



# Portfolio

1<sup>st</sup> Edition

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## About Us

Based in South Africa, QTS provides a variety of inspections, services, design and manufacturing for local and international Engineering industry.



## SERVICES

### NON-DESTRUCTIVE TESTING

General NDT (Welds, Castings, Forgings)  
Advanced NDT  
Mill Integrity Inspections  
Winder Integrity Inspections  
Tank & Pipeline Inspections  
Pressure Vessel Inspections  
Winder Rope Testing (Electromagnetic EMT)  
Ventilation Fan Audits  
Weld Inspections  
Tower Crane Integrity Inspections

### MECHANICAL SERVICES

Mill Mechanical Audits  
Winder Mechanical Audits  
Laser Alignment  
Bearing and Coupling Maintenance  
Ventilation Fan Mechanical Audits  
Sheave Wheel Installation and Alignment  
Repair and Installation of Equipment

### CONDITION MONITORING

Vibration Analysis  
Ultrasound (Electrical and Mechanical)  
Oil Analysis (Electrical and Mechanical)  
Infrared Thermography (Electrical and Mechanical)  
Motion Amplification Analysis (IRIS Camera)  
Pump Efficiency Analysis  
Laser Proximity Technology

### COATINGS (INDUSTRIAL)

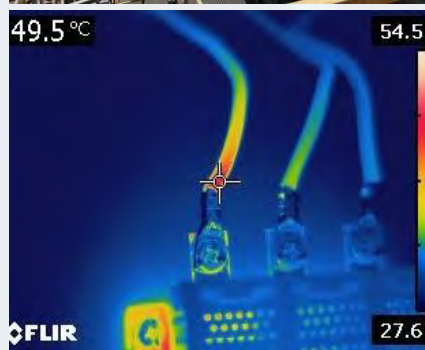
Lost Surface Area Repairs e.g. Tanks, Pipelines  
Specialized Surface Preparation & Coatings  
Corrosion Protection  
Mill Shells, Structures, Pans  
Media Blasting

### ENGINEERING

Design  
Finite Element Analysis (FEA)  
Fabrication

[www.qtsmining.com](http://www.qtsmining.com)

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### ABOUT QTS

Qualified and Experienced Personnel  
Safety Compliant, Global Involvement.  
Modern, State of the Art Equipment.  
Cost Effective Inspection Solutions  
Improved Asset Management  
Integration Asset Management  
Integration into Reliability Centered Maintenance  
Quality Assurance Services

#### Contact

**NDT: Grant Pollack (+27) 71 355 9249**

**Mechanical: Bertie Grove (+27) 66 223 6261**

**Coatings: Gerald Howard (+27) 63 611 3735**

**Condition Monitoring: Hein Pienaar (+27) 82 575 3004**

**Engineering: Carlo Gagiano (+27) 84 588 5493/ Jaco Van**

**Staden (+27) 81 562 6747**

**Sales Representative: Jumbo Berry (+27) 74 175 0499/ Trevor**

**Graham (+27) 82 790 7155**

#### Directors

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**Gert van der Walt: (+27) 79 886 8666**

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## INSPECTIONS

Grinding Mill integrity inspections  
Winder engine integrity inspections  
Pressure vessel inspections  
Wind turbine inspections  
Shaft column piping inspections  
Pump station piping inspections  
Tank and Sphere inspections  
Pipeline inspections  
Tower crane integrity inspections  
Sheave wheel inspections  
Drum shaft alignment  
Fan impellers  
Welds

## METHODS

UT (Ultrasonic testing inspections) for welds & components subject to cracking.  
MPI (Magnetic Particle Inspections) for surface or near surface defects.  
VT (Visual Testing)  
PT (Liquid Penetrant Testing)  
Eddy current testing for surface or near surface defects.  
ACFM (Alternating Current Field measurement).  
Corrosion mapping.  
Time of Flight Diffraction testing (ToFD) of welds & winder drum shafts.  
PA (Ultrasonic Phased array inspections) for welds & components subject to cracking.  
Pressure vessel, boiler inspections & certification.  
Thickness measurements.  
Rope access (Tanks).  
Ground penetrating radar for silo & box front inspections.  
Sheave wheel profiles and fleet angles analysis.



