



**"Our Quality is not an act. It is a habit."**

**COMPANY PROFILE**

# About Our Company

RES is an independent service provider that specialises in providing welding engineers, auditors and welding, coating and non-destructive testing inspectors as a third-party quality assurance and quality control (QA/QC) inspection service. WE also offer a range of services to the fabrication, construction, mining and oil & gas industries both in Tanzania and Africa

We can perform internal and external quality audits as preparation for quality accreditation to international standards such as ISO 9001:2008, and help your fabrication shop to achieve ISO 3884 (quality requirement for welding) accreditation. We also provide non-destructive testing services and personnel utilising international standards and the latest inspection technology.

Welding engineering and inspection work can be outsourced from this fully qualified and experienced company on pre-agreed rates to allow flexible and efficient use of this skill set in line with partners' construction/fabrication project requirements.

## **Our Mission**



The company's mission is to provide quality services and solutions to meet our client's needs, with safety, quality, confidence and value, both in the Tanzania and Africa collaborating with our industry partners to provide a quality service from the best available assets. We aim to provide our best available assets to suit our customer's needs and continue to invest in the best equipment and employee training.

## **Our Vision**



Our vision is to be the leading and trusted provider of weld engineering, inspection and non-destructive testing services and solutions.



# Why Us

Res Inspection and Engineering Services Limited is a company that provides weld engineering solutions for any of your welding needs, from weld procedure qualification, application, destructive/non-destructive testing and support documentation to witnessing welder qualification testing to industry standards.

## **Our Core Values**

### **Impact**

We have a passion for delivering exceptional results as we succeed together with our clients.

### **Excellence**

We continuously develop our competences to be able to offer the best expertise and quality to our clients.

### **Respect**

We treat everyone equally, with respect and equality.

## **Our Dedication and Accountability**

A commitment in heart and mind to exceeding the expectations of our clients and partners. We take responsibility for our decisions and actions.

### **Flexibility**

We have created a special and unique work environment that thrives on the freedom of creativity and originality, while enabling us to listen and be open to the possibility of new ideas.

### **Integrity**

We demonstrate honesty and reliability in every action we take. We seek to earn the trust and respect of our clients. We work with great passion, enthusiasm and solidarity in an innovative, supportive and safe environment.

## **Occupational Health, Safety and Environmental Policy**

At RES we make sure that activities are carried out at the highest standards without harming suppliers, subcontractors, clients, neighbours, visitors and the environment we live in. We aim to guide our clients to ensure “Zero Fatal Incident” with created Occupational Health, Safety and Environment culture.



## OUR SERVICES



### **VERIFICATION ON DESTRUCTIVE TESTED SAMPLES**

At RES we ensure that we go through all welding properties and make sure that objects are analysed by applying a test to break down a particular material to determine its physical properties, such as the mechanical properties of strength, toughness, flexibility, and hardness.

