A Higher Level of Reliability ®



# Applied Inspection Limited non-destructive testing, materials testing, consultancy, training and welding





**Non-destructive testing** 

**Materials testing** 

Consultancy

**Training** 

Welding



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## Introduction

Applied Inspection is an ISO 9001:2008, RISQS and RIS-2701-RST accredited company providing nondestructive testing and training, welding, welder training and materials testing both on site and from one of three fully equipped laboratories in Chesterfield, Burton on Trent and Ossett in West Yorkshire, as well as a dedicated rail office in Glasgow.

The company was formed in 1984, becoming an associate member of BINDT and rapidly gaining a reputation for being one of the most highly qualified NDT companies within the United Kingdom. We have a worldwide reputation for providing a fast reacting and professional service to a vast range of industries including; petrochemical, nuclear, off-shore, rail, power generation, mining, gas, construction, foundries, general engineering, and the leisure industry. Our round the clock service ensures Total Customer Focus.

In 2015, Applied joined the Rockwood Corporation family of businesses, enabling Applied to further enhance its capabilities in advanced methods, innovative technologies and reporting to bring added value to our customers.

Our major strength is a superb team of highly qualified and experienced permanent staff, the majority of whom have been with us for many years. The management team comprises of eight personnel qualified to ASNT, ACCP and PCN level III; with all of our technicians qualified to level II. Our mission is to continue to invest in the training and development of our staff in order to ensure consistent improvement of service and standards.



## **Non-destructive Testing**

Applied Inspection offers a comprehensive range of non-destructive testing headed by experienced and knowledgeable personnel with the commitment to provide customers with a service second to none.

Radiography: x-ray and gamma ray, iridium 192, cobalt 60, selenium 75 and ytterbium 169 Ultrasonic inspection Magnetic particle inspection Dye penetrant inspection Eddy current testing Visual inspection Outsourced NDT Positive material identification (PMI) Ferrite testing Hardness testing Rope access

We are registered with the Amusement Device Inspection Procedures Scheme (A.D.I.P.S) to provide NDT to the leisure industry.

## **Non-destructive Testing Training**

In conjunction with TWI we provide NDT training to PCN Level II and ASNT Level II nationally and globally; delivering courses on site or at one of our facilities.

Training courses are available in the following inspection disciplines;

Radiography Ultrasonics Magnetic particle Liquid penetrant Eddy current Welding inspection Visual inspection Boroscope inspection







## **Non-destructive Testing Methods**

## Radiography

X-ray capabilities up to 300 KV Gamma capabilities 4 x Selenium 75 100 Curies 8 x Iridium 192 80 Curies 3 x Cobalt 60 33 Curies 2 x Ytterbium 169 7 Curies Used to inspect materials of varying density and thickness to detect subsurface flaws

## **Magnetic Particle**

Four bench units up to 3000 Amps AC & HWDC Used on welds, castings and forged ferro-magnetic materials in order to detect cracks and flaws on the surface or very near to the surface

## **Dye Penetrant**

DPI lines for colour contrast and fluorescent inspection Used mainly on non-ferromagnetic materials to detect surface breaking flaws

## **Eddy Current Inspection**

An electromagnetic technique that can only be used on conductive materials

Used to detect surface and near surface defects on relatively small areas Equipment is light and compact and provides immediate feedback, making it ideally suited for onsite inspections

## **Positive Material Identification (PMI)**

Identification and chemical analysis of various metal alloys through nondestructive methods Certifies that materials received are the materials purchased

## Visual Inspection

Used extensively to evaluate the condition or the quality of a component's surface

Easily carried out, inexpensive, does not require special equipment Identifies where a failure is most likely to occur and when failure has commenced

## **Ultrasonic Inspection**

Uses sound waves of short wavelength and high frequency to detect flaws or measure material thickness Used to test welds, castings and wrought products

## Ferrite Testing

Fast, inexpensive and accurate way to measure delta ferrite content in austenitic and duplex stainless steels

Proper ferrite content provides a balance between ductility, toughness, corrosion resistance and crack prevention





## **Laboratory Services**

Applied Inspection has 10 radiography bays offering x-ray and gamma radiography from three locations around the UK.

Experienced level II and level III personnel offer round the clock service for cast, forged and welded components Permanent nght shift radiography teams Fast turnaround 7 days/week service 24 hour production schedules enable us to offer fast turnaround times

4 ton capacity overhead cranes safely transport larger components Collection and delivery service available

In each of its facilities, Applied Inspection offers the complete in-house NDT service as a one-stop shop to clients requiring single or multiple NDT disciplines on their components or products.

Staffed by experienced level II and level III personnel, each base offers a 24 hour production schedule which can be extended to a 7 days a week as and when workload requires.





All inspections are carried out to approved procedures and techniques complying with exacting national and international standards, as well as customer specific standards.

With handling capabilities of between 2.5 and 4 tonnes and a range of radiographic bays and equipment, each facility has the capability to service most NDT requirements locally, or the flexibility to relocate work to the most suitable facility for technology and turnaround requirements.

A collection and delivery service is available.





## **Non-destructive Testing Consultancy**

Applied Inspection level III personnel carry out contracts for a wide range of small and large companies working to PCN, ASNT, ACCP and other accreditation schemes.

