



**Dates:** 16<sup>th</sup> – 19<sup>th</sup> January 2018

**Time:** 9am-6pm

**Venue:** Evolve - by TCR, 215 Pancham Icon, Nr. D-mart, Vasna Road, Vadodara, Gujarat.

**TCR advanced Engineering & Academy for Conservation of Energy jointly organizes work shop on thermography.**

## Course Objective:

- ✓ Infrared thermal imaging provides a means for perceiving the physical world in useful ways across a wide range of applications. Level-I training provides fundamental information and class room experience necessary to use infrared thermography in various applications.
- ✓ This 32-hour Level I training course employs a combination of lectures, hands-on demonstrations and experiments, as well as quizzes and reviews to develop qualitative skill for thermography. The training concludes with overall course review & exam.
- ✓ The course covers basic heat transfer theory and the theory and applications of infrared thermography including: building envelope, condition monitoring of electrical, mechanical and thermal equipment.

required to attend this course. Those having a IR camera are encouraged to bring it along as there will be many hands-on learning opportunities during the course.

- ✓ NDT Technicians
- ✓ Engineers of junior management level
- ✓ Fresh /Junior Inspection Engineers
- ✓ Trainee process engineers
- ✓ Trainee Plant Engineers / Managers
- ✓ QA / QC Engineers
- ✓ Metallurgical / Materials Engineers
- ✓ Other Technical, Laboratory, engineers from other allied disciplines, management and administrative staff who need a working understanding of Infrared-thermography and their applications.

## Who Should Attend?

- ✓ The course should be taken by anyone using an infrared thermal imaging camera, or interested in purchasing one, or wanting to take their first step to become a professional Level 1 certified thermographer.
- ✓ No prior experience and/or formal training is required to attend this course. Owning a camera is not

## Registration:

The course is limited to 15 participants only and will be decided on first come first served basis. Interested candidates can register by filling attached registration form.

The course fee includes participation, course material and stationery.

Tea / coffee and working lunch will be served. Participants have to make their own arrangements for accommodation and local conveyance.

The course fee is non-refundable; however, in the event of cancellation of training program by TCR for some unavoidable reasons, it will be refunded. TCR accepts the change in nomination.

## Course fee:

	Indian passport holders	Foreign passport holders
2 days introduction to thermography course fees (16 <sup>th</sup> & 17 <sup>th</sup> Jan-2018)	Rs 25000+ 18% GST	USD 1000
+		
2 days extension workshop Level-1 course fees (16 <sup>th</sup> -19 <sup>th</sup> Jan-2018)	Additional Rs 15000 + 18%GST	Additional USD 750
Level-I exam fees	Rs 5000 + 18% GST	USD 250

\*10 % discount in case of 3 or more participants from same organization.

## Payment mode:

Interested participants should mail/ E-mail the registration form along with DD/at par cheque in favour of "TCR ADVANCED ENGINEERING P LTD." at the address mentioned in attached registration form.

### Forward your Registration forms to:

**Mr. Rajesh Kumar**, HOD - Training  
TCR Advanced Engineering Pvt. Ltd., 250/9  
GIDC, Makarpura, Vadodara, Gujarat. Ph:  
0265-2657233, 7574805594-96

Email: [rajesh@tcradvanced.com](mailto:rajesh@tcradvanced.com)

Mobile: +91 7574801050

Registration form can be downloaded from our website:

<http://tcradvanced.com/coursecalender.php>

For more course details, check our FB page: -

<https://www.facebook.com/EvolveTCR/>

## Instructor:

**Ms. Shail Derashri** is an Engineer and a **Level – III Certified Thermographer (ASNT)** from Infraspection Institute, USA with over 2000 hours of field experience. She is also a Certified Energy Manager CEM (AEE, USA) and a Certified Energy Auditor (BEE, EC Act 2001, GOI). Honoured by AEE, USA as "Young Energy Professional of the year" and by SEEM as "Best Performance – Energy Auditor", she has over ten years of experience in efficiency improvements, predictive maintenance and



industrial training. Her articles have been published and her work has been recognized at national conferences.

## Infrared Training Course Outline

### 2-Day Introduction to Thermography

#### Part One

- Introductions and course overview
- Electromagnetic Spectrum
- Introduction to various PdM techniques
- Applications Overview

#### Part Two

- Heat transfer basics
- PdM techniques
- Heat and temperature theory
- Getting to know a good qualitative image

### 2-Day Extension workshop towards Level – I Certification

#### Part Three

- Infrared equipment
- Hands-on equipment uses: Camera adjustment skills
- Range, Level, Span, Focus
- Heat Transfer Theory
- Taking a good qualitative image
- Hands-on equipment uses

#### Part Four

- Review
- Hands-on equipment uses: Refining diagnostic skills
- Radiation Theory
- Emissivity
- Reports
- Applications Overview
- Course Wrap-Up and review
- Course examinations

## CERTIFICATION:

**This Level 1 course meets SNT-TC-1A Standard**

Students participating will receive a certificate of attendance on completion of the course. To complete the certification process, students are required to take the written exam and score a minimum of 75%, and have 100 hours / 3 months of field experience along with a typical report for evaluation to the Instructor along with a letter from a supervisor to state that the 100 hours in thermography have been completed.

The written exam will evaluate your knowledge in infrared theory and mainstream applications.

The practical experience will allow you to prove you have the skills necessary to perform testing in the field.