



Photo: Future Headquarters

2021 ANNUAL LOCAL CONTENT CONFERENCE



**THEME: TECHNOLOGY TRANSFER PROCESSES IN GHANA
UPSTREAM OIL & GAS INDUSTRY: EXPERIENCES**

WEC at a Glance

Wayoe Engineering and Construction Limited (WEC) is a fully Indigenous Ghanaian Company (100% Ghanaian owned).

Core business:

- ❑ Engineering & Construction Services
- ❑ Electrical & Instrumentation
- ❑ Heavy Lifting Equipment Rental

❑ Key markets include:

- ❑ Oil & Gas
- ❑ Mining
- ❑ Power
- ❑ Petrochemical
- ❑ Infrastructure / Industrial

International Certifications:

- ❑ ISO 9001: 2015 Quality Management System.
- ❑ ISO 14001: 2015 Environmental Management System.
- ❑ ISO 45001: 2018 Occupational Health and Safety Management System.
- ❑ Trace



2000+

Workforce since
formation



70+

Completed
Projects



10

Locations
across Africa



4

Awards



Expectations of Technology Transfer

- ❑ Transfer of technology should provide the enabling environment to sufficiently develop capacity and capability of indigenous companies for large scale projects;
- ❑ Transfer of Technology should improve the structure and resourcefulness of the indigenous companies. (Information Technology, Management, Standards and Training).
- ❑ The transfer process should be managed by the IGC instead of the foreign company. In this way the IGC can have control over the transfer process and timelines;
- ❑ The transfer of technology should be such that indigenous companies can easily understand and implement the process without the foreign companies;

Method of Technology Transfer

- ❑ Recruitment of Expatriates with required skills and experience to develop the capacity and skills of the locals;
- ❑ A Joint Venture with a foreign company, each partner will learn from the other party's expertise;
- ❑ Training and development of local staff.
- ❑ Formal transfer of new technologies rights and innovations

The journey so far (technology transferred and technology adopted)

People:

- ❑ Expats for leading Oil and Gas
- ❑ Locals - Laser scanning technician
- ❑ Locals - Engineers and Designers for Oil and Gas projects
- ❑ Locals – Qualified welders, Fabricators, Painters, Quality Inspectors (welding/painting/NDT)



Christian Colin – Operations Director

25 years of experience

Previous Work:

- PESCHAUD
- FRIEDLANDER
- TOTAL Energy
- FOXTROT



Xavier Billon – Oil & Gas HOD

25 years of experience

Previous Work:

- Boccard
- Entrepose Ghana
- Fouré Lagadec

Personnel – Locals	Job Title	Previous Qualification	Competence Upgrade
Francis Akweter	QA/QC Lead	HND in Mechanical Engineering	CSWIP Level 2
Henry Aboagye	Piping/Structural Designer (Oil & Gas)	WASSCE	Diploma in Piping Designing- India
Obed Tanlon	Engineer (Oil & Gas)	Degree in Engineering (Oil and Gas)	PGD in Piping Engineering - India

The journey so far (technology transferred and technology adopted)

People:

□ Rope Access Qualification



Rope Access Team - IRATA level 1 Certified

CNC Machine Operators

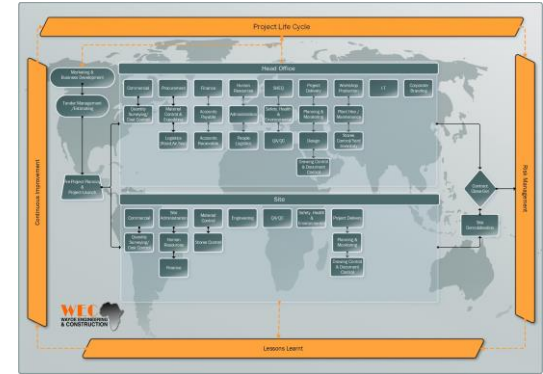
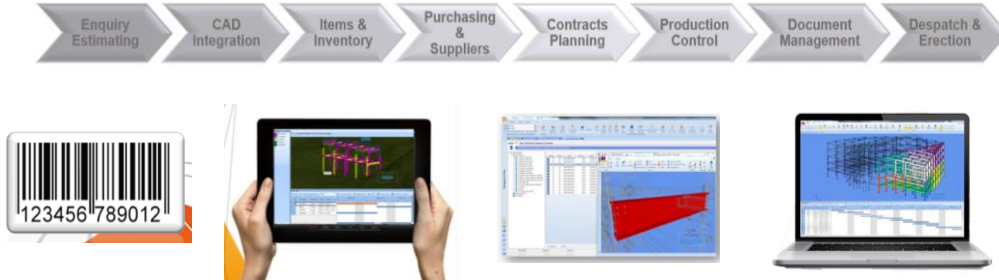


CNC Machines Operators - Trained

The journey so far (technology transferred and technology adopted)

Process/Systems:

- ❑ Integrated