



Experience

Our major clients

M/s. Larsen & Tubro Ltd.

M/s. Duncans Industries Limited, Kanpur.

M/s. Nagarjuna Fertilizers & Chemicals Ltd. Kakinada

M/s. Refermech Engineering, Chennai.

M/s. Stewarts & Lloyds of India Ltd.

M/s. Tube Products of India Ltd.

M/s. Neyveli Lignite Corporation

M/s. Krrup Industries India Ltd.

M/s. Spic Jel Engineering Construction, Chennai.

M/s. Saipem UK Ltd.

M/s. NDT Laboratories Pvt. Ltd.

M/s. Indian Oil Corporation, Andaman.

M/s. Electrowatt Engineering, Oman.

M/s. Pipava Shipyard Ltd, Gujarat..

M/s. Haldia Petrochemicals Ltd, Haldia.

M/s. Aban Construction Ltd. Chennai

M/s. Coastal Gujarat Power Ltd, Mundra, Gujarat

M/s. Precision Machine Tools, Chennai.

M/s. Reliance Petroleum Ltd. Jamnagar

M/s. Reliance Gas Transportation Ltd.

M/s. Tata Chemicals Ltd. Mithapur

M/s. Leighton Contractors India Pvt Ltd, Jamnagar.

M/s. Grasim Industries Ltd, Harihar

M/s. Indian Oil Corporation Ltd, Panipat

M/s. Vijaya Tanks & Vessels Ltd.

M/s. Nirma Ltd, Bhavanagar.

M/s. NOCIL, Mumbai

M/s. Valentine Maritime Gulf LLC

M/s. Simplex Infrastructure Ltd

M/s. Mitsubishi, Haldia

M/s. Afcon Infrastructure Ltd, Jamnagar

M/s. RIL, Kakinada Gas Terminal.

SIGMA NDT SERVICES



Company Profile



Head office: L64/21, Aishwarya Colony, Indira Nagar, Adyar, Chennai - 600 020.

Jamnagar : Opp Reliance Main Gate, Moti Khavdi, Jamnagar-361140.

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E-mail : sigmandt@rediffmail.com, Website: www.sigmandt.com



Company Details

Sigma NDT Services offers experience, expertise and equipment in specialised, non-destructive testing, quality assurance, quality control and certification services

CAPABILITY

The capabilities of Sigma NDT Services are founded in combination of

Specialist professionals with expertise, qualifications and experience

State of the art testing equipment utilizing advanced but proven technology

Flexibility within the organisation to respond to and meet client requirements



PEOPLE, COMMITMENT & QUALITY

The strength of Sigma NDT Services is its technical team which has extensive experience and practical qualifications.

The company firmly believes in Commitment and Quality Leadership as its management approach. This provides effective direction while allowing freedom to improve services to customers. All employees have direct involvement in development and standardisation of work processes reducing variation and improving quality in all work areas.

This environment has nurtured pride in quality workmanship and in providing effective and reliable services.

Sigma NDT Services are therefore secure in the knowledge that "We always do quality work". The client also knows that there is commitment and quality assurance to his project.



Our Services



REFINERY EXPERIENCE



We are the annual contractors for M/s. Reliance Engineering & Associates Ltd., Jamnagar for the past 6 years carrying out various types of inspections like ultrasonic testing using digital flaw detectors, radiography inspection, Magnetic Particle inspection, high temperature thickness measurement using panametrics epoch 36DL, Phased Array Inspection etc

We have also done radiography testing, Ultrasonic testing at IOCL, Panipat.

We have also done radiography inspection at IOCL, Andaman.





Features:

- 1) Input : 415 volts A.C. with Neutral 63 Amps. (max.)
- 2) Out put Channels : 3 channels
- 3) Output : 220 volts A.C. with Neutral , 63 amps (per Channel)
- 4) Input supply on/off control by ELCB (63 Amps.)
- 5) Output current display by Amps. Meter (Per channel).
- 6) Output system control by Auto & Manual Switch.
- 7) Auto control by PID.
- 8) Manual control by Energy Controller.
- 9) Coil sizes : 10 Gauge / 12 gauge / 14 Gauge / 16 Gauge



List of our Services

- * Phased Array Inspection of :
 - * Coker Drum,
 - * Vessels,
 - * Reactors,
 - * Welds,
 - * Corrosion mapping
- * Heat Treatment by :
 - * Pad type resistance Method
 - * Coil type resistance
 - * Method, Induction Coil Method
- * Tank floor Inspection by LFET
- * Ultrasonic testing
- * Radiography testing using
- * IR 192, Selenium, X ray
- * Magnetic Particle testing
- * Penetrant testing
- * Eddycurrent Testing along with IRIS
- * Thickness Survey
 - * Thru Coating
 - * Coating Thickness
 - * High temperature
- * Hardness Measurement
- * Remote Visual testing
- * Training
- * Level III services



PHASED ARRAY INSPECTION

We are the first Indian NDT company to implement the future of ultrasonics - the Phased array in Reliance ,Jamnagar refinery.This system can replace radiography .It can be implemented in different type of joints like piping,structure etc. The inspection is very fast and takes only very few minutes to scan a joint and give a report.We are having two omniscan equipment ,manufactured by olympus NDT ,Canada with full accessories to do the job from 2" dia to Flat. We have got special training from Olympus NDT about this technology and also we have got more than ten fully trained and experienced Phased array Technicians .we are also giving training to various organisations on on Phased Array.

