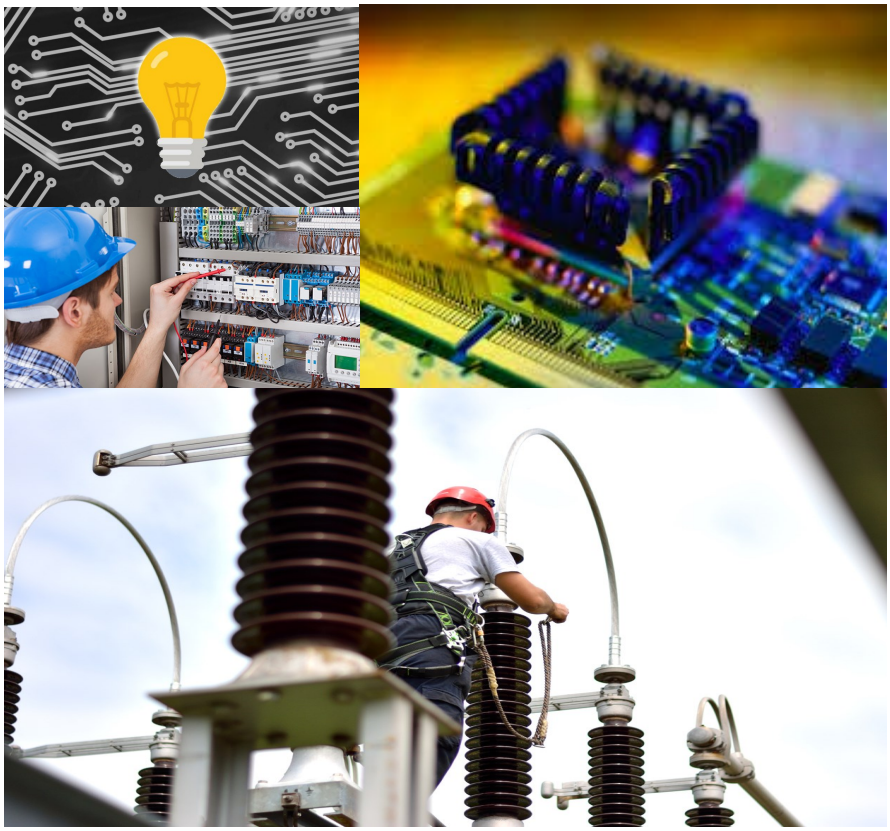

*"Education is the most powerful weapon which you use to change the world"*

# DHT Wired Company Profile



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# About us

DHT Wired is a training solutions provider which offers personnel training to businesses of all sizes and at all levels. Extensive research goes into the development of each and every programme to pinpoint the skills gaps and design contextually relevant learning modules in collaboration with industry professionals and renowned experts in each sector.

- ### Public Training Courses

  Our public courses provide a convenient way for individuals and small teams to be upskilled. These courses are presented throughout the year in many regions in Africa.

- ### In-House Training Course

  Our in-house training offers you the opportunity to host one of our expert facilitators at your company. This is provided upon request to companies with 10 or more participants for a specific programme. Contact us to find out more about our in-house training courses and availability of facilitators.

# Vision

DHT Wired will provide the most relevant and innovative professionals skills training in Southern Africa.

# Mission

Provide professional skills development in the electrical environment with content relevant to the field of expertise. This is all aimed at providing sustainable growth individuals within Africa

# Services

DHT Wired, established in January, 2012, is a specialist electrical training company located in Roodepoort, Wilropark.

DHT Wired provide the following high quality services:

Technical Training

- SANS 1 & 2
- Earthing & Lightning Protection
- General Machinery Regulation
- Introduction to PLC's
- High Tension Switching
- Cable Jointing & Termination
- Power System Protection
- Uninterrupted Power Supply (UPS)
- PLC Programming
- Substation Maintenance
- Variable Frequency/Speed Drives
- Transformer Maintenance
- Industrial/Commercial Refrigeration & Air Conditioning

Our customers benefit from increased knowledge and improved maintenance and trouble-shooting techniques which leads to greater job satisfaction, higher productivity and reduced costs.

