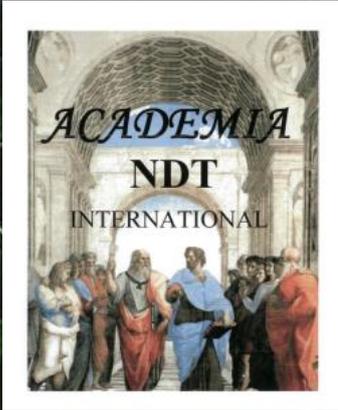


I&T NARDONI INSTITUTE



ADVANCED NON DESTRUCTIVE TESTING

PROVE NON DISTRUTTIVE

*Controlli
Formazione
Strumentazione
Ricerca*



Brescia - Italy



I&T Nardoni Institute

55 anni

di esperienza nel campo delle prove non distruttive.

Monitoraggio e Diagnostica

- **Ultrasuoni** / Ricerca
Tecniche Standard
Tecniche Speciali Saldature Austenitiche
Tecniche speciali Calcestruzzo
Tecniche Computerizzate
C-B SCAN
TOFD
PHASED ARRAY
GUIDED WAVES

- **Emissione Acustica** / Ricerca
Corpi a pressione
Monitoraggio e diagnostica strutture civili e meccaniche

- **Radiografia - Gammagrafia**

- **Correnti Indotte** / Tubi
Scambiatori
Turbine-Compressori

- **Liquidi penetranti**

- **Magnetoscopia** / Portatile
Bancale fisso

- **Estensimetria**
- **Tensioni residue / metodo Barkhausen**
- **Centro Addestramento e qualificazione**
- **Centro Esami - settori meccanico-civile-aerospaziale**



G. Nardoni



Pietro and Diego Nardoni



I & T

NARDONI INSTITUTE
BRESCIA-ITALY
Advanced
NonDestructive-Testing



I & T NARDONI INSTITUTE S.r.l.

Via D.C. Pontevica, 21
25124 Folzano - Brescia
Tel. +39 030 - 266582 / 2160757
Fax. +39 030 - 2667429

nardoni@speedyposta.it nardoni@numerica.it
www.nardoni.it Partita IVA-VAT-CF: 03479120176

Monitoring - Diagnostic - Nondestructive Testing - Monitoring - Diagnostic - Nondestructive Testing - Monitoring - Diagnostic - Nondestructive Testing - Monitoring

The main activity of I&T NARDONI INSTITUTE is NON DESTRUCTIVE TESTING .

The NDT methods applied are the following : X-Ray , Digital X-Ray, Ultrasonic test , Ultrasonic Computerize systems (Tofd, Phased Array, B-C Scan), Guided waves, Eddy current include RFT , Magnetic particle, Penetrant test , Acoustic emission , Stress measurements strange gages , Barkhausen method , Visual test , AC field.

The intangible value of the Company is based on 40 years experience of NDT examinations in the following fields : Chemical , Petrochemical , Nuclear , Fossil , Hydro power plant , Civil structures , Aircraft , Automotive , Steel plant , Machinery etc.

The Products and materials examined have been the following : Castings , Forgings , Welds in carbon steel and austenitic steel , Composite materials , Aluminium laminates and castings , Titanium etc ., with advanced computerized ultrasonic systems.

In the ultrasonic area I&T has developed advanced computerized techniques for the full automated acquisition of examination data according ASME Code Case 2235 .

TOFD , C-B-Scan , Phase Array have been extensively used since 1997 on pressure vessel, heat exchanger, sphere, nozzle, tank, forgings , plates, piping in Italy and in rest of the world (Canada, Saudi Arabia, Malaysia, Mexico, India, Singapore, etc.)

Special techniques for austenitic welds and 9%Ni examinations have been developed ; assistance , training have been performed also abroad (South Korea , Nigeria , Canada , Australia , UK , Singapore, etc).

X-Ray ; I&T has experience in low, medium , high energy radiation (betatron , linear accelerators), Isotope as Ir.192 , Co 60 and in 2009 we have Digital X-Ray for welds and thickness base material inspection.

I&T is accredited for the Qualification and Certification of NDT Personnel according EN 473 , ISO 9712 , SNT-TC-1A .

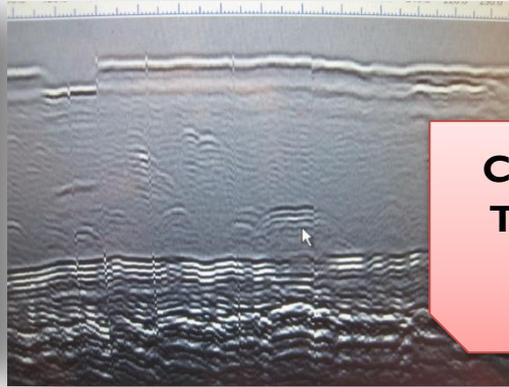
All Personnel performing examination is qualified and certified according EN 473 , SNT – TC – 1A, ISO 9712 at II and III level .

Special training courses have been made in Italy, US, Germany, UK , Russia, Malaysia for TOFD Immersion technique, Computerized technique.

I&T regularly participated to National and International conferences presenting technical papers.