Storage Tank Inspections



Winder Integrity's



Sphere Welds



Mill Integrity's

## Contact

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## MECHANICAL INSPECTIONS



## INSPECTIONS

Winder Annual Mechanical Audit Inspection  
Fan Audit Inspection (Centrifugal, Axial)  
Mill Mechanical Inspection/ Audit  
Winder, Fan & Mill maintenance and repairs  
Sheave Maintenance and Alignment  
Pump Station Audit & Installation  
Pelton Wheel Turbine



## METHODS

Vibration Monitoring and Analysing  
Laser Shaft Alignment (Checks, Corrections)  
Dynamic Balancing  
Flow Measurements  
Bearing Inspection and Installations  
Advanced Alignment



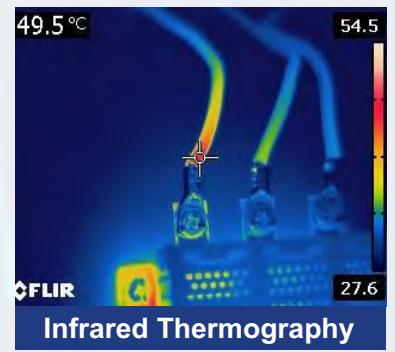
## Contact

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## CONDITION MONITORING

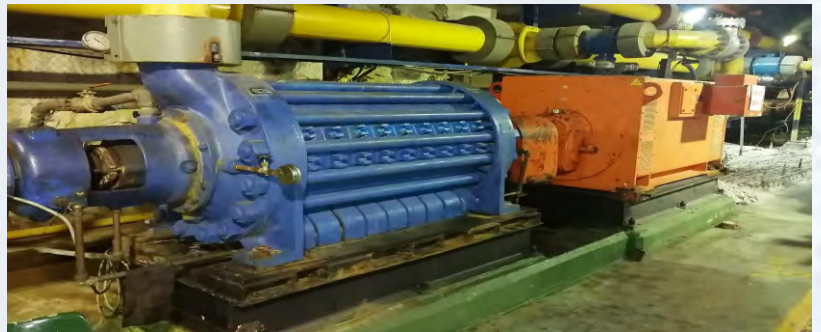
All Compressors (Demag, GHH, Centac, Cooper, ISOPAC, Sulzer)  
Condition Monitoring on Ventilation Fans (Centrifugal, Axial)  
Infrared Thermography (Electrical & Mechanical)  
Condition Monitoring on Process Equipment (Mills, Agitators, Conveyors)  
Condition monitoring on Refrigeration Plants (York, Sulzer, Carrier, Howden)  
Drone Thermography  
Oil sampling (Electrical & Mechanical)  
Thermal efficiencies of equipment



IRIS Camera



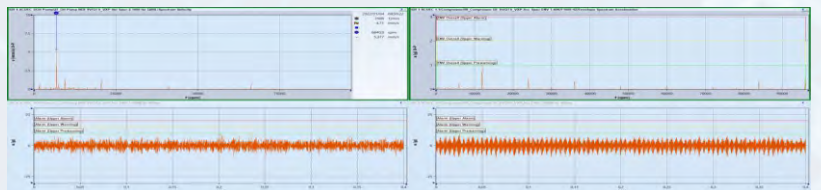
Motion Amplification



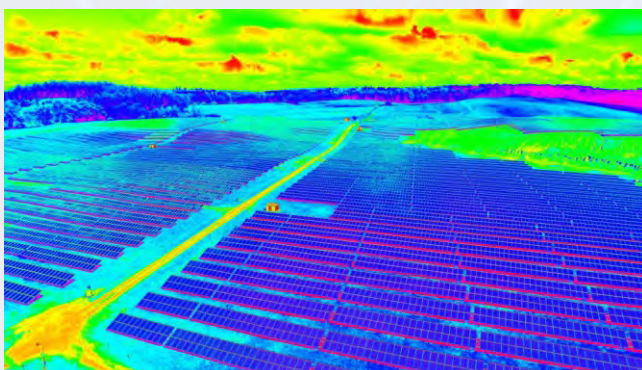
Condition Monitoring

## METHODS

Vibration Monitoring and Analysing  
Infrared Thermography  
Ultrasound  
Motion Amplification (IRIS)  
Time waveform analysis