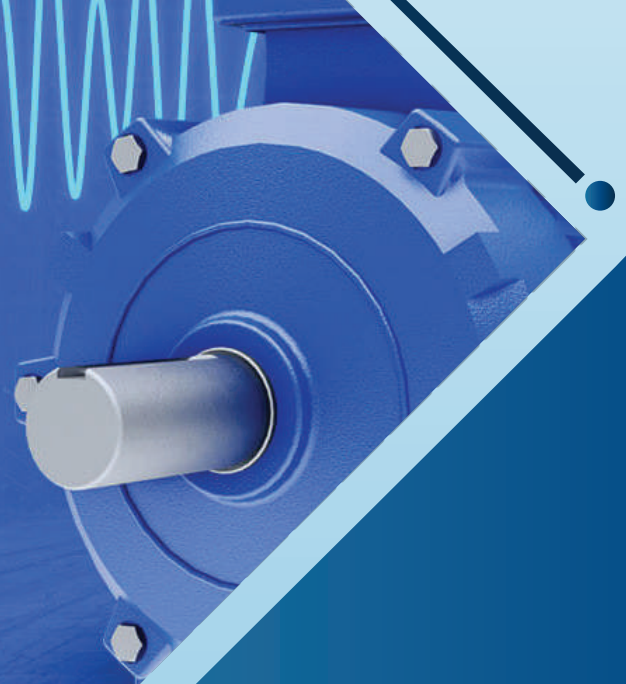


### **MONITORING THE WELDER PERFORMANCE ON THE BASIS OF ACCEPTANCE OF NDT TESTING OF JOINTS AND MAINTAINING THE RECORD AS PER LINE HISTORY.**

At RES we monitor the Welder performance on the basis of acceptance of Non Destructive Testing of Joints and maintaining the record as per line History. Our Experts make sure that this process is done accurately to avoid any mistakes.

TRACTIAN

# Guide to Vibration Analysis





## OUR SERVICES

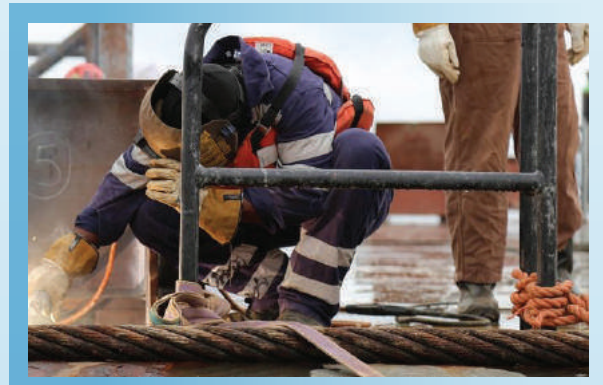
### PROVIDE A FINAL WELDING INSPECTION REPORT.

At RES we ensure that we go through a step by step process of all inspections and our team of experts provide a final welding inspection report making sure that everything is correct and up to date.



### QA/QC DOCUMENT REVIEW ON PRE-PROJECT QUALITY PLANS AND DOCUMENTATION

At RES we document, review on Pre - project Quality plans and documentation. We have qualified professionals who will make the correct follow up.





## OUR SERVICES



### **PREPARATION AND APPROVAL OF WORK PROCEDURES AND INSPECTION TEST PLAN ITP/QCP FOR PIPING ACCORDING TO THE PROJECT REQUIREMENTS**

At RES we do preparation and approval of work procedures and inspection test plan ITP/QCP for piping according to the project requirements.



### **INSPECTION PROCEDURES AND TEST PLANS FOR SPECIFIC PROJECTS**

At RES we inspect procedures and test plans for specific projects. Our team ensures that all steps are taken correctly and with accuracy.





## OUR SERVICES

### CLIENT REPRESENTATION / AUDITS ON ANY SIZE PROJECT

At RES we conduct client representation or audits on any size project. RES makes sure that our clients receive the best and because of our expertise, We are able to work with any size of project.



### NON-DESTRUCTIVE TESTING

At RES we deal with Non Destructive Testing (NDT) in which we use a variety of techniques in which materials or components are inspected, tested and evaluated to analyse for any breach in quality or consistency, without causing any damage. RES makes sure that your assets meet operational compliance standards.





## OUR SERVICES



### FRACTURE MECHANICS

At RES we offer fracture mechanics where we deal with the propagation of cracks in materials. We use methods of analytical solid mechanics to calculate the driving force on a crack and those of experimental solid mechanics to characterize the material's resistance to fracture. We make sure that our client is given the best service and with full accuracy.

### Root Cause Analysis

Identify, Eliminate, Prevent

### ROOT CAUSE ANALYSIS

At RES we manage an asset and ensure its ability to perform its function effectively and efficiently is maintained. We improve reliability, safety and asset protection whilst at the same time helping to maximize asset performance.







