



4TH international exhibition
and conference on valve
and flow control technologies

LEADING THE GLOBAL MARKET FLOW

MAY 25TH > 26TH 2022

BERGAMO EXHIBITION CENTRE - BERGAMO - ITALY

WWW.INDUSTRIALVALVESUMMIT.COM

ORGANIZERS



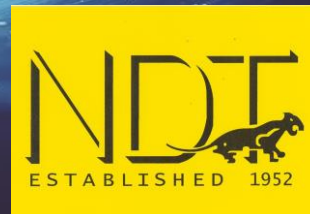
SCIENTIFIC COMMITTEE



Michele Cevenini

NDT ITALIANA –MANAGING DIRECTOR

BIO WATER BASED LIQUID PENETRANTS FOR NON DESTRUCTIVE TESTING OF VALVES' QUALITY: KEY INNOVATIONS IN SAFETY AND COSTS FOR THE VALVES INDUSTRY



IVS 2022 Warm-up

On-line Technical Conference preparing to IVS 4th edition

Biography

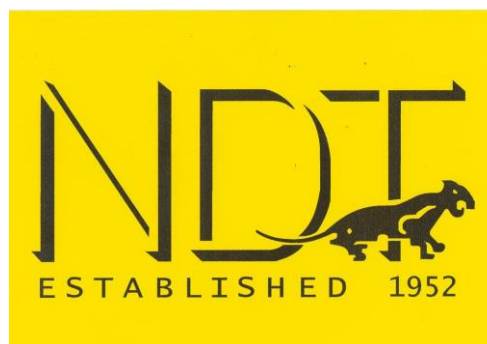


Michele Cevenini is the managing director of NDT Italiana, one of the world's most famous non-destructive testing quality inspection companies.

Michele joined the Company in 2005, after a cum laude degree in economics and work experiences in London and New York.

NDT Italiana has a very long experience manufacturing liquid penetrants, magnetic particles, ultrasonic couplants and UV lamps, and is focused on safety and productivity of quality control in the valve industry.

Company



NDT ITALIANA

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About us – Quality Pioneers

- NDT ITALIANA works since 1952 in the field of NON-DESTRUCTIVE TESTING. The headquarters are in Italy near Milan. A large area is devoted to production and goods stocking, to guarantee quick supply to customers worldwide
- NDT Italiana is certified UNI EN ISO 9001 and approved NATO AQAP-120, and is equipped with internal Chemical and Electronic Laboratories, Technical Service, Specialised Consulting at the service of our customers



NDT founder, Mrs. Angela in 1952



NDT factory in Italy, near Milan

➤ NDT Italiana manufactures:

1. **LIQUID PENETRANTS:**

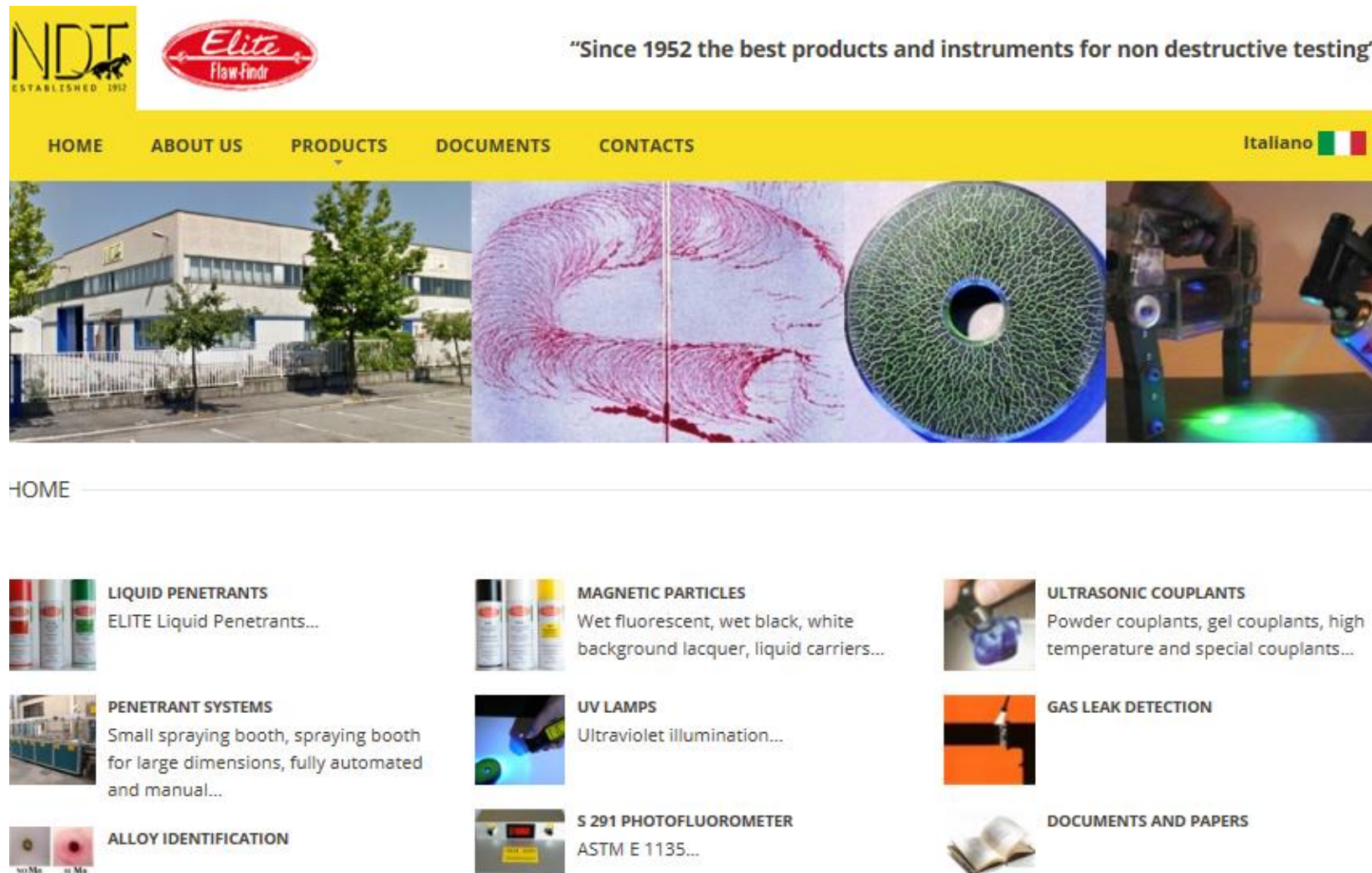
- FLUORESCENT WATER BASED
- RED WATER BASED AND TRADITIONAL OIL-BASED

2. **MAGNETIC PARTICLES:**

- FLUORESCENT AND DUAL COLORED, BLACK

3. **ULTRASONIC COUPLANTS**

4. **UV LED LIGHTS**



The screenshot shows the NDT Elite website homepage. At the top, there is a yellow navigation bar with the NDT logo (ESTABLISHED 1952) and the Elite logo (Flaw-Finder). The slogan reads: "Since 1952 the best products and instruments for non destructive testing". The navigation menu includes HOME, ABOUT US, PRODUCTS, DOCUMENTS, and CONTACTS. A language selector shows "Italiano" with the Italian flag. Below the navigation bar is a banner image featuring a factory building, a liquid penetrant test on a metal part, a circular ultrasonic couplant, and a UV lamp. The main content area is titled "HOME" and displays a grid of product categories with small images and text descriptions:

- LIQUID PENETRANTS**
ELITE Liquid Penetrants...
- MAGNETIC PARTICLES**
Wet fluorescent, wet black, white background lacquer, liquid carriers...
- ULTRASONIC COUPLANTS**
Powder couplants, gel couplants, high temperature and special couplants...
- PENETRANT SYSTEMS**
Small spraying booth, spraying booth for large dimensions, fully automated and manual...
- UV LAMPS**
Ultraviolet illumination...
- GAS LEAK DETECTION**
- ALLOY IDENTIFICATION**
- S 291 PHOTOFLUOROMETER**
ASTM E 1135...
- DOCUMENTS AND PAPERS**