DHT Wired facilitators have expertise with a variety of manufacturer hardware and software. Our facilitators have the ability to make difficult topics simple and easy to understand so the customer can apply their knowledge immediately on-the-job.

We offer training at our well equipped technical training centre or deliver training on-site at our customer's location. We will provide our training services at our customer's convenience.

# Skills Development

## SANS 10142 – 1 (Latest Edition 2 of 2017)

This course is specifically developed to give an excellent introduction and essential background for delegates associated electrical systems for the Inspection and Test of an Electrical Installation. Provide delegates with the necessary knowledge and skills to inspect and test existing and new installations, the necessity for documenting results, and the use of a report system to log the specific fault. It is presented at a practical level, and covers all the essential information required to give the candidate an understanding of electrical principles and applications in the field of Fault finding and implementing the relevant Legislation and Regulation.

**Duration: 2 days**

**2 CPD credits**

## Earthing & Lightning Protection

Earthing: Often little importance is attached to efficient methods of earthing, not only during design stage but also during the life cycle of the plant. This often results in unnecessary expenditures as well as hazardous working conditions.

For many years, research has shown that earthing systems have been ignored and/or neglected and we believe that by sharing some of our experiences and case studies collected over the years, we can easily address most of these issues efficiently and cost effectively. For example, long dry seasons as well the high soil resistivity conditions are often encountered throughout the country and are deterrent factors which appear impossible to resolve; but with the information that we will make available these issues are negligible. Lightning protection systems have changed drastically since Benjamin Franklin first invented lighting rods in 1752. Today's systems are required to protect modern appliances, electrical systems, many building construction projects, etc. The course examines critical concepts of lightning protection and the related standards, air and earth termination systems as well as internal lightning protection systems, which will assist in mitigating problems/issues that would arise.

**Duration: 2 Days**

**2 CPD credits**

## HT Switching & Authorisation

Due to the increase in fatalities relating to high voltage systems, the need for training on these systems is in demand. There are stringent laws that every company must follow in terms of working with HV equipment which we will delve into on the course.

**Duration: 3 Days**

**3 CPD credits**

# Skills Development

## Cable Jointing & Termination

Faults in power cables may cause loss of supply to customers and loss of revenue for suppliers therefore it is imperative that the fault location process is efficient and accurate. For fault locating to be efficient and accurate technical staff, need to have expert knowledge accompanied with experience to attain service reliability.
This workshop is designed to ensure those responsible for the selection, laying, operation, maintenance and monitoring of power cables understand the technical issues involved and comply with relevant specification and requirements.

**Duration: 2 days**

**2 CPD credits**

## Power System Protection

Minimising failures, Downtime & costs by Implementing an Effective Power System protection. The GOLDEN RULE of PROTECTION is: **All conductors and components (such as cables, transformers, contactors, isolators, relays and overload relays for motor spares) must be fully protected against Overloads, Short circuits and Earth faults.** This protection must be achieved at all points in the distribution system, at all times and under all conditions and circumstances. All power systems are prone to faults which occur mostly as a result of insulation failure and sometimes due to external causes. Therefore, it is important to ensure that an effective power system protection is implemented to reduce the damage, downtime as well as costs that your company may occur. The objective of a protection scheme is to keep the power system stable by isolating only the components that are under fault, whilst leaving as much of the network as possible still in operation.

**Duration: 2 days**

**2 CPD credits**

## OHS ACT 85 of 1993 and Electrical Safety Regulations & Standards

As an electrical specialist, the pressure on you and your organisation to interpret, translate and comply with a variety of statutory regulations, standards and occupational health and safety legal requirements is proving to be quite onerous. Accidents and disputes may arise which result in financial burdens, potential loss of life and serious injury, equipment breakdowns and possible criminal prosecutions for non-compliant installation work. The responsibility is constantly on you to ensure that you keep track of these changes to the legal environment to minimise or prevent occupational health and safety, financial and legal risks. By law you are required to do everything reasonably practicable" to mitigate all safety hazards and risks. So, how "safety proof" are your users, designers and installers when exposed to electrical installations and equipment?