OUR SERVICES

## RES INSPECTION & ENGINEERING SERVICE

### 1. NDT INSPECTION

- Magnetic particle inspection
- Dye penetrant inspection
- Fluorescent inspection
- Ultrasonic Testing Inspection

### 2. WELDING INSPECTION

Certified welding inspectors play an intrinsic role in the welding industry.

- Visual inspection on machine structures such as Boom, Stick, Bucket, Chassis etc.
- Prepare and approve welding procedures and scope of works
- Inspection on Structures like Pipe, Tanks, and Pressure vessels

### 3. TRAINING AND CERTIFICATION OF WELDERS

We provide coded welders training which is fully approved by CSWIP welding inspectors, these tutors and examiners are suitably registered for witnessing, welding and permanent joining.

#### WHO IS A CODED WELDER?

A coded welder is someone who has completed a Welder Approval Test in a specific welding configuration to a certain specification or standard, such as ASME IX. For the UK approvals are conducted to BS EN ISO Standards such as CSWIP Scheme and for the USA the ASME IX and AWS standard.

- Flux core arc welding (Positioning) 3G,4G,5G&6G
- SMAW Arc welding
- Welding on specific steel structures such as Pipes, Tanks, Pressure Vessels and materials like Stainless Steels, Alluminium and Carbon Steels,
- TIG Welding



## 4. WELDING CONSULTANCY SERVICES

RES' welding consultants can help you understand and find solutions across a range of disciplines, these include

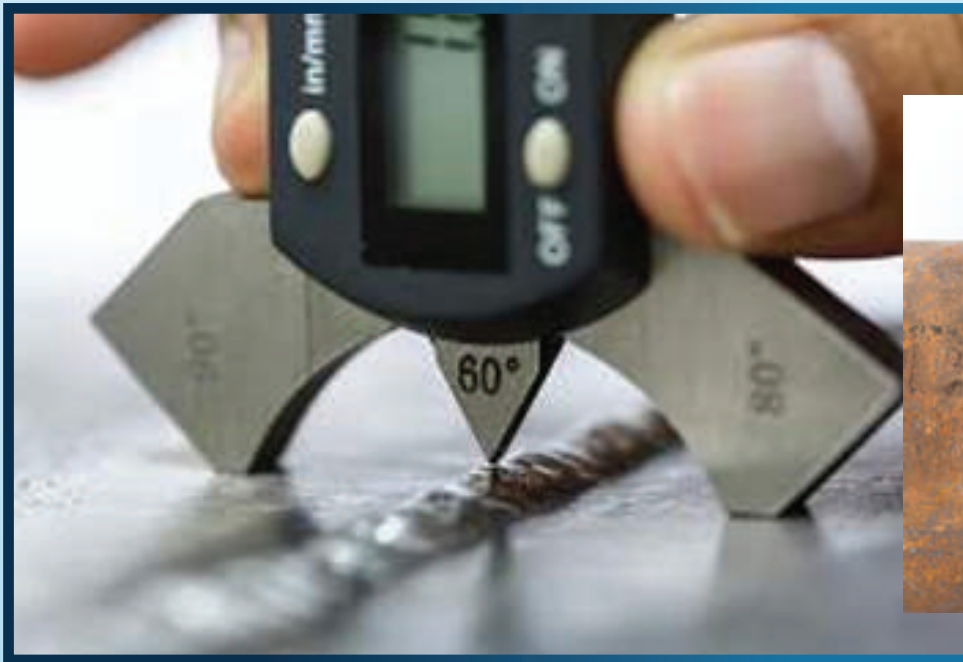
- Weld design.
- Welding metallurgy and weldability.
- Fabrication and installation.
- Distortion control.
- Quality control.
- Repair.
- Codes and standards interpretation



## 5. WELDING REPAIR & REBUILD OF STRUCTURES.

Repair welding is a popular technique that involves the cracked material being removed by arc gouging and the element welded to re-join the material on either side of the crack.