NDT TRAINING



We conduct ASNT Level II Training courses at various paces all over India .We provide training in various NDT subjects like ultrasonic testing,Radiography testing ,Magnetic particle testing and Penetrant testing . We give practical hands on training on the latest equipments used in the market and also we have sample test pieces to resemble the defects which normally appear in materials.

We have highly experienced Lecturers and ASNT NDT LEVEL IIIs to train the students from basics.



Features:

- 1) Input : 415 volts A.C. with Neutral 63 Amps. (max.)
- 2) Transformer Rating : 50 KVA
- 3) Out put Channels : 6 channels
- 4) Output : 70 volts A.C. with Neutral 125 Amps. (Max. Per channel)
- 5) Input supply on/off control by MCCB (63 Amps.)
- 6) Output Supply on/off control by MCB (125 Amps.)
- 7) Output current display by Amps. Meter (Per channel).
- 8) Output system control by Auto & Manual Switch.
- 9) Auto control by PID.
- 10) Manual control by Energy Controller



Pad Coil Sizes :

1. 3.5 KW Dimention : 10 inch X 12 Inch
2. 2.7 Kw Dimention : 8 Inch X 10 Inch
3. 2.7 Kw Dimention : 4 Inch X 20 Inch



SPECIFICATIONS

Input Supply	: 415Volts \pm 10% ,3Phase,50Hz.
Rated output	: 50Kw at 100% duty cycle.
Frequency	: 5Khz to 30Khz.
Input Ampere at rated output	: 415V;70Amps.
Dimensions	: H:145cm. W:60cm.D:60cm.
Weight	: 60Kg (approx).
Input Power factor	: Higher than 0.96.
Inverter	: IGBT based series resonant.
Indications	: Mains ON, Induction ON, water fail. Over heat trip, phase sequence error.
Output Profile Regulation	: Through PID controller.
Induction coil	: Made of highly flexible water cooled cable for easy wrapping around pipes of different diameters.



Applications

- | | |
|---|--------------------------------|
| * Transmission Pipeline–Construction/Repair | * Shipbuilding |
| * Pipe Fabrication Shops | * Mining Equipment Maintenance |
| * Power Piping–Construction/Repair | * Drill Pipe Manufacturing |
| * Petrochemical–Construction/Repair | * Shrink Fit |

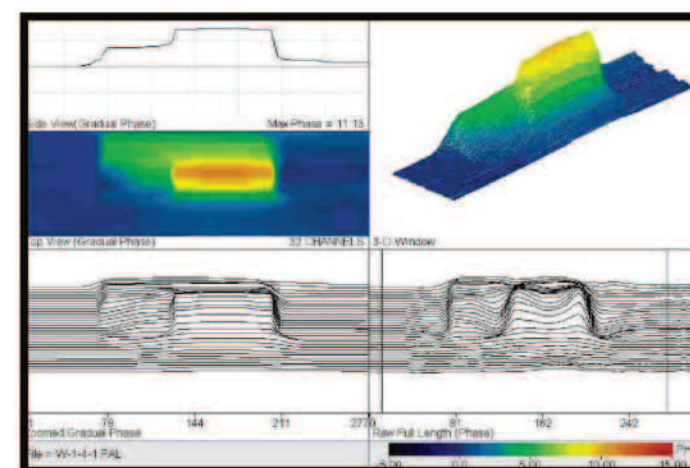


SIGMA NDT provides tank floor scanning services using the Low Frequency Electromagnetic Technique “Falcon Mark II” System. SIGMA NDT can also inspect the welds using the Hawk eye System.

The Low Frequency Electromagnetic Technique (LFET) does not use permanent magnets as is common in Magnetic Flux Leakage (MFL) equipment. The Falcon Mark II scan through coatings and tightly bonded scale. The system is lightweight, battery operated, and portable

The falcon Mark II is used to scan the floor plates for topside and underside corrosion. Areas identified with the scanner are then marked and verified with ultrasonics. SIGMA NDT also offers a smaller Falcon JR. to inspect inaccessible areas around the floor such as support lets, sumps, buckled annular plates, etc.