# Skills Development

## OHS ACT 85 of 1993 and Electrical Safety Regulations & Standards (Continued)

Can you and your team afford any delay in getting the skills, tried and tested approaches and proven techniques for mastering the essential safety regulations and standards? This training course has been specially designed to give you an in-depth understanding of the underlying principles regarding electrical safety legislation to successfully navigate your organisation through this regulatory process and respond effectively to any potential hazards that may arise when using or installing electrical equipment in your workplace.

**Duration: 2 days**

**2 CPD credits**

## Uninterrupted Power Supply (UPS)

Uninterruptible Power Supply is an integral part for most of the applications that demand the continuity of their electric supply. This Course is intended to provide advanced engineering aspects of Uninterruptible Power Supply (UPS) Emphasis shall be laid on topics relevant to uninterruptible Power Supplies construction and troubleshooting. Operation, characteristics and selection of Uninterruptible Power Supplies will be studied extensive practical examples will be demonstrated throughout this course.

**Duration: 2 days**

**2 CPD credits**

## Electrical Auditing & Compliance

Employers and Machinery Supervisors are faced with daily challenges with compliance to the Electrical Installation Regulations 2009 where **Certificates of Compliance** need to be issued for all maintenance and repairs are done to low voltage electrical installations.

The experience of the Approved Inspection Authority (A.I.A) when auditing and investigating compliance of low voltage electrical installations in these complex environments have found that electricians generally are ill equipped with the skills required for inspection, testing and verification.

This program uses the experience gained by the Approved Inspection Authority in bridging the gap between the requirements of the Regulations and The SANS 10142-1:2017 Wiring of Premises code of practice.

**Duration: 2 days**

# Skills Development

## Motor & Generator Maintenance, Testing & Condition Monitoring

Motors and generators represent industry's workhorse in small, medium and large size applications. It is estimated that motors consume 50% of the total electrical energy consumed in the world today. The cost of maintaining electrical motors can be significant in the budget of mining, manufacturing and utilities industries. The goal of this course is to learn how to maximise efficiency, reliability and longevity of electrical motors and transformers. Understanding maintenance & troubleshooting procedures of such vital industrial equipment means that reduced downtime and increased productivity are the immediate benefits for the company.

**Duration: 2 days**

**2 CPD credits**

## Power Transformer Testing, Diagnostics & Condition Monitoring

Power transformers represent a major capital asset for an organisation's power distribution system and while in service, they need to be maintained and monitored in order to anticipate faults and possibly avert any failure. Faults in power transformers can occur at any time, and the causes are many and varied.

When faults do occur they generally cause loss of supply to customers and loss of revenue for suppliers. This training course has been specially designed to give you a practical understanding of the principles regarding transformer testing and diagnosis by examining key aspects such as routine tests, diagnostic testing and oil sampling techniques. Ultimately, it is service reliability and continuity that are the reason for sound transformer performance.

**Duration: 2 days**

**2 CPD credits**

## Tan Delta

Tan Delta is a diagnostic test conducted on the insulation of cables, wirings and all electrical equipment. It is used to measure the deterioration of electrical devices example transformers switchgears cables etc. It also gives an idea of the aging process and enables us to predict the remaining life span of this equipment. It is alternatively known as the loss angle test or the dissipation factor test.

**Duration: 3 days**

**3 CPD credits**

# Skills Development

## Substation Maintenance

Substations are some of the most critical assets owned by utilities and large industrial sites. Substations play an important role in a power system network in maintaining the continuity of power supply and power quality to industrial and commercial consumers. A properly planned and maintained substation is therefore essential for the reliable operation of a power system network.

**Duration: 3 days**

**3 CPD credits**

## Variable Speed/Frequency Drives

Technology improvements have made Variable Frequency Drives (VFDs) a more reliable and cost effective method of speed control. With the advancements of VFDs in recent years, they have evolved into highly sophisticated digital microprocessor controllers and high frequency power devices. History has shown that although you can achieve two to six percent energy savings with premium efficient motors over standard efficient (EPACT) motors, VFDs can provide up to 35 percent savings if applied properly. In many cases pumps and fans are sized according to worst case-scenario using maximum flow conditions or by using a "rule of thumb" approach to apply a 20 percent oversizing formula. It is important to evaluate the complete application and system characteristics to determine the potential savings available.