Vibration Analysis



Infrared Drone Thermography

## Contact

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## INFRARED INSPECTIONS

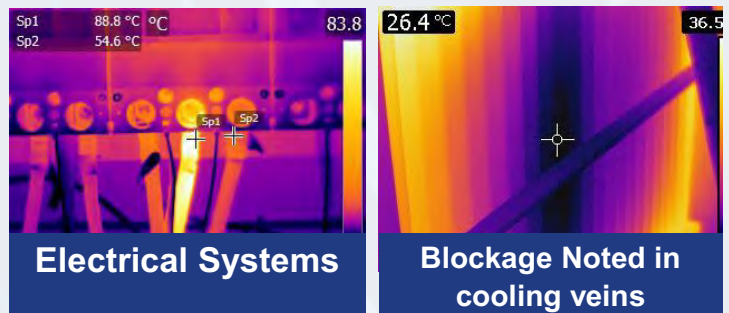
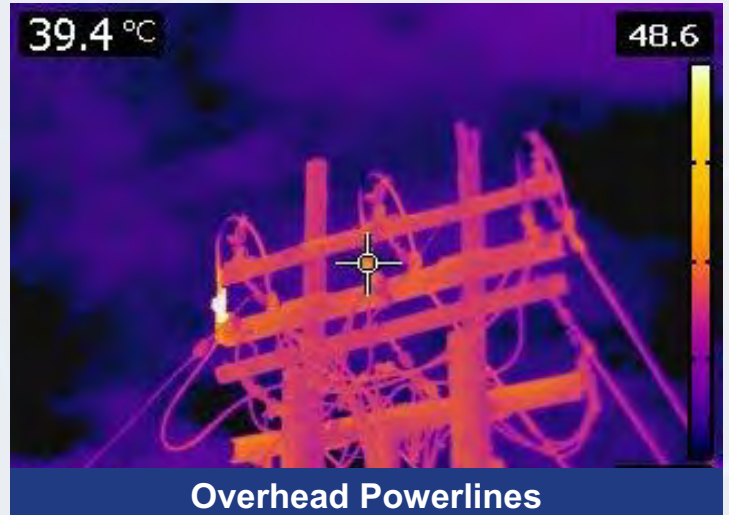


## INFRARED INSPECTIONS Surveys conducted: Electrical, Mechanical & Structural:

- Medium and low voltage panels
- Mini-Substations
- Transformers
- Links
- Distribution boards
- Overhead powerlines
- Holding tanks
- Pipelines
- Valves
- Insulation
- Bearings
- Motors
- Gearboxes
- Idlers
- Pumps
- Mills
- Kilns
- Valves
- Steam Traps

## INDUSTRIES

- Engineering
- Mining
- Oil, Gas and Petrochemical
- Smelters
- Waterworks
- Food & Beverage
- Transportation



## Drone Thermography and Visual Surveys

- Buildings & Structures
- Overhead powerline surveys
- Plant surveys
- Solar plant surveys
- Pipeline surveys

## Contact

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## About Us

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## COATINGS

### COATING SERVICES

Glass flake  
Pipe wrapping  
Waterproofing (galvanized roofing, positive & negative water pressure.)  
Corrosion protection  
Acid resistant coatings  
Oil resistant coatings  
Glass fiber  
Spray painting  
Powder Coatings

### SURFACE PREPARATION

Media blasting (Sand, Gritt, soda, glass beads, dustless blasting, etc.)  
High pressure water blasting/cleaning

### INDUSTRIES

**MINING**– Ventilation fans, booster fans, leach tanks, Cyanide tanks, pressure columns, bunting walls, under-pans, water tanks, Mills, metal structure blasting & coating, coating of change house walls and floors, corrosion protection.