We have experienced team which is able to repair most machine structures and components including *Boom, Stick, Car body, Bucket, Chassis, Pipes, Pressure vessels, Tanks etc.*



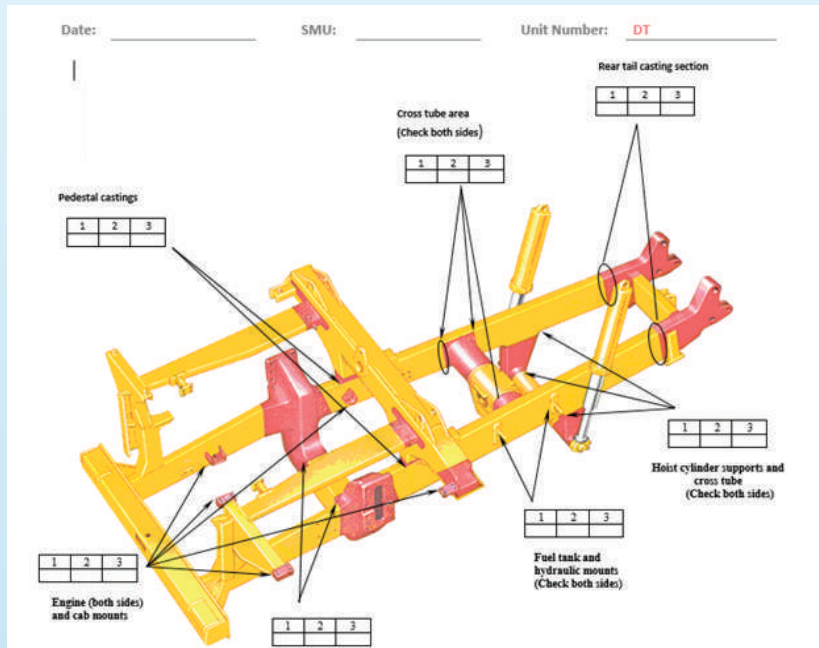
## 6. PROVIDING A FINAL INSPECTION & QUALITY CHECK REPORTS

Final inspection provides a comprehensive review of products before they are delivered to customers, ensuring that all requirements and specifications are met. This offers a number of advantages, including:

- Enhanced Quality - Final inspection checks for defects and errors in the product, ensuring that it meets the required quality standards and that the customer receives the product they expect.
- Reduced Rejection Rates - This reduces the risks of products being rejected by the customer and can help to eliminate costly rework and product recalls.
- Increased Customer satisfaction – This helps to ensure that the product is up to the customer's standards and can help to improve customer relationships.
- Improved Processes - This can be used to identify process issues that could lead to defects, helping to improve processes and reduce the risk of product defects.