**Duration: 2 days**

**2 CPD credits**

## Industrial/Commercial Refrigeration & Air Conditioning

DHT Wired (specialist in Air-conditioning & Refrigeration Engineering Skills Training) believes in INTENSIVE PRODUCTIVE TRAINING!

Our training centre is well equipped with modern facilities & leading lecturers will provide both theory & practical training of the highest level. Skill yourself in a course that will lead to a recognized qualification

**Current modes of practice**

- ⇒ Health & Safety requirements
- ⇒ Nitrogen welding
- ⇒ Leak & pressure testing
- ⇒ Air-conditioning refrigerant properties
- ⇒ Charging of refrigerant into refrigeration & air-conditioning Systems
- ⇒ System analysing & commissioning
- ⇒ Service & maintenance of systems
- ⇒ Installation of air-conditioning system;
- ⇒ Compressor change repairs
- ⇒ Fridge repairs / leak repairs
- ⇒ Superheat / Fault finding

**Duration: 5 Days**

# Skills Development

## Factory Automation

## S7 300 & S7 400 PLC Troubleshooting

The aim of this course is to provide participants with the tools to build effective Fault finding strategies (Troubleshooting) on automated factory applications.

## S7 300 & S7 400 PLC Service & Maintenance—Module 1 & Module 2

This course teaches the delegate fault finding techniques required for maintenance. All theoretical learning is reinforced by practical examples making use of a hard PLC simulator and the STEP 7 software.

## S7 300 & S7 400 PLC Programming

This course is directed at users with industrial engineering experience in the fields of configuring, design & commissioning of SIMATIC S7 programmable controllers.

## S7 300 & S7 400 PLC Programming Advanced

This course is directed at users with engineering experience in the fields of configuring, design & commissioning of SIMATIC S7 programmable controllers. The knowledge & skills acquired in the RCL-PLC-PROG-ONE course will be consolidated & extended to enable the participant to structure & generate & put into operation complex programs.

# Skills Development

## Human Machine Interface

### Operator Panels (WinCC Flexible) - Basic

This course will enable Service and Commissioning personnel to configure and commission a HMI unit containing a Siemens Operator panel.

### Operator Panels (WinCC Flexible) - Advanced

This course will enable Technicians and Engineering personnel to apply advanced features with HMI units.

### SCADA Control Systems (WinCC)

This course will enable engineering and maintenance personnel to design and configure automation systems using Siemens Windows Control Centre (WINCC).

### SCADA Advanced Control System (WinCC)

This course will enable engineering and maintenance personnel to design and configure automation systems using Siemens Windows Control Centre (WINCC) inclusive of high level integration.

# Skills Development

## Unit Standard Training

**US 259197**

Test and inspect a three-phase industrial / commercial installation

**US 13683**

Issue certificate of compliance for a domestic / commercial / industrial installation

**US 25966**

Inspect and test a single phase domestic installation

**US 113898**

Complete a certificate of compliances for a single-phase domestic installation. DHT Wired in collaboration with TDI as a registered provider for Unit Standards with EWSeta. After successful completion of the assessment, you will receive documentary proof of successful completed unit standards of inspection, testing and certification of the relevant assessment as required by the Energy Sector Education and Training Authority (ESETA). Department of Labour Accreditation as determined by the ESETA requires ensuring competence for assessments above. Documentary proof of your process and documents used by you to inspect, test and certify any of the above type of electrical installation is a prerequisite for assessment process.

**Duration: 2 Days**

## Preparation for Installation Rules Paper 1 & paper 2

Our Installation Rules program prepares learner for the National exam, Paper 1 and Paper 2, on the Electrical Installation Regulations.

This exam is required as part of the criteria by the Department of Labour to apply to become an installation electrician.

We cover all legal aspects (OSH Act), Applicable rules and Regulations (SANS 10142-1) are covered. With our prep we cover the previous exam papers. All relevant code is also covered. Residential, Commercial and Industrial Installations are covered in the Installation Rules SANS 10142 course.

