch (Provided)
	12:30am-3:30pm	Technical Session 1- Infrared Roof Surveying Techniques
	3:30pm-5:00pm	Technical Session 2- Safe Working Practices and How to Prepare for an On-Roof Infrared Survey
	5:00pm-7:00pm	Supper on your own
	7:00pm-10:00pm	Travel and Field Trip to Test Roofs and Return to Hotel
	10:00pm-Until	RoofScanIR Social - Q&A with Snacks and Beverages (Optional)
OCT 25th	9:00am-10:0am	Technical Session 3 - Review of On-Roof Test Roof Surveying
	10:00am-11:30am	Technical Session 4 - Report-Writing, Pricing and Preparing Proposals
	11:30am-12:30pm	Lunch (Provided)
	12:30pm-5:00pm	Technical Session 5 - Roof Chemistry, Thermodynamics, Types of Membranes, Types of Decks and Types of Insulations and how the Roof Assembly affects IR Moisture Surveying Results
	5:00pm-7:00pm	Supper on your own
	7:00pm-10:00pm	Travel and Field Trip to Test Roofs and Return to Hotel
OCT 26th	8:00am-3:00pm	Review of On-Roof Test Roof Surveying, Report and Proposal Writing, Review of Sales & Marketing, and Review of Roof Assemblies (Lunch provided)

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