➤ NDT ITALIANA with its products and instruments meets the requirements of many key industrial sectors with turn-key solutions

➤ NDT Italiana's Products are sold in over 100 countries:

Albania, Algeria, Angola, Argentina, Australia, Austria, Azerbaijan, Bahrain, Bangladesh, Belgium, Bolivia, Bosnia Herzegovina, Brazil, Bulgaria, Canada, Chile, China, Colombia, Congo, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Ecuador, Egypt, Equatorial Guinea, Estonia, Ethiopia, Finland, France, Germany, Great Britain, Greece, Holland, Hong Kong, Hungary, Iceland, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Ivory Coast, Japan, Jordan, Kazakhstan, Kenya, Kosovo, Kuwait, Latvia, Lebanon, Libya, Lithuania, Luxembourg, Malaysia, Mali, Malta, Morocco, Mexico, Nepal, New Zealand, Nigeria, North Korea, Norway, Oman, Pakistan, Panama, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sudan, Sweden, Switzerland, Syria, Taiwan, Thailand, Trinidad, Tunisia, Turkey, Ukraine, United Arab Emirates, United States, Venezuela, Vietnam, Zimbabwe...

- NDT ITALIANA is geographically located to exploit non destructive testing opportunities worldwide
- NDT ITALIANA is selling directly and through a network of distributors covering all industries, and is focused on the Industrial Valve Industry



International Standards: ISO 3452; ASME V Art. 6; API 20D, AMS 2644...

“Penetrant systems are to be classified as follows [...]:

- Method A(W) Water washable – water containing (≥ 20% water by volume)

AMS 2644

“Penetrant testing products shall be classified by type method and form [...] Form c: Water Suspendable”

**EN ISO
3452**

“PT shall be performed using either Type 1 (fluorescent) or Type 2 (visible) penetrant [...]:

- Method A: Water Washable
- Form c: Water suspendable”

API 20D

Bio Liquid Penetrants: Advantages for the operators and the environment

Safety Advantages:

1. No flammability risk, not irritant for the eyes or the skin of the operator (water-based)
2. 0% Volatile Organic Compounds (VOC), no expensive air treatment with active carbon filtration needed, safe for the environment

Cost Advantages:

1. No costs of cabins with active carbon filtration for solvents (being water-based)
 2. Economical: free of oil and other volatile solvents
- Same sensitivity and process parameters compared to traditional oil-based penetrants and solvent-based developers



K71B2 BIO red penetrant+
Elite DWS2 developer

Red Bio Liquid Penetrant indications on test block

Stable and reliable indications' sizing over time



Penetrant Elite K71B2 BIO red penetrant+ Elite DWS2 developer

Left: 30 s after development

Right: 5 min after development



Sensitivity level 2 (same of traditional oil-based penetrants)



Competitor equivalent «B»

Left: 30 s after application

Right: 5 min after application



Too much bleed out = generation of false cracks + missing small ones

Safer Products – the BIO line

Elite Bio NDT Products

Standard NDT Competitor Products



GHS02



Flammable



GHS07



Xi Irritant



Xn Harmful



Environmental Hazard



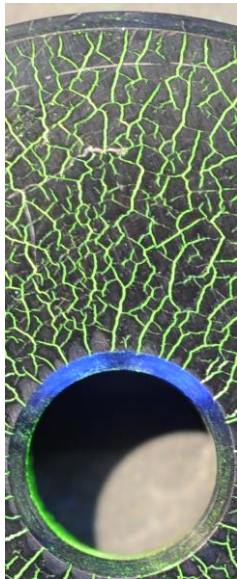
Penetrant and
Magnetic Bio
products are not
flammable, not
harmful, not even
irritant for the eyes
or the skin, not
polluting for the
environment

Magnetic testing with our line of Bio Magnetics

- Also for magnetic inspection today is available the possibility to use a safer Fluorescent Bio Magnetic product

Cracks with Elite FW1AC Bio Water Based Fluorescent Magnetic:

- No need to apply and remove white contrast paint!



Same Cracks with standard white contrast paint + black magnetic:

- Need to apply and remove white contrast paint!