# 7. INSPECTIONS

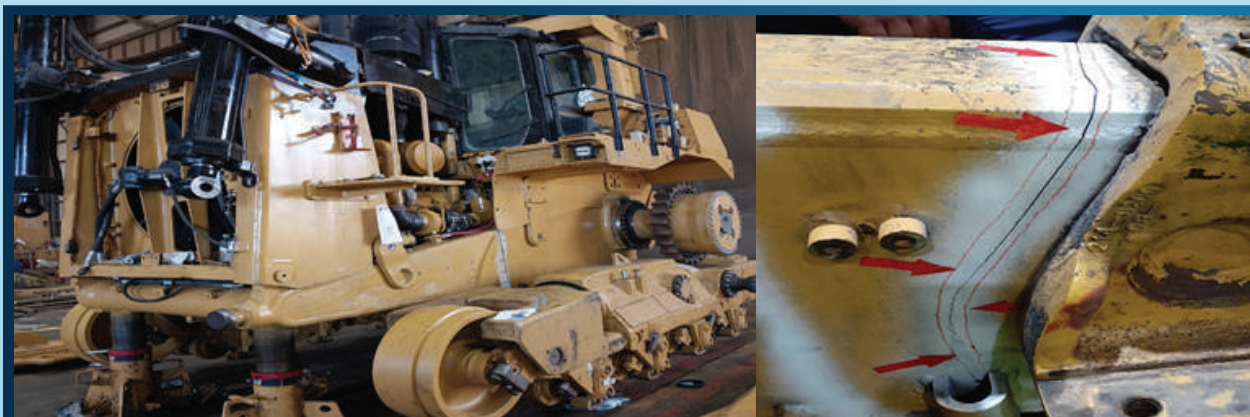
## • Truck chassis inspection



## Excavators 500hrs inspections



Boom, Stick, Bucket, Carbody & Superstructure inspection



Dozer/Wheel dozer chassis inspection



## Excavator Boom bearing replacement



## Tanks inspection

- Pressure equipment is required for inspection by LAW



## 8. MAINTANANCE &REBUILD



Excavator Bucket  
Maintenance & Rebuild



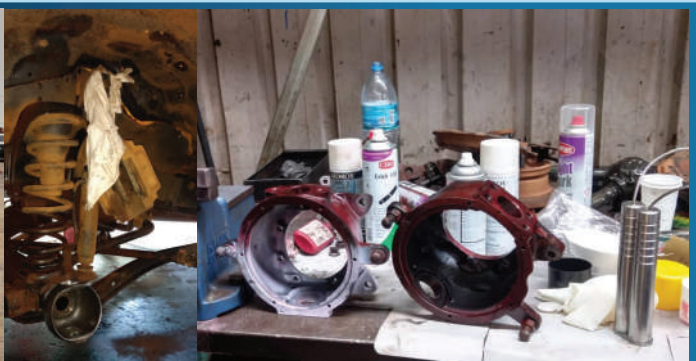
Excavator Stick rebuild



Clam Hinge replacement  
& repair



Truck chassis repair



Cars Knuckle inspection and repair

## OUR COMMON NDT METHODS

### Dye Penetrant Inspection (DPI), Surface testing – ferrous/non-ferrous materials

DPI on welds on pipelines, structures, storage tanks and pressure vessels fabricated from non-magnetic materials, e.g. stainless steel and aluminium, to the clients specifications, international standards and acceptance criteria. Dye penetrant inspection (DPI), also called liquid penetrant inspection (LPI) or penetrant testing (PT), is a widely applied and low-cost inspection method used to locate surface-breaking defects in all non-porous materials (metals, plastics, or ceramics).



## VISUAL INSPECTION

Visual inspection of welds on pipelines, structures, storage tanks and pressure vessels to the client's specifications, international standards and acceptance criteria using specific inspection tools that are designed to act as an aid when measuring the visual aspects of the joint set-up and completed weld.

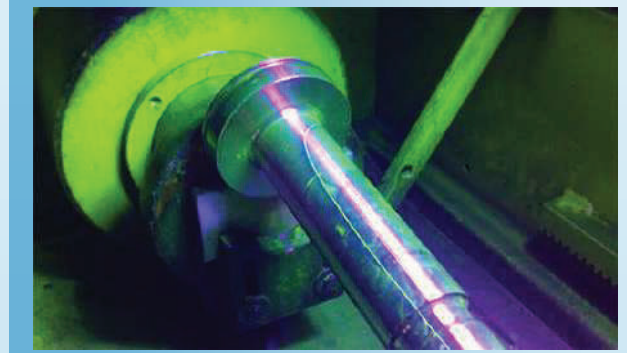




## OUR COMMON NDT METHODS

### Magnetic Particle Inspection (MPI), Surface Testing, Ferrous Metals

This method works on the material surface using a magnetic flux, magnetic ink and a background contrast colour. This can be used to detect surface breaking and near surface discontinuities that can be problematic to the function and life of the material under test. MPI on welds on pipelines, structures, storage tanks and pressure vessels fabricated from ferro-magnetic materials e.g. carbon steel, to the client's specifications, international standards and acceptance criteria.