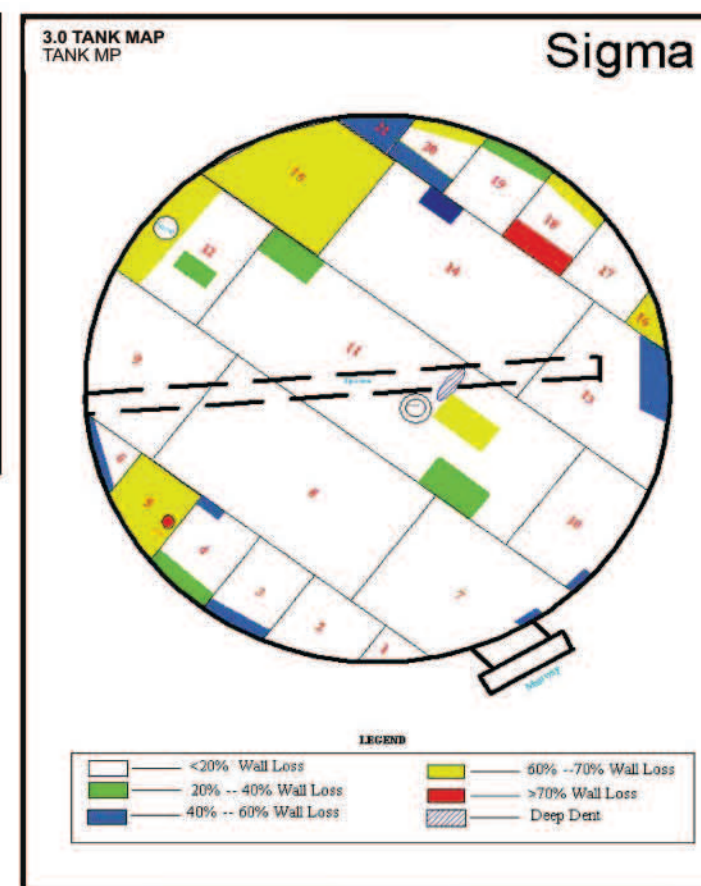
The Hawkeye is used to scan the welds. It is used to detect surface and subsurface cracks. SIGMA NDT also offers Magnetic Particle Inspections and Vacuum Box Testing as alternatives.



waveform and line-plot from Falcon Mark II

ADVANTAGES

- No Couplant required
- Tests through coating
- Scanning speed of up to 6m per minute
- Real Time C scan and 3D Display
- Minimal floor Preparation
- Maximum Penetration till 19mm
- Tests ferrous materials like carbon steel



Report Format



FIBERSCOPE & EDDY CURRENT INSPECTION



We have been in the field of inspection of boilers, Heat exchanger tubes for the past 8 years. We have been carrying out various types of testing like fiberoptic inspection, Eddy current inspection, with latest technology equipments

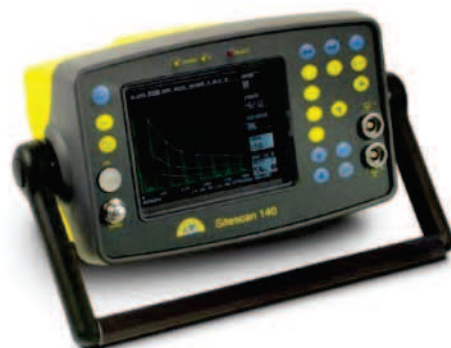
Some of our experience include:

Fiberoptic inspection at M/s. Grassim Industries Ltd.

Eddy current inspection at Corba Power Station

Fiberscope inspection at Reliance Industries Ltd.

SONATEST SITESCAN 140 & Krautkramer USM 35 X DAC



SONATEST SITESCAN 140

We have the capability to arrange any number of the popular SITESCAN series and Krautkramer, general purpose flaw detectors equipped with all the necessary functions you would expect from modern digital instruments. Features include: FW/HW/RF rectification
2 gates
Depth/E-E/Trig measurement
Auto-Cal
DAC/AWS/AVG
Storage for 20 probes, 800 A-scans & 5000 thickness readings.

THICKNESS MEASUREMENT

We have successfully carried out thickness measurement at major refineries chemical plants

- High temperature thickness measurement
- High accuracy thickness measurement
- Corrosion mapping



PANAMETRICS EPOCH 37 DL PLUS



Crawler X-Ray Inspection

We have got vast experience in testing cross country pipelines using X-ray crawlers. Our experiences include

Pipeline Inspection at Oman for M/s. Electrowatt Engineering

Vijayawada to Rajamundry Pipeline Project for M/s. Larsen & Turbo Ltd.

Pipeline testing at Bombay offshore

48" dia Pipeline for Bharat Oman refinery LTD at Vadinar, Jamnagar through M/s Leighton India.



X-ray Inspection

We have got vast experience in testing pipelines using X-ray

Our experiences include

Inspection of Pipeline at Cochin for M/s. Larsen & Tubro Ltd.

Inspection of Offshore Pipeline for M/s. Reliance Petroleum Ltd., Jamnagar.

Inspection of Pipes at IOCL refineries

Inspection of structures at Pipava shipyard Ltd



Gamma Radiography

We have got vast experience in testing storage tanks, pressure vessels, Piping Joints, Structures etc. by using Ir 192 gamma radiography.

Our experiences include
M/s Reliance Gas terminal, Kakinada.
IOCL, Andaman
IOCL, Panipat
Reliance Industries Ltd, Jamnagar
Mumbai Offshore
Jamnagar onshore & Offshore