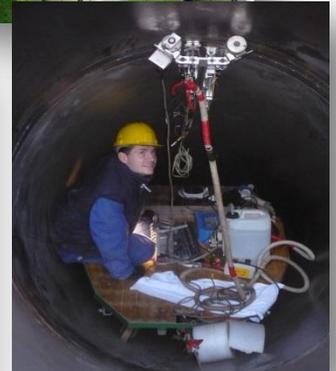
Equipments and services on NDT transfer technologies in its own stands . More than sixty publications have been already spread out in the conference all over the world . I&T is certified according ISO 9001 .

TOFD INSPECTION

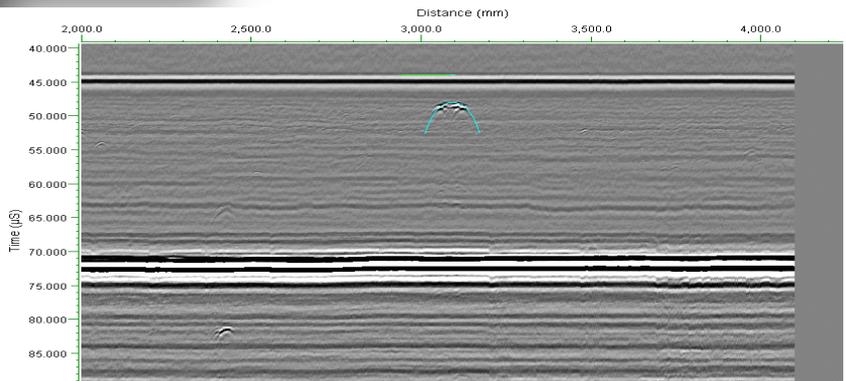


CALIBRATION ON TEST BLOCK FOR PIPING

PIPING INTERNAL INSPECTION



TOFD WELD INSPECTION IN CrMoV



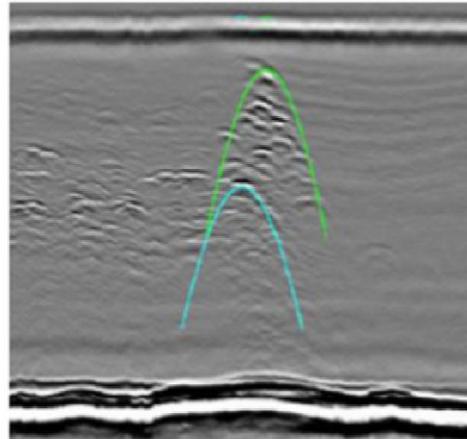
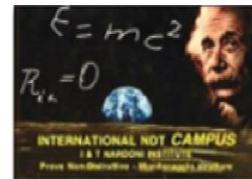
Slag inclusion length 80 mm, depth 45 mm height 4 mm, thk 135 mm

HANDBOOK OF TOFD MAPS

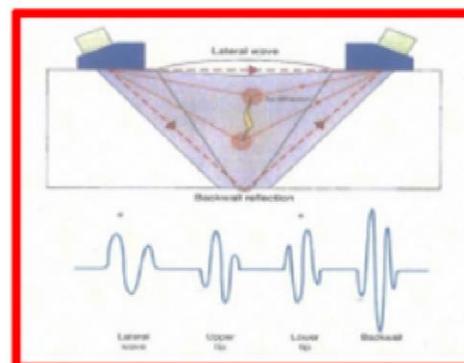
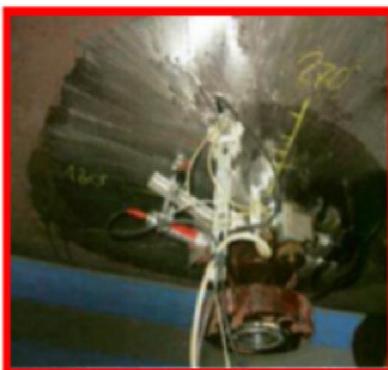
more than 100 TOFD maps for different thickness available to compare for the conformity of the TOFD parameters



I&T NARDONI INSTITUTE



TOFD REFERENCE COLLECTION maps ASME CODE SEC. V UNI EN 583-6



ED. OCTOBER 2013

I&T NARDONI INSTITUTE srl Via D.C. Pontevica, 21 - 25010 Folzano-
Brescia-

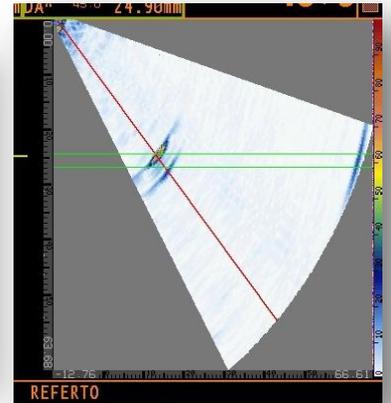
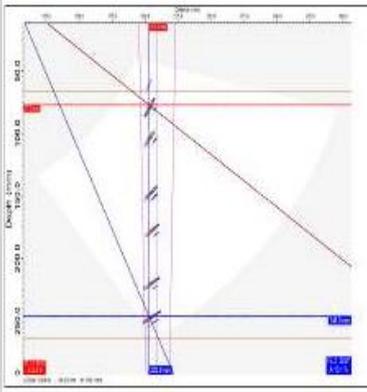
Tel. ++ 39 030 - 266582 / 2160757 Fax. ++ 39 030 - 2667429

