

Aliko Dangote  
Foundation



Nachwuchs-  
stiftung  
Maschinenbau



# NIGERIAN INDUSTRY MEETS GERMAN ENGINEERING



## **Aliko Dangote Foundation-VDMA** **Technical Training Programme**

*Supported by:*



german  
cooperation

DEUTSCHE ZUSAMMENARBEIT



Aliko Dangote, President/CE, Dangote Industries Limited and Dr. Reinhold Festge, VDMA Past-President during the official signing of MoU in Lagos, Nigeria

## ABOUT PARTNERSHIP

The ADF-VDMA partnership involves the collaboration between the Aliko Dangote Foundation, Germany's VDMA (Mechanical Engineering Industry Association) and its Foundation for Young Talent in Mechanical Engineering Nachwuchsstiftung Maschinenbau gGmbH – NWS). The idea of establishing a shared Vocational Skills Training Programme arose from a shared vision about addressing the deficit in vocational skills required in the manufacturing sector in Nigeria.

These organizations have both been involved in promoting dual track technical and vocational training and education for many years. In addition to that, the enhancement of the Nigerian-German relationship between companies and related institutions is another key matter of importance. The training centre at the Dangote Academy provides a unique opportunity for an institutionalized alliance and experience exchange.

## PARTNERS

**The Aliko Dangote Foundation** – Aliko Dangote Foundation is a charity set up by Mr. Aliko Dangote in 1994 to enhance opportunities for social change through strategic investments that improve health and wellbeing, promote quality education, and broaden empowerment opportunities for individuals and communities.

The Foundation has a mandate to realize Aliko Dangote's vision of an Africa whose people are healthier, better educated, and more empowered. To achieve its mandate, the Foundation routinely partners the Dangote Business Group, Governments, the Private Sector, and other Development Organisations on various development initiatives in Nigeria and the rest of the world.

**Dangote Academy** - Dangote Academy was established in 2010 to provide Technical and Management training with the aim of bridging the skill and competency gap of employees. The Academy was created recognizing the fact that we cannot rely completely on the Universities and colleges to provide specialized Technical and Management training required to run a major business as the Dangote group. Dangote Academy presently has two centers, one In Lagos and the other in Obajana, Kogi state.

**The VDMA** - German Mechanical Engineering Industry Association - represents over 3,300 mostly medium-sized companies in the capital goods industry, making it the largest industry association in Europe. The association represents the shared financial, technical and scientific interests of the mechanical engineering industry. Mechanical engineering is Germany's biggest industrial employer with more than 1.3 million employees. It develops and produces key technologies for the global market. The export ratio is 80 percent. With a revenue of EUR 229 billion (2019), it is one of the leading branches of industry in Germany.



**The NWS** – Nachwuchsstiftung Maschinenbau gGmbH – is the Foundation for Young Talent in Mechanical Engineering founded by VDMA and VDW (German Machine Tool Builders' Association). Its mission is to inspire young people for a professional career in the mechanical engineering industry. NWS offers qualifications for trainers and teachers as well as consultancy services in the field of technical education and vocational training. The foundation cooperates with 675 mechanical engineering companies and more than 380 vocational schools – over 7,050 participants have successfully completed NWS' education and training programmes.

## SUPPORTERS

Beside the partners, different public and private institutions and companies have made significant contributions to the Nigerian-German training initiative.

The establishment of the new training programme including the development of the dual track training courses has been supported by the German Federal Ministry for Economic Cooperation and Development (BMZ). This financial support is handled by the GIZ – the German Agency for International Cooperation.

Moreover, many companies have actively supported to the programme by providing:

- workshop supplies and training equipment such as machinery and sophisticated instrumentation and monitoring systems
- instructions for trainers – in Germany and in Nigeria
- sponsoring
- the offer of internships for trainees

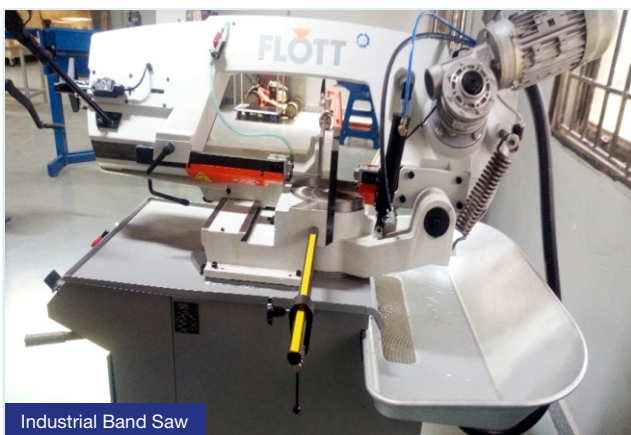
The Aliko Dangote Foundation, VDMA and NWS are very grateful for the tremendous support provided by these institutions and companies.



