



GAMMATEST NDT

NON DESTRUCTIVE TESTING SERVICES

GAMMATEST NDT ENGINEERING QUALITY CONTROL INDUSTRY LIMITED COMPANY



www.gammandt.com

ABOUT US

GAMMA TEST NDT, which was established in 2008 in Istanbul; is an independent, impartial, experienced and reliable inspection company. Our inspection activities are carried out by our non-destructive inspection personnel certified according to TS EN ISO 9712. Within the scope of our activities, among the projects carried out by our organization so far; Factories producing pressure vessels, natural gas main pipelines, natural gas installations of industrial facilities, welding controls of ships in shipyards, stadiums, shopping centers, HEPP Projects, water pipelines within İSKİ, DSI, Ereğli and İskenderun Iron and Steel Factories in the iron and steel industry. There are hundreds of industrial establishments. We experience the satisfaction of performing the controls successfully.

OUR MISSION

With more than twenty years of experience in the field of Quality Control and our eleven years of operation, with our experienced employees; By always keeping customer service at the forefront, giving importance to innovations and creativity, based on knowledge and experience, expressing ideas by communicating, using all resources efficiently, respectful to the society and the environment, and adhering to our principles and values, our customers, suppliers and Our aim is to achieve our goals within the framework of team spirit with our employees, to meet the current expectations and needs of our customers fully and on time, to try to provide services that exceed their expectations in the future, and not to give up on the principle of mutual trust, superior business ethics and honest behavior in our commercial and social relations.

OUR VISION

To be among the leading companies in the world by providing value to our customers, by developing our employees, by targeting the best in what we do with our modern management approach, by maintaining the reliable working system of our sector in the short term in the services we provide in the field of quality control, and to work in line with the international vision, mission and values in the long term.



Our NDT Services

Non-Destructive Testing

1- Visual Examination

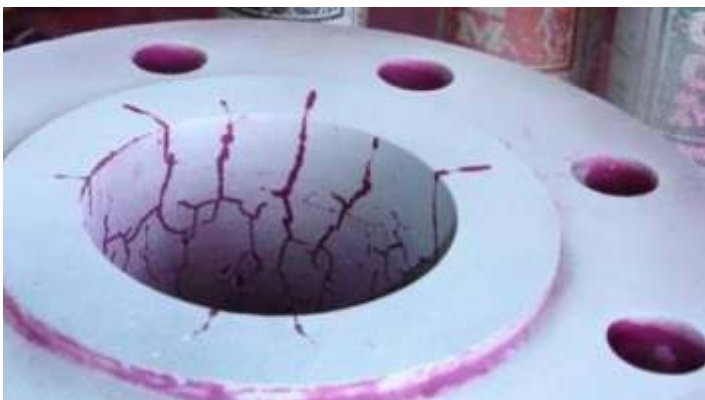
It is the examination of conditions affecting the quality such as discontinuities, structural defects, surface condition on the surface of a product or metal parts, with or without the use of an optical aid (such as a magnifying glass). Visual inspection can be seen as a very simple method, but it is one of the most important inspection methods. It is mostly a work that needs to be done before the application of another non-destructive testing method. In fact, most of the application standards prepared for other non-destructive testing methods require first visual inspection and recording the findings. This method can be applied to all metallic or non-metallic materials. Depending on the accessibility to the examination surfaces, it can be applied by using auxiliary tools

such as endoscopes when necessary. Generally, it is not desirable to perform surface cleaning as a preparation for the inspection surface. More precisely, the surface should be such that the expected defects are best visible. The examination is carried out under sufficient light conditions and according to appropriate viewing angles



2- Liquid Penetrant Examination

PT Liquid Penetrant Inspection Dye Penetrant Testing; It is aimed to make the discontinuities visible on the surface by using a special paint type with very high penetrating properties. Penetrant (interference) inspection – Relates to the phenomenon of a rising or escalating liquid as it is confined to a small opening due to the characteristics of capillary action or the surface wetting properties of the liquid. Penetrant inspection is used to find surface-open discontinuities on relatively smooth, non-porous surfaces. Types of defects that can be found in penetrant inspection: cracks and porosity etc.



Our NDT Services

Non-Destructive Testing

3- Magnetic Particle Examination

The magnetic particle method has a wide range of applications applied to ferromagnetic materials due to its simple, fast and low cost applicability, which is used in the detection and location of surface and near-surface defects. In this method, the determination of surface defects depends on the size of the defect and its proximity to the surface, and it is applied only to ferromagnetic, that is, magnetizable materials. The basic principle of the method is based on the magnetization of the examined material. The magnetization process is carried out by passing an electric current or a direct magnetic flux through the part. Ferromagnetic materials do not show any resistance to this magnetic flux, on the contrary, they contribute to the passage of this magnetic flux.