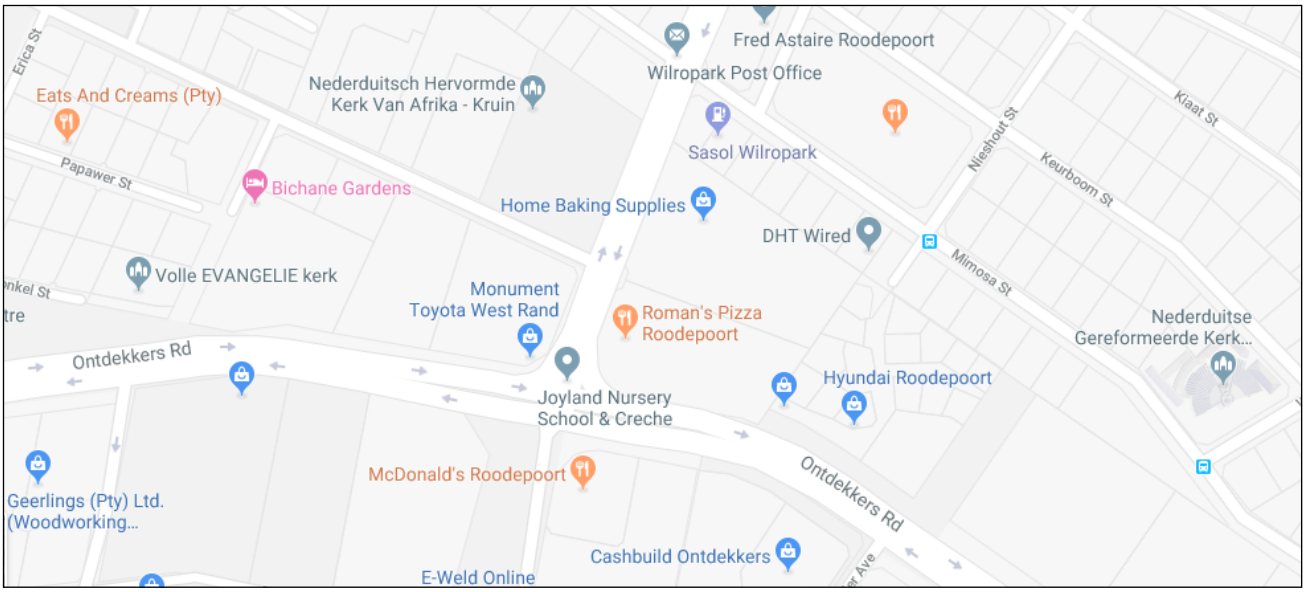
**Duration: 2 Days**

# Current Clients

Rendered technical training to the following companies

ABB
ABI
Afrisam
Afrox
Air Liquid
Airports Company South Africa
Albany
Alstom
Anglo American
Assmang
Aurocon Engineering
Aveng
Babcock
BMW
BVI
Cell C
City of Cape Town
City Power
Coca Cola
Consol
De Beers
Defy
Denel
Department of infrastructure
Department of water affairs
DPW
EHL Consulting
ElectroMechanica
EOH
Eskom
Exxaro
Foskor
Group 5
Illovu Suger
Johnson & Johnson
Lafarge
Life Health Care
Lonmin Platinum
Mondi
MTN
Murray & Roberts
Nampak
Nestle
Netcare
Nissan
Nkomati Mine
Omnia
Petra Diamonds
PG Bison
Pioneer Foods
Powertech
Prasa
Procter & Gamble
Rand Refinery
Rand Water
RBM
RCL Foods
Rhodes Food Group
SA Bank Note
SAAB
SAB Miller
SANSA
Sappi
Sapref
Sasol
Schneider Electric
Siemens
Simba
South32
Steinmuller Africa
Sun International
Surge Technology
Surtek
Tongaat Hullets
Total SA
Toyota
Transnet
Unilever
Vodacom
Waco Industries
York Timbers
Zeal Engineering

# Contact Us

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