Tel. Campus: +39 030-2160135

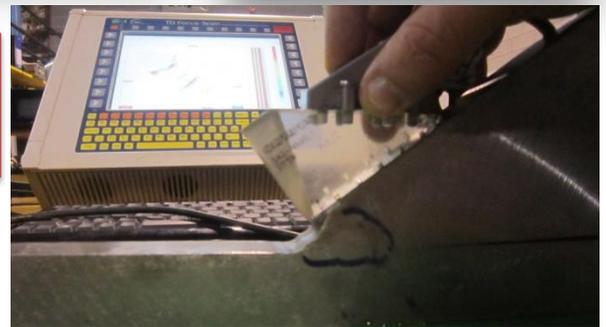
E-mail: Nardoni@numerica.it - Nardoni@speedyposta.it nardoni.campus@gmail.com

BRESCIA-ITALY

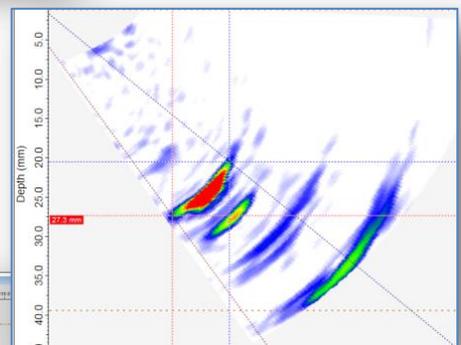
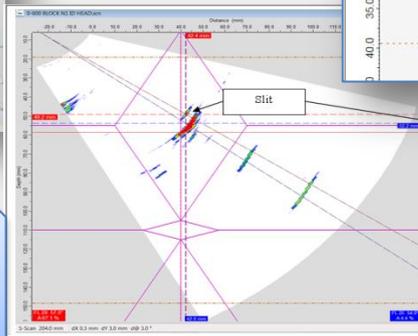
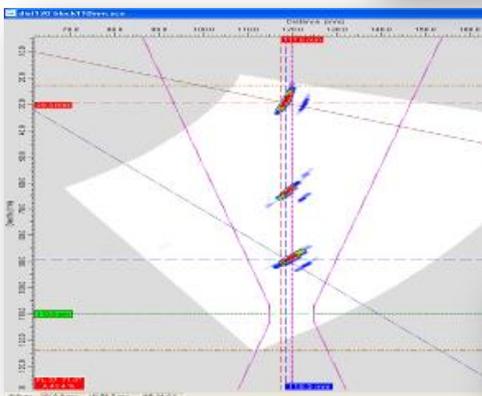
PHASED ARRAY INSPECTION



PHASED ARRAY ON CALIBRATION BLOCKS

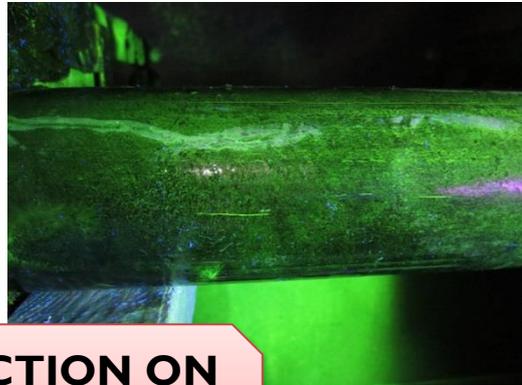
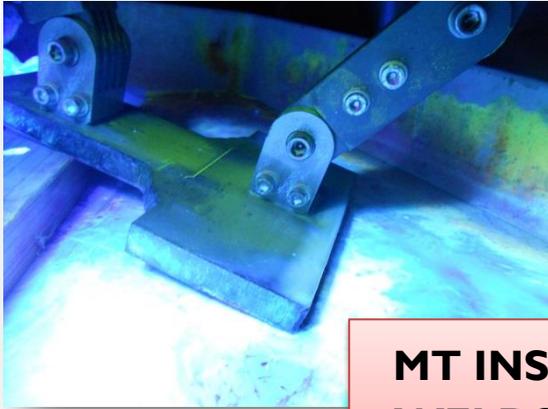


CIRCUMFERENTIAL AND NOZZLE WELD INSPECTION

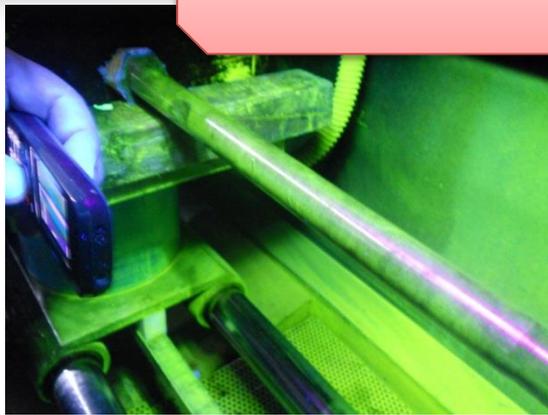


EXAMPLE OF PHASED ARRAY MAPS

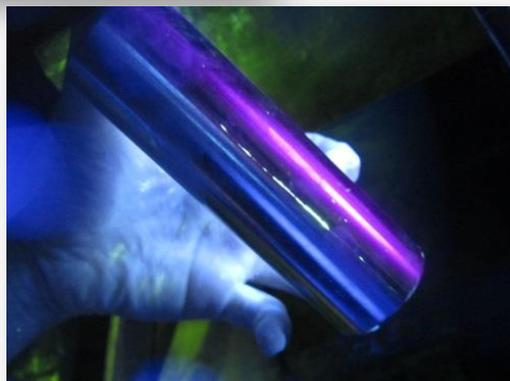
MAGNETIC PARTICLE AND LIQUID PENETRANT INSPECTION