If a magnetic field is applied to the surface of a material with faults, if ferromagnetic powders are sprinkled on the surface, these dusts are attracted by the leakage fluxes formed in the areas where the faults are located, and collect on these discontinuities and form a bridge for the passage of the leakage flux. Thus, the locations of the existing discontinuities are determined.

4- Ultrasonic Examination

Ultrasonic inspection is based on the principle of sending high-frequency sound waves into the material and reflecting them back. Sound waves are sent and received into the material with a single probe with a transceiver feature or by using a transmitting probe and a receiving probe. Since the dimensional dimensions of the part to be tested are known, the sound attenuation sent and received is calculated in advance for the faultless part, but if there is any error (discontinuity) in the part, the sound attenuation becomes more and the location of the error appears as an error echo on the screen of the device. All kinds of parts, welding seams, cast and forged parts can be tested with ultrasonic testing. In industry, it is used to monitor metal wall thickness or weld quality in industrial environments such as petrochemical, energy, marine, aerospace, automotive.

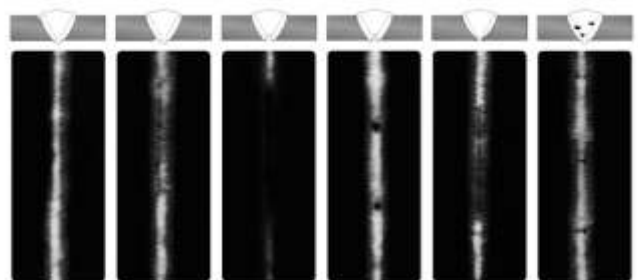


Our NDT Services

Non-Destructive Testing

5. Radiographic Examination

Radiographic inspection method is one of the most widely used non-destructive testing methods in the industry because it is a very sensitive inspection method and the inspection results can be recorded permanently. The test piece is irradiated with a beam of radiation (x or gamma rays) from a source. As the radiation passes through the material, it is absorbed and lost at a certain rate depending on the property of the material, and then reaches the film placed on the back surface of the part and affects the film. Since the discontinuities weaken the radiation differently, the intensity of the radiation passing through the regions with the discontinuities and the darkening it will create on the film will also be different. After the film is developed, darkening on the film becomes visible as a sign of discontinuities. This method is applied to ferromagnetic and non-ferromagnetic metals and all other materials. X-rays are widely used in non-destructive testing, as they provide the opportunity to examine the internal structures without damaging the materials.



Advanced Non-Destructive Testing Services

Non-Destructive Testing

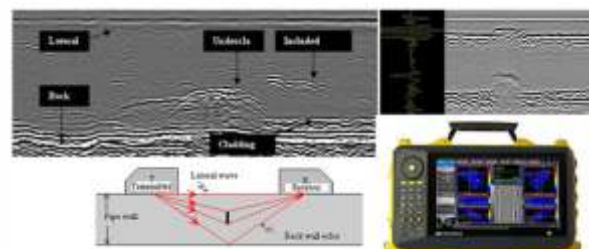
1- Phased Array Ultrasonic Test (Paut)

Basically, Phased Array technique works with ultrasonic principles. However, unlike the classical Ultrasonic Inspection technique, instead of single/double crystal, we can provide clearer information about the test piece by using multiple angles and sound beams in accordance with user needs and inspection requirements, making more effective, fast and detailed defect detection. With the PAUT inspection technique, 3-dimensional inspection is provided to detect irregularities in the material, and information about the orientation of the defects and their location in the material can be obtained at once. In the probe used in this method, 8-16-32-64-128.... element is found. The firing order of the elements can be adjusted as desired, allowing them to focus on a specific region. This method has many advantages over the traditional pulse-echo method.



2- Time Of Flight Diffraction (TOFD)

The TOFD method (Time of Flight Diffraction) is an ultrasonic testing technique used for error detection and sizing. This method is a very sensitive and fast method used to detect discontinuities in welded fabrications. TOFD provides mapping of the position of the fault section. The operating principle of the system is based on the detection of the ringing in the corners and ends of the errors by the probes. Therefore, unlike other ultrasonic techniques, the system does not carry the risk of the sound beam not being reflected back. Unlike standard ultrasonic inspection, this method is not amplitude dependent, so it is not affected by constraints such as probe position, orientation of discontinuities, irregular or changing material surfaces, or poor grip. In addition, this technique is used to collect information about the material structure today, and thanks to the results obtained, it provides many advantages in terms of cost to manufacturers and producers.