**PETROCHEMICAL**– Tanks, pipe wrapping, metal structure blasting & coating, corrosion protection,

metal structure blasting & coating.

**ENGINEERING**– Media blasting, metal structure blasting & coating, product surface preparation, corrosion protection.

**SMELTERS**– Machinery blasting & coating, metal structure blasting & coating, corrosion protection.

**WATERWORKS**– Tank repairs, bunting walls, corrosion protection.

**FORESTRY**– Water dam sealing, machinery blasting & coating, roof waterproofing, metal structure blasting & coating.

**AGRICULTURE**– Water dam sealing, machinery blasting & coating, roof waterproofing, metal structure blasting & coating.

**DOMESTIC**– Roof waterproofing, internal & external painting, high pressure washing/blasting of walls & floors



Pipeline Coating



Tanks



Tank Base Protection



Pipeline wrapping  
Above & below ground



Flooring

### Contact

Gerald Howard (+27) 63 611 3735  
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## About Us

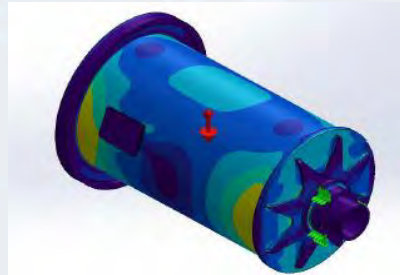
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ENGINEERING

## DESIGN & FABRICATION

Stainless and Carbon steel  
Piping Design  
Pump station design  
Custom Couplings  
(For: Steel, HDPE, PE, GRP,PVC,AC)  
Manufacturing and Installation  
Rolling, Plasma Cutting  
Sandblasting, Corrosion protection  
(Painting, Powder coating & Galvanizing)  
Design, FEA  
Engineering Drawings  
BOQ's



Design and FEA



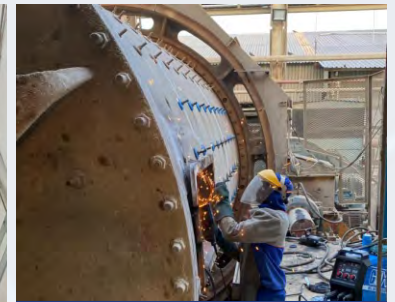
Piping and Specials

## SITE REPAIRS

Crack and Patch repairs  
Tank, Mill and Structural Steel  
Repairs



Pump Stations



Site Repairs

## STRUCTURAL STEELWORK

General steel manufacturing  
Support brackets  
Manhole covers  
Air vents  
Structure and support structure  
design



General Steel Work

## Contact

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600NB 90° S-BEND FBE T1600/3 GF=1200MM C-C=3800MM  
C/W 150NB FLANGED OUTLET T/D  $\phi$ =600MM



CUSTOM BRACKETS FOR 150NB PIPE



250X80NB TEE FAE T1600/3 GF=280MM



300NB GUSSETED TEE FAE T1000/3-F  
F=2400MM C-F=700MM C/W 100NB  
FLANGED OUTLET T1000/3  $\phi$ =400MM AND  
300NB PUDDLE



COVER WITH 200X200MM OPENING



CUSTOM MANHOLE COVER HOLE SIZE 1200X1200MM



*CO<sub>2</sub> WELDING*



*ARC WELDING X42*



*PUMP STATION MANIFOLD ØOPON 891250MIC  
ARCTIC FROST F28*



*450X150NB TEE FAE T1600/3 GF=460MM GALVANIZED*



*350NB TEE FAE T1600/3 GF=355MM*



*FLANGE ADAPTORS FUSION BONDED EPOXY ARCTIC  
FROST F28 300MIC*

# CONTACT DETAILS

## **Non-Destructive Testing**

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## **Mechanical Inspections**

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## **Condition Monitoring (Vibration Analysis)**

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## **Infrared & Drone Thermography**

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## **Coatings & Sandblasting (Surface Preparation)**

Gerald Howard  
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## **Pressure Vessel & Tanks Structural Integrity (SIMS)**

Jaco van Staden  
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## **Engineering Manufacturers & Suppliers**

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