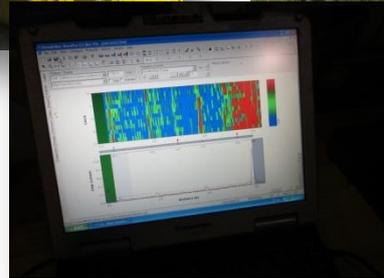
**MT INSPECTION ON
WELDS AND BOLDS**



**PT INSPECTION ON
WELDS PLATES
AND CASTINGS**

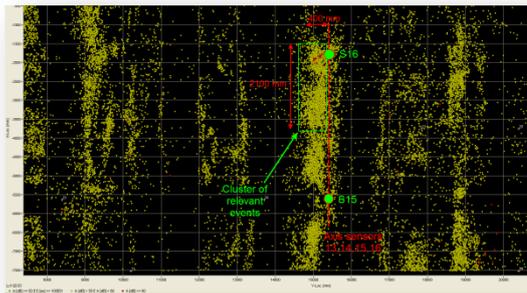


GUIDED WAVE INSPECTION

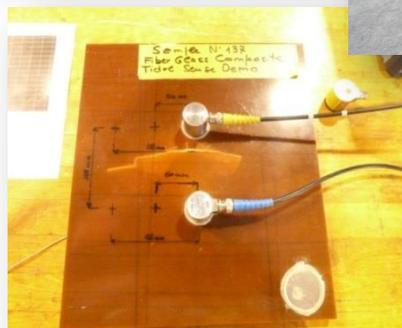
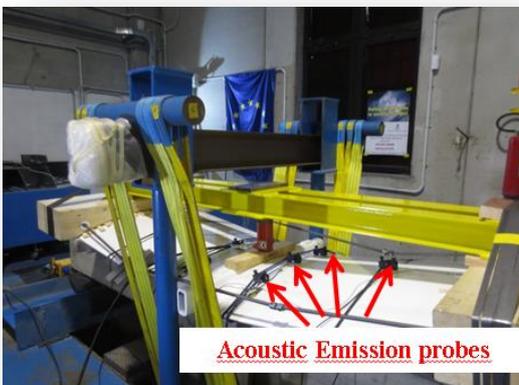


GUIDED WAVE INSPECTION ON REFINERY TUBES

ACOUSTIC EMISSION INSPECTION



ON HYDROCRACKERS

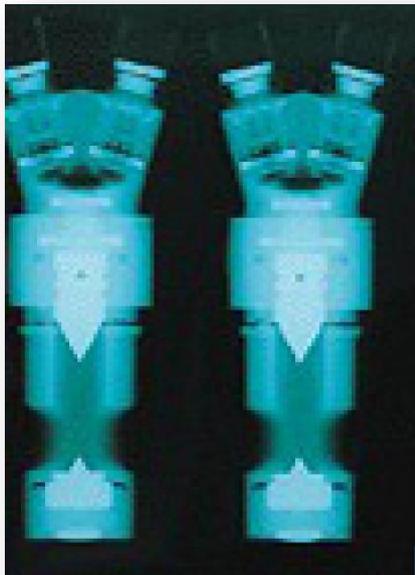
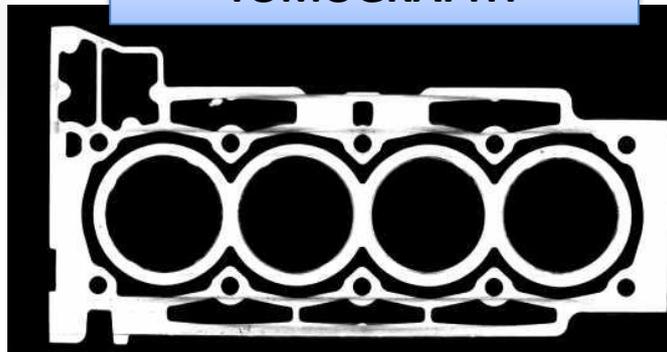


ON FIBER GLASS AND COMPOSITE MATERIALS

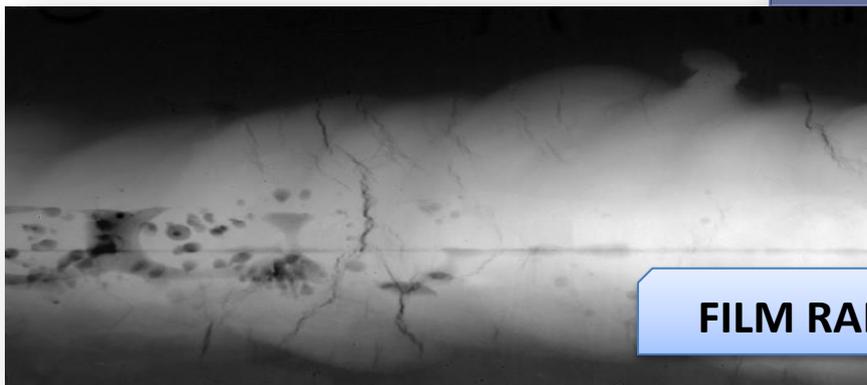
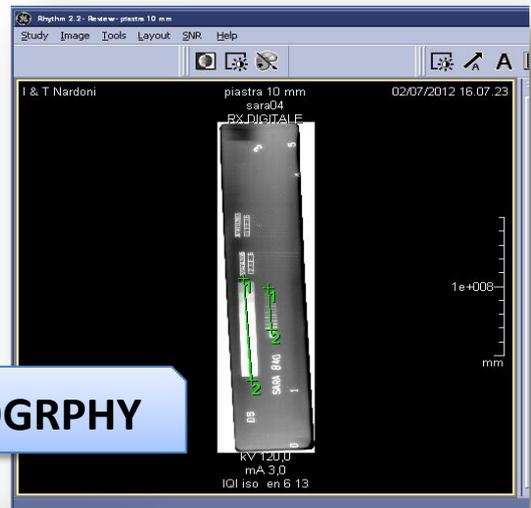
RADIOGRAPHY-FILM AND DIGITAL