Welding Engineering Services

Welding Engineering

Welding Preparation and Quality Control occupies a very important place in the manufacture and assembly of industrial facilities and equipment. All kinds of welded fabrication is done according to a standard. The welding method to be applied must be confirmed according to the relevant standard. Verification of the welding method is done with WPQR. The sample sample prepared according to the standard is welded by a certified welder in accordance with the manufacturing conditions. Destructive and non-destructive tests prescribed by the standard are applied to the prepared sample. If the results of the tests are sufficient, the method is validated. Welding is a process that must be applied with a specification. All variants of the source should be determined with reference to a previously validated method test (WPQR). The manufacturer makes the welding with the WPS (Welding specification) prepared according to the scope range of the WPQRs in his hands. In order for your welded productions to be made in accordance with regulations, specifications and Standards, weld suitability tests must be performed at the beginning of production.

- WPQR (Welding Procedure Qualification Record) Welding method approvals .
- WPS (Welding Procedure Specification) Welding procedures They are called. With its expert staff of GAMMATEST NDT Welding Engineers
- EN ISO 15609-1 Specification and qualification of welding procedures for metallic materials
- Welding procedure specification
- Part 1: Arc welding
- EN ISO 15614-1 Specification and qualification of welding procedures for metallic materials
- Welding procedure test - Part 1: Gas and arc welding of steels, arc welding of nickel and nickel alloys
- EN ISO 15613 Specification and qualification of welding procedures for metallic materials
- Qualification based on pre-production welding testing.
- ASME SEC IX - API 1104
- AWS D.1.1

In accordance with its standards, it performs WPQR Inspections, all Destructive (DT) and Non-Destructive Tests (NDT) requested by the Standard and prepares declarations of conformity according to the results..

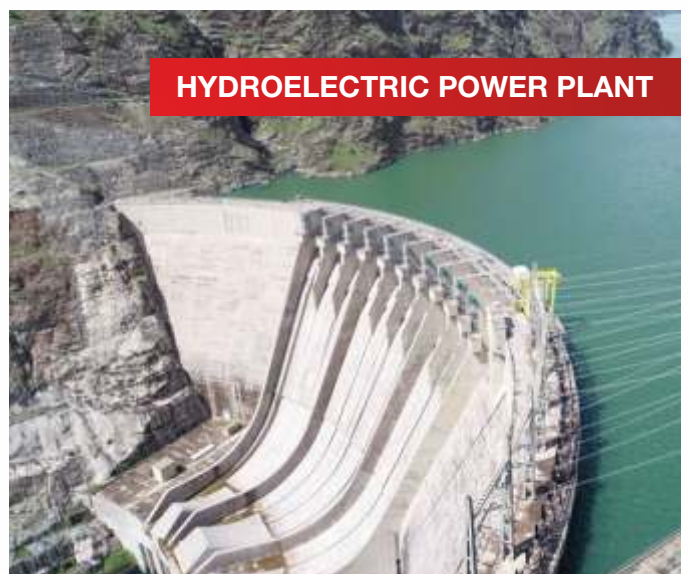


Heat Treatment Services

Heat Treatment (Pwht) & Pre-Heating Treatments (Pre Heating)

Pre-heating and post-welding stress relief before and during the welding process with portable devices in the workshops and fields we offer. The need for preheating and stress relief depends on the metallurgical structure of the material, its thickness and the usage environment within the framework of the relevant standards and codes. As Gammatest NDT, we provide accurate and reliable service to our customers with mobile heat treatment equipment suitable for pipelines, pressure vessel and boiler manufacturing, experienced personnel and modern equipment.

Some Sectors We Serve



Some Sectors We Serve

SPHERE TANKS



OIL REFINERY



UNDERGROUND STORAGE TANKS



STEEL STRUCTURES



PRESSURE VESSEL MANUFACTURING



BRIDGES



Some Sectors We Serve



ARÇELİK FABRİKASI



**MARAŞ ELBİSTAN
TERMİK SANTRALİ**



İ.B.B. KATI ATIK TESİSİ



**EREĞLİ TAT
ÇELİK FABRİKASI**



**BALIKESİR
DEVLET HASTANESİ**



**BALIKESİR
ŞİŞECAM FABRİKASI**



**EDİRNE
TRAKYA ÜNİVERSİTESİ**



EMAAR SQUARE



ESKİŞEHİR ETİ FABRİKASI



ESKİŞEHİR STADYUMU



HALIÇ SANAYİ SİTESİ



**İSKENDERUN
DEMİR ÇELİK FABRİKASI**

Some Sectors We Serve



**İSTANBUL
TİCARET MERKEZİ**



**MARMARA ÜNİVERSİTESİ
RTE KAMPÜSÜ**



NEF İSTANBUL



**ORDU GİRESUN
HAVALİMANI**



**POLATLI
ŞİŞECAM FABRİKASI**



YILPORT

Our References



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