Ultrasonic testing with our line of Bio Couplants



Couplant specific for Ultrasonic Testing

- ✓ Safe for operator and environment
- ✓ Fast to apply and remove
- ✓ Anti-rust protection
- ✓ Higher quality of the signal (lower background noise): up to +30%



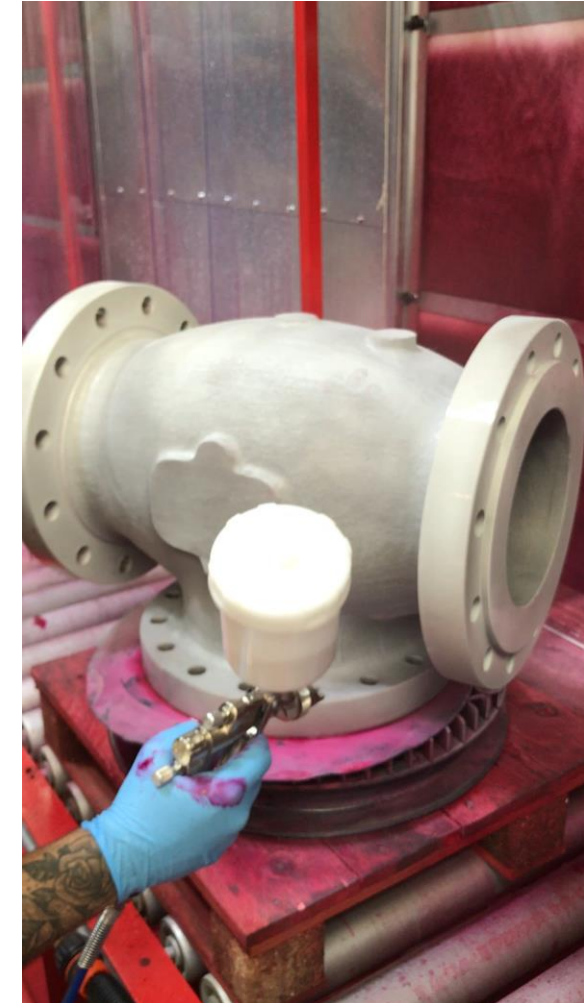
Couplant not specific for Ultrasonic Testing (example: glue, grease, oil...)

- ✗ No Safety Data Sheet or Certificate of Analysis
- ✗ Difficult to prepare (see above) and remove
- ✗ Probe and piece not protected
- ✗ Lower quality of the signal force the operator to increase the gain with higher background noise

Company case studies in the valve industry

Liquid Penetrant Inspection with Bio penetrants

- Large Valve producer for the Oil&Gas Industry
 - Target: eliminate any risk for the operators and dangerous emissions (VOC volatile organic compounds) during quality inspection of Valves with liquid penetrants and magnetics
 - Solution: Elite red Bio Penetrant K71B2 and white developer water suspendible Elite DWS2
 - Easy to apply and economical, uses a compressed air spraying gun (no empty spray cans to dispose of)



Company case studies in the valve industry

Magnetic Particles Inspection with Bio magnetics

- Large Valve producer for the Oil&Gas Industry
 - Target: eliminate any risk for the operators and dangerous emissions (VOC volatile organic compounds) during quality inspection of Valves with liquid penetrants and magnetics
 - Solution: Elite Bio Fluorescent Dual Magnetic particles FW1AC
 - No risk for the operator or the environment, economical and fast: no need to apply and then remove the white contrast paint!





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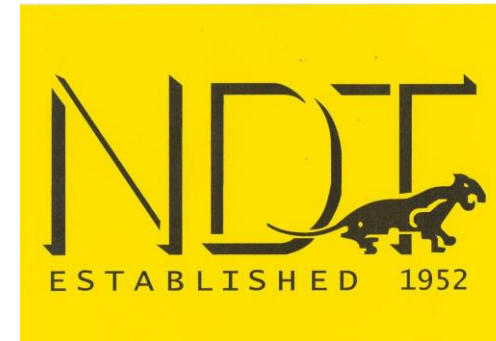


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Q&A SESSION

Thank you for your attention!



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