TOMOGRAPHY



DIGITAL RADIOGRAPHY



FILM RADIOGRAPHY

EDDY CURRENT INSPECTION



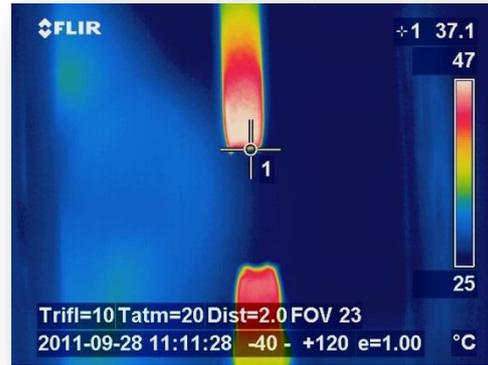
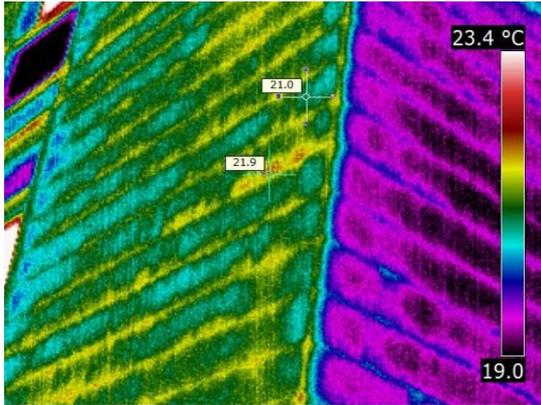
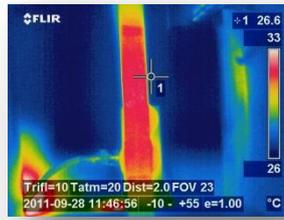
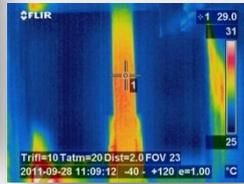
**EDDY CURRENT INSPECTION
ON HEAT EXCHANGER TUBES**



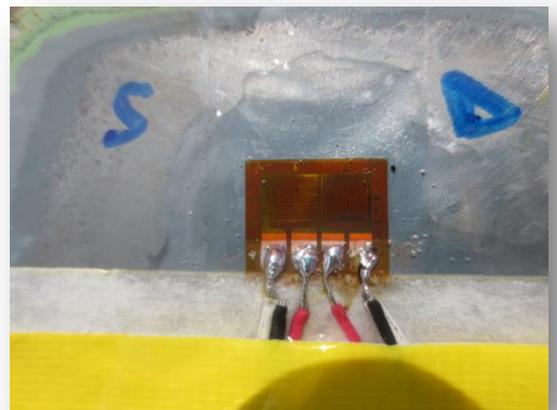
**EDDY CURRENT INSPECTION
ON TURBINE BLADES**



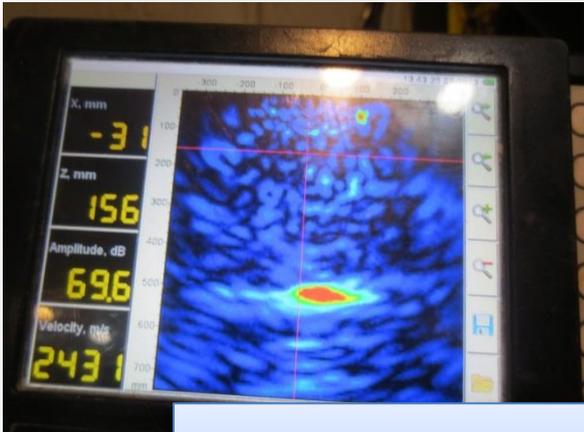
TERMOGRAPHY



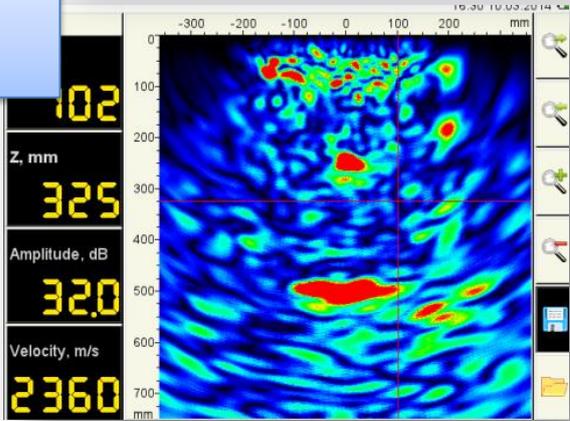
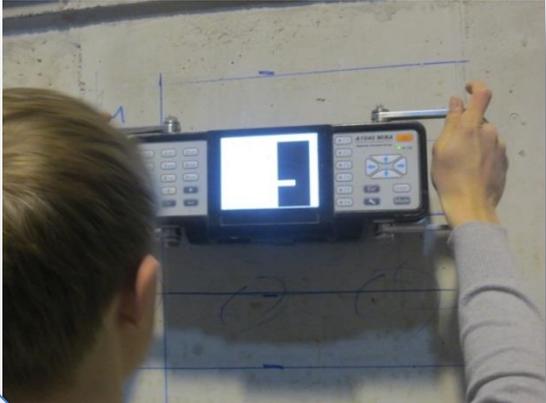
STRESS ANALYSIS