The scope of consultancy work we undertake involves;

Preparation of QA documentation to incorporate non-destructive testing activities

Auditing and cross-checking activities; ensuring processes and the application of various NDT techniques are in accordance with applicable specifications

Provision of third party assistance for evaluation of NDT procedures and inspection

Compilation of NDT procedures and techniques in accordance with a wide range of national and international codes, standards and specifications

Provision of training and certification of NDT personnel in accordance with the American Society of Non-Destructive Testing document SNT-TC-

## **Rail Division**

Our dedicated rail division offers a comprehensive range of services carried out by highly qualified and experienced personnel, PTS and safety critical approved, and we hold approval to RIS-2701-RST (rail industry standard for NDT processes on rail vehicles). Our services include;

Fleet checks Procedure writing Wheel-set inspection Ultrasonic axle testing Bogie frame inspection Axle boxes - removal and fitting

Applied Inspection is able to provide preparation, validation, development and approval of non-destructive test procedures as well as the provision of a complete technical support service.



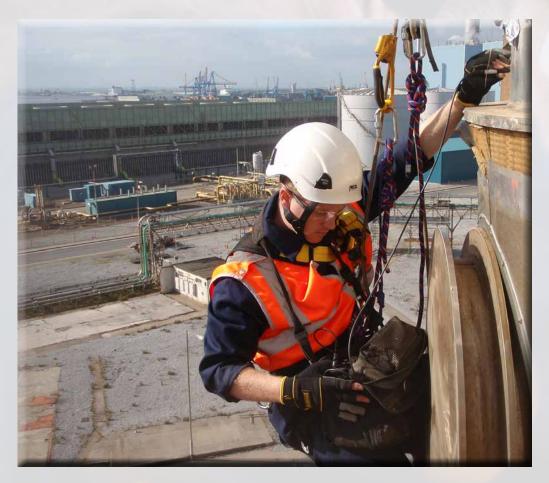


## **Rope Access Services**

Rope access methods provide safe, efficient and cost-effective options for difficult access locations, including confined spaces and jobs that would typically require scaffolding. Rope access has minimal set up time. Technicians can quickly be put into position to evaluate, perform repair work, and restore the facility to production.

When the cost of access is disproportionate to the cost of the actual job, rope access should be considered.

We are also able to provide fully qualified IRATA trained rope access technicians qualified to PCN level II and experienced in ultrasonics, eddy current, MPI, DPI and visual inspection.



#### Services include;

#### Insulation

Piping (repair/install/remove)

- Metal cladding/blanket (repair/install)
- Tank/vessels

Equipment

Removal of damaged equipment (including cable trays) Removing overhead hazards

Ice removal, insulation cladding

Furnace and burner de-slags

Nuts and bolts removal/replacement (including torqueing) Confined space maintenance and repair work

**Electrical scope** - including Installation, troubleshoot/inspection and reparation of:

EHT (electrical heat trace) Electrical & communication cables Light & ballast Welding Scope Structural

Vessels/tanks

#### Pipes Pipefitting

Steam trace Valves/PSV install/replace Bustle pipes Spool removal and replacement







## **Welding Services**

Applied Inspection provide a professional and comprehensive welding and welder training service throughout the UK. Our staff are experienced in all processes and material types, offering a service to suit your business needs. We hold third party quality approval from BSI to ISO 9001:2008 for welding services, both on-site and at our Burton on Trent welding facility.

Utilising the skills of our highly qualified staff could be of considerable benefit to your company; increasing productivity whilst maintaining quality and ensuring conformance to recognised standards.

#### **Welding Consultancy**

We can be your very own virtual welding manager covering all aspects of your welder and welding requirements; from procedure writing to approval of your welders as well as problem solving and pre-employment assessments. Our highly competitive rates give you all the benefits of having a welding manager without having someone on your payroll.

#### **Welding Inspection**

Applied Inspection currently offers this service to a variety of industries including; foundries, construction, rail, rolling stock, oil and gas companies.

## **Welding Development**

If you are venturing into new markets we are ideally suited to assist you in putting in place the appropriate welding procedures, welder training and approval to the relevant standard.

## **Practical Welding Services**

## **Specialist Welding**

We provide a highly skilled welding service in all processes - MMA, MIG/MAG, FCAW/GAS and TIG, and all material types; either on-site or within our own premises.

## **Welding Repairs**

Our professional welders are able to undertake weld repairs at your own premises at a time to suit your production schedule or alternatively, we will carry out repairs here at Applied Inspection. A collection and delivery service is also available.

## **Production Welding**

Our skilled welders are able to work along-side your existing workforce, providing you with a cost effective option that fits in with your shift patterns and production schedule.

#### Training

Our training facility boasts six fully equipped welding booths, all with the latest equipment. Our trainers are fully conversant with all methods of welding and the most commonly used standards; giving you confidence that your welders will be trained to the highest standard.



## **Materials Engineering and Testing**

We offer a wide range of metallurgical analysis and materials consultancy; including component failure investigations, warranty claims, metallography, reverse engineering and corrosion investigations. We also offer a collection and delivery service for your convenience.

#### **Material Analysis**

Applied Inspection provides a comprehensive and competitively priced range of materials testing in our laboratory or, where appropriate, on site at our customers' premises. We are able to carry out analysis on a range of materials including metals, ceramic and polymers. Analysis of samples can be carried out using a wide range of analytical techniques.

#### Services include;

Component failure analysis Forensic investigation/expert witness Warranty Reverse engineering Hardness surveys Macro examination Compositional analysis/surface analysis Positive material identification (PMI-XRF analyser) Ferrite determination (Fischer FMP30) Condition monitoring Diagnostic analysis









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## **Contact Us**

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