Rotary Saw



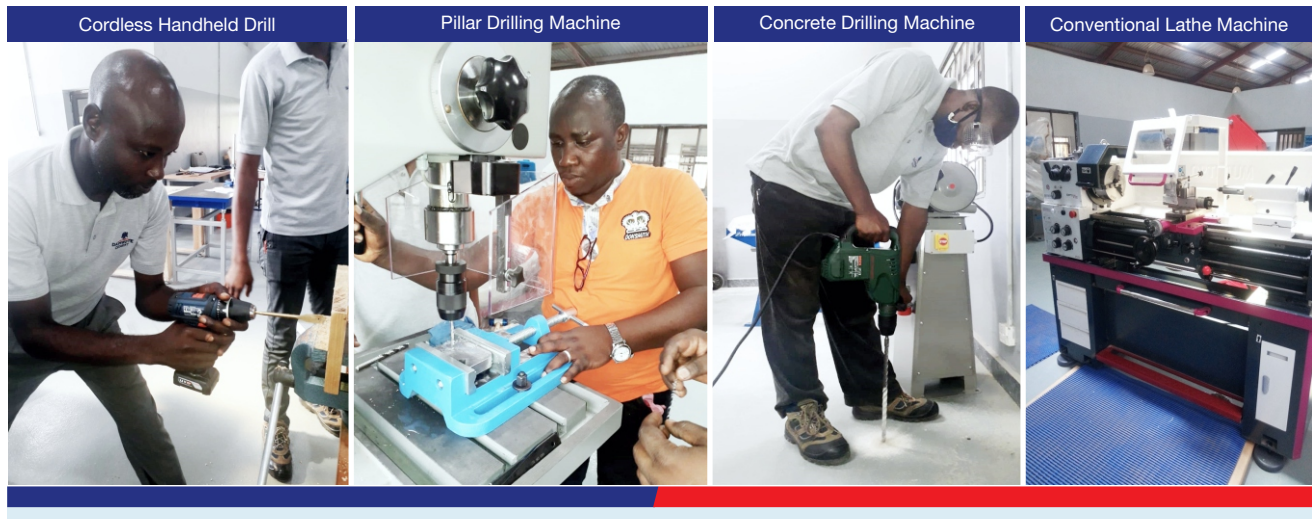
Conventional Lathe Machine



Industrial Band Saw



Using the Rotary Saw



## TRAININGS

The training concept is based on dual-track vocational training which combines theoretical and practical aspects. This holistic approach reflects the needs of the industry and provides the trainees with a realistic and practice-oriented training addressing all required hard and soft skills. The inclusion of cutting-edge technologies such as the digitalization of industrial value-chains is at the heart of the training programme. Due to the close strong involvement of the Dangote Group and other Nigerian companies the course content is consistently geared to the practical requirements of the local industry.

Trainers of the German training service provider, Professional Training Solution GmbH (PTS) ensure a first-rate training programme. They are highly-qualified with long-standing experiences in technical and vocational training worldwide. PTS has been successfully providing its services for international customers for more than 35 years. This company was selected for the Nigerian-German training initiative due to its expertise and excellent reputation. Furthermore, trainers of Dangote Academy have been professionally trained by PTS in order to conduct the courses within the ADF-VDMA Technical Training Programme.

The didactic concept will also comprise the use of NWS' digital learning platform “Mobile Learning in Smart Factories”(MLS). It is a tool that enables self-determined and intuitive learning based on practice-oriented tasks. Thereby MLS provides insights into digitalized industrial processes and value-chains.

## ADVANTAGES OF THE TRAINING

- Combines Nigerian requirements with German expertise and technology know-how
- Includes theoretical and in-plant practical engagements
- High-standard facilities with modern equipment, learning tools and hostel accommodation for the trainees
- Benefit from NWS' long-standing experiences in industry-ready vocational training
- Access to a lively network of Nigerian and German companies

The focus areas of the trainings are mechanics, electronics and mechatronics. Companies or individuals active in these areas are invited to use the new training centre for the training of their employees.

The courses are open to the following groups:

- School leavers and trainees seeking qualification in the occupational fields of mechanics, electronics and mechatronics
- Technical specialists from companies in the manufacturing industry, who seek further training as part of their professional activity
- Instructors who seek empowerment to conduct advanced training and courses



## COURSE PROGRAMME

The course programme focuses on three core disciplines:

- Short Courses Mechanical Programme
- Short Courses Electrical Programme
- Full Trade Vocational Training Mechanical Programme  
It consists of:
  - Seven short courses for advanced training which last between 2 and 4 weeks
  - An 18/30-month professional, dual trade vocational training course.

## ADVANCED TRAINING - SHORT COURSES

Participation in the Advanced Training Short Courses is open to:

- Technical specialists from companies in the manufacturing industry, who seek further training as part of their professional activity
- Instructors who seek empowerment to conduct advanced training and course

## COURSE PROGRAMME - ADVANCED TRAINING SHORT COURSES

### Mechanical Programme

The further training includes specialisation courses for mechanics in the fields of welding and brazing, vulcanisation as well as control technology and maintenance of machines. Industrial mechanics can continue their education in the field of mechanics and assembly.