CHARACTERIZATION OF CONCRETE STRUCTURES



**ECHOGRAPHY OF
CONCRETE SECTION**



**DEPTH CRACK
EVALUATION**



**REBOR STRENGTH
EVALUATION**

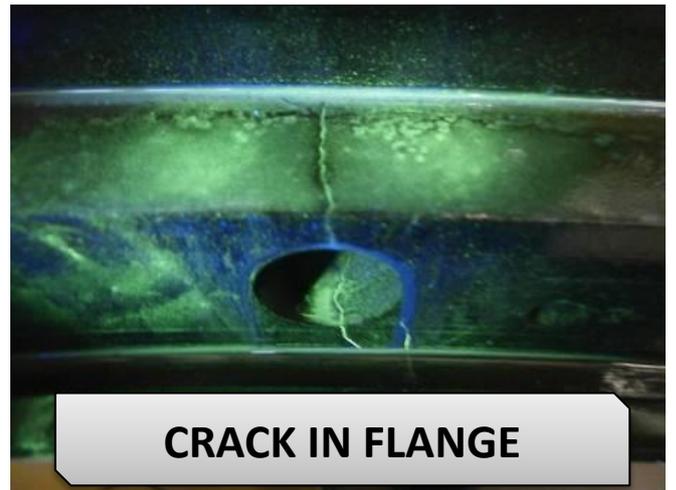
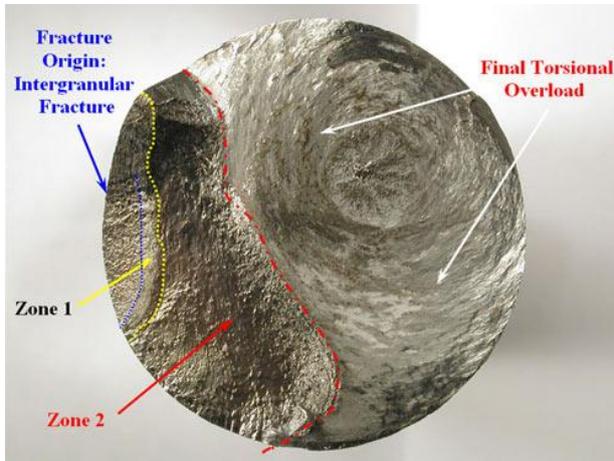