## ULTRASONIC INSPECTION

UT on welds on pipelines, structures, storage tanks and pressure vessel fabrications to the client's specifications, international standards and acceptance criteria. Ultrasonic is used to test for subsurface defects in welds. A time base indication will require investigation and assessment by the trained technician.



## OUR WELDING ENGINEERING

Expert welding knowledge and advice through our welding engineer and welding inspectors

- Weld Procedure Qualification to BS EN ISO 15607:2003/EN 1011
- Welder Qualification witnessing to ASME and BS EN ISO 9606-1:2013
- Welder Qualification to BS EN ISO 9606-1:2013/ASME 1X
- Consultancy and company preparation towards BS EN ISO 14731, BS EN 3834 and CE marking BS EN 1090-1 Standards implementation
- Provision of a nominated responsible welding coordinator



## OUR MECHANICAL TEST METHODS

**Bend Test** : Used to determine the soundness of a welded joint by use of a wrap-around or plunger style testing fixture.

**Failure Analysis** : Determines the cause of failure through material testing and analysis of operating conditions.

**Fillet Weld Fracture** : Involves breaking the welded joint with force and then visually inspecting the fractured area to determine weld penetration and quality.







## TRAINING & CERTIFICATION

RES provides testing for the certification of welder and procedure qualifications. Procedure qualifications are required when standard welding procedures are not or cannot be used. The purpose of the welding procedure is to guide welders to utilize repeatable and trusted welding techniques. The procedure will vary depending on the code or specification being employed, and based on the material alloy and for each welding type used. RES can qualify and document the procedure (PQR) and create a WPS that defines the necessary variables for your process.



## PLANNING PRE-PRODUCTION DUTIES

A Certified Welding Engineer is involved in all phases of a welding project, including planning, drawing up and approving contract documents and/or consulting with the client or other technical personnel involved in the project. He is also typically responsible for making sure all of the necessary equipment supplies and labour for the welding operations are on hand.

## DOCUMENTING WORK ORDERS/Writing REPORTS

RESs also have administrative responsibilities. They are usually responsible for documenting all welding work performed, including completing work orders and/or preparing technical reports. Sometimes CWEs also participate in final walk-throughs with clients or are on hand for equipment installation or the initial start-up of the project.



## OUR INSPECTION, LOAD TESTING AND CERTIFICATION

Inspection services from RES help you to reduce risk and ensure quality and accuracy, as well as meeting regulatory requirements of our Load testing, certification and inspections make sure that we use effective tools that can prevent structural failures before they occur and provide clients with quality assurance. We have incorporated this with different Equipment.

Qualified inspectors possess extensive training, experience, and wide-ranging industry expertise. This way we ensure accurate services to our clients. We offer this service for the following



**Mobile Cranes**



**Overhead Cranes**



**Forklift/ Telehandlers**



**Lifting Gears/Tackles**



**Hydraulic and Palletjacks**



**Truck Mounted Cranes**



**Manlift and Scissor lift**



**Tower Cranes**



**Scaffold Inspection and Erection**

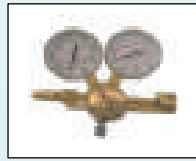


**Rigging & Slings training and Certification**

## OUR GENERAL WELDING EQUIPMENT & SUPPLIES

### Gas Equipment

- Gas outfits
- Touch and accessories



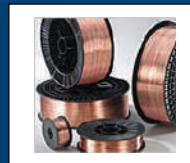
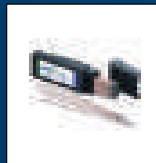
### Arc Equipment

- Stick welding #2 MIG welding #3 Plasma
- Welding cables and Hardware



### Filler Metals

- Electrodes
- Welding wire



### Welding accessories

- Abrasives
- Other welding accessories



### Safety and Protective Equipment

- Gloves
- Welding Helmets
- Protective clothing



### Tools and Hardware





## OUR LEGAL CERTIFICATION





## **REGISTERED OFFICE & HEAD OFFICE**

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