COURSE	CONTENT	DURATION
Welding and Brazing	<ul style="list-style-type: none"><li>• Work on pipes and fittings</li><li>• Production and repair of metal connections using various welding and cutting methods</li></ul>	3 weeks
Vulcanisation	<ul style="list-style-type: none"><li>• Condition check and adjustment of conveyor belts</li><li>• Repair of damaged conveyor belts</li></ul>	2 weeks
Control Technology and Maintenance of Machines (for foremen)	<ul style="list-style-type: none"><li>• Operation and evaluation of control systems</li><li>• Installation of updates</li><li>• Maintenance, diagnosis and troubleshooting</li></ul>	2 weeks
Basics in Mechanics and Fitter Work	<ul style="list-style-type: none"><li>• Commissioning of machines</li><li>• Repair of small- and medium-sized machines</li></ul>	4 weeks

### Electrical Programme

For electricians, specialisation courses are offered in the areas of electrical installations, electrical machines and measurement technology.

COURSE	CONTENT	DURATION
Electrical Installations	<ul style="list-style-type: none"><li>• Electrical installation of machines and systems</li><li>• Cabling, checking and commissioning of the systems</li></ul>	4 weeks
Electrical Machines	<ul style="list-style-type: none"><li>• System integration of electrical machines and generators</li><li>• Alignment, synchronization and application of different variants, e.g. Star, triangle, Dahlander, Wendeschütz and Steinmetz</li></ul>	4 weeks
Advanced Measuring Techniques	<ul style="list-style-type: none"><li>• Knowledge of various electrical measurement methods</li><li>• Recording the characteristics of electronic components</li><li>• Troubleshooting in electrical and electronic systems</li></ul>	3 weeks



A Section of the Male Hostel

## FACILITIES

The training takes place at Dangote Academy, the Dangote Training Centre in Obajana where the partners have built up additional training facilities for the Nigerian-German training project. This state of the art centre is equipped with modern classrooms, computer and technical drawing rooms, library as well as with electrical, automation, instrumentation and mechanical workshops. There are also accommodations for the students, a cafeteria and an administrative wing. Modern leisure facilities are in planning and will round off a pleasant stay on the Dangote Academy Campus.

### Campus, Dangote Academy

The Academy in Obajana sits on a 24 Acre land with the following facilities: An Administration Building, 500- seater Auditorium, Classroom Block, Cafeteria, Workshops, Halls of Residence and a recreation center.

### Workshops and Equipment

There are five workshops equipped with German state-of-the art equipment:

1. Mechanical, Welding/ Brazing Workshop
2. Industry Mechanics, Machine Fitter and Metal Worker Workshop
3. Applied Electric/Electronic, Plumbing and Refrigeration Workshop
4. Hydraulic/Pneumatic, Mechatronic/Control of Machinery workshop
5. Industry Mechatronics Workshop

### Accommodation

Dangote Academy has two hostels; one male and one female hostel which provides accommodation for trainees throughout the duration of their program. The hostels are well equipped with basic amenities such as constant water and electricity supply, common room, laundry room etc.



Typical Trainee Accomodation



Auditorium



Conference Room



View of Workshops, Classrooms and Auditorium



Trainees in class





## REGISTRATION FOR ADVANCED TRAINING SHORT COURSES

In order to sign up for the short courses and for further information on registration and pricing, please visit our website: <https://dangote.com/vdma/>

Please send enquiries regarding the short courses to: [dangote.academy@dangote.com](mailto:dangote.academy@dangote.com)

## DUAL VOCATIONAL TRAINING FULL TRADE COURSE

### Industrial Mechanics

The industrial Mechanical training consists of Basic Engineering, Mechanical and Electrical Engineering. The Basic Engineering training will last for 18 months after which exceptional candidates will proceed to the Mechanical and Electrical Engineering training for an additional 12 months. It comprises various theoretical and practical trainings as well as exposure to industrial work experience in various plants of the Dangote Group and Industry Partners in Nigeria. Additionally, it includes continuous assessment processes and appraisals.

COURSE	CONTENT	DURATION
Industrial Mechanic Training	<ul style="list-style-type: none"> <li>Basics</li> <li>Basic Engineering</li> </ul>	18 months
	<ul style="list-style-type: none"> <li>Mechanics</li> <li>Electrics</li> </ul>	12 months

## ADMISSION CRITERIA FOR THE 18/30-MONTH DUAL VOCATIONAL TRAINING FULL TRADE COURSE

- Admission age bracket: 16–24 years
- Educational background: 5 credits in O' Level Sciences
- Possession of one of the following certificates: WAEC (SSCE), NABTEB (NTC), NECO (SSCE)
- School Testimonials

All enquiries related to this Technical Training Scheme course should be sent to:

[dangote.academy@dangote.com](mailto:dangote.academy@dangote.com)

Admission will be subject to passing an Aptitude Test and an Oral Interview





First Batch of ADF - VDMA Technical Trainees



For enquires, please contact

Dangote Academy

Email: [dangote.academy@dangote.com](mailto:dangote.academy@dangote.com)

Or

Visit <https://dangote.com/vdma/>