**INFIELD CONCRETE
ANALYSIS**



FAILURE ANALYSIS

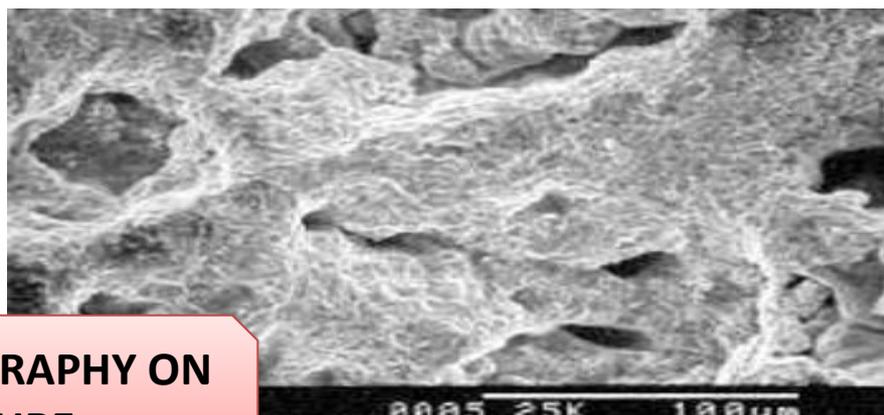
EXPLODED HYDROGEN TUBE



CRACK IN FLANGE



CRACK IN TURBINE BLADES



SEM MICROGRAPHY ON FRACTURE

EUROPEAN RESEARCH PROJECT



SIXTH FRAMEWORK PROGRAMME

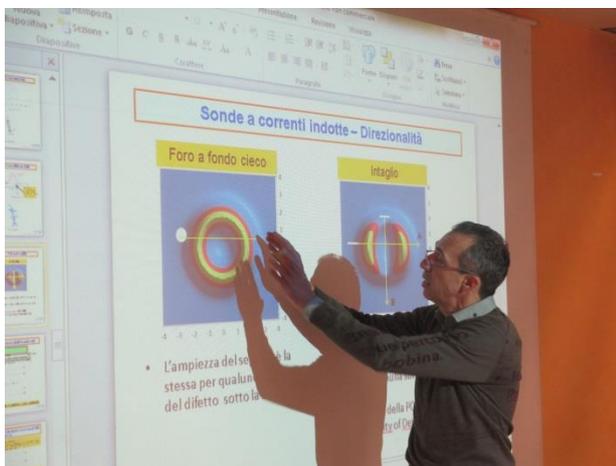
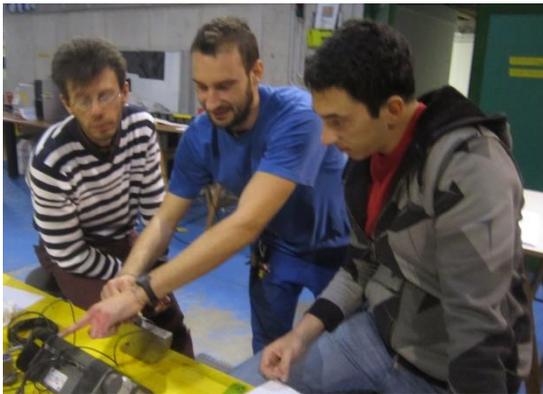


INTERNATIONAL CAMPUS

Albert Einstein

I&T NARDONI INSTITUTE

TRAINING AND QUALIFICATION OF NDT PERSONNEL
EN ISO 9712 / SNT-TC-1A

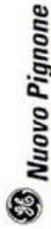




Final Clients portfolio of I&T Nardoni Institute



I&T Nardoni Institute, selected by key customers for Ultrasonic Computerized Systems for these final clients



Nuovo Pignone



السعودية
Saudi Aramco



TOYO
ENGINEERING



VALERO



SAPREF
PEMEX



STATOIL

HALDOR TOPSOE
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26010 Fozzano - BRESCIA
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PETRONAS



NESTE OIL



Snamprogetti

PARSONS
FLUOR

Technip



SIN1
Siirtec Nigi



SK lubricants



Lurgi



AgipPetroli

Syncrude

ALSTOM

ConocoPhillips

MELS S.A.



Uhde
ThyssenKrupp



JACOBS



Foster Wheeler



Saipem



MANAGEMENT SYSTEM CERTIFICATE

Certificato No./Certificate No.:
CERT-00866-96-AQ-MIL-SENCERT

Data prima emissione/Initial date:
19 marzo 1996

Validità/Valid:
12 febbraio 2016 - 15 settembre 2018

Si certifica che il sistema di gestione di/This is to certify that the management system of

I&T Nardoni Institute S.r.l.

Via della Cascina Pontevecchia, 21 - 25010 Folzano (BS) - Italy

È conforme ai requisiti della norma per il Sistema di Gestione Qualità/
has been found to conform to the Quality Management System standard:

UNI EN ISO 9001:2008 (ISO 9001:2008)

Questa certificazione è valida
per il seguente campo applicativo:

Sviluppo ed erogazione dei seguenti servizi: prove non distruttive (PND); ricerca ed analisi rotture, verifica integrità corpi a pressione e strutture. Trasferimento tecnologico relativo a strumentazione innovativa, Formazione del personale PND, Commercializzazione di strumentazione innovativa

(Settore EA: 35 - 29)

This certificate is valid
for the following scope:

Development and provision of the following services: non destructive tests (NDT); failure analysis, pressure vessels and structures integrity verification. Technology transfer on advanced instrumentation, Training of NDT personnel. Trading of advanced NDT equipment

(EA Sector: 35 - 29)

Luogo e Data/Place and date:
Vimercate (MB), 11 gennaio 2016



0002 01 000 6
0004 01 000 6
0007 01 000 6
0010 01 000 6

0003 01 000 6
0005 01 000 6
0006 01 000 6
0008 01 000 6

0009 01 000 6
0011 01 000 6
0012 01 000 6
0013 01 000 6

Per l'Organismo di Certificazione/
For the Certification Body

Vittore Marangon
Management Representative

La validità del presente Certificato è subordinata al rispetto delle condizioni contenute nel Contratto di Certificazione/
Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

DNV GL Business Assurance Italia S.r.l. Via Energy Park, 14, 20871 Vimercate (MB), Italy, Tel: 039 68 99 903, www.dnvgl.it/businessassurance

CERTIFICATO DI ACCREDITAMENTO *Accreditation Certificate*

Accreditamento n°
Accreditation n° **1542**

Rev. **0**

Si dichiara che
We declare that

I&T NARDONI INSTITUTE SRL

Sede/Headquarters:
Via Della Cascina Portevica, 21 - Loc. Folzano - 25124 Brescia BS

è conforme ai requisiti
della norma

**UNI CEI EN ISO/IEC 17025:2005 "Requisiti generali per la competenza dei
Laboratori di prova e taratura"**

*meets the requirements
of the standard*

*EN ISO/IEC 17025:2005 "General Requirements for the Competence of Testing
and Calibration Laboratories" standard*

quali

Laboratorio di Prova

as

Testing Laboratory

L'accreditamento attesta la competenza tecnica del Laboratorio relativamente allo scopo riportato nelle schede allegate al presente certificato. Le schede possono variare nel tempo. I requisiti gestionali della ISO/IEC 17025:2005 (sezione 4) sono scritti in un linguaggio idoneo all'attività dei Laboratori di Prova, sono conformi ai principi della ISO 9001:2008 ed allineati con i suoi requisiti applicabili.

Il presente certificato non è da ritenersi valido se non accompagnato dalle schede allegate e può essere sospeso o revocato in qualsiasi momento nel caso di inadempienza accertata da parte di ACCREDIA.

La validità dell'accreditamento può essere verificata sul sito WEB (www.accredia.it) o richiesta direttamente ai singoli Dipartimenti.

The accreditation certifies the technical competence of the laboratory limited to the scope detailed in the attached Enclosure. The scope may vary in the time. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in a language relevant to Testing Laboratories operations and meet the principles of ISO 9001:2008 and are aligned with its pertinent requirements.

The present certificate is valid only if associated to the annexed schedule, and can be suspended or withdrawn at any time in the event of non fulfilment as ascertained by ACCREDIA.

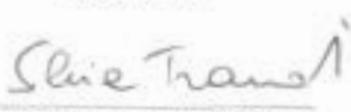
The in force status of the accreditation may be checked in the WEB site (www.accredia.it) or on direct request to appointed Department.

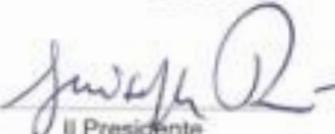
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1st issue date
2015-09-24

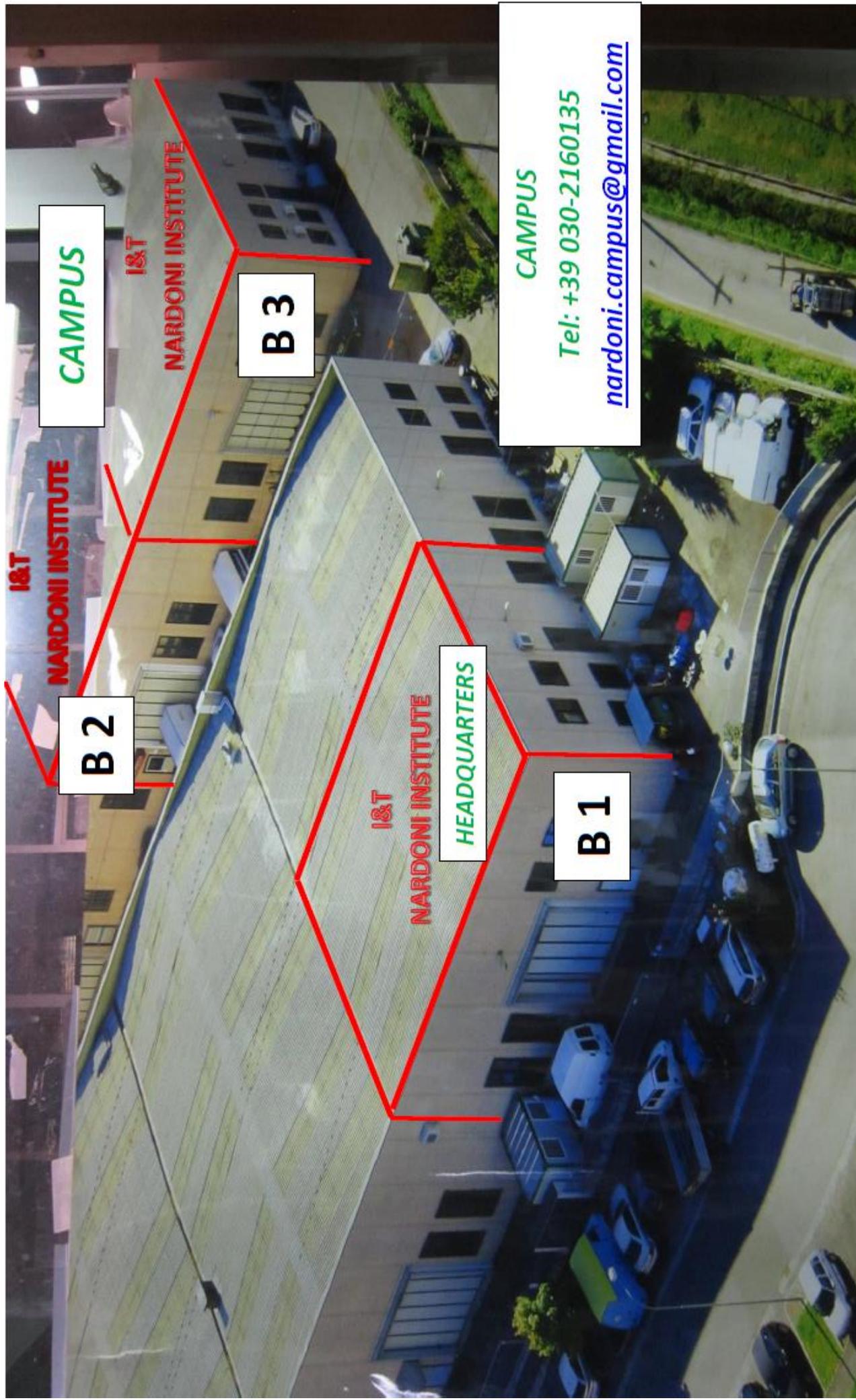
Data di modifica
Modification date
2015-09-24

Data di scadenza
Expiring date
2019-09-23


Il Direttore Generale
The General Director
(Dr. Filippo Trifiletti)


Il Direttore di Dipartimento
Department Director
(Dr.ssa Silvia Tramontin)


Il Presidente
The President
(Ing. Giuseppe Rossi)



CAMPUS

Tel: +39 030-2160135

nardoni.campus@gmail.com

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nardoni@numerica.it , nardoni@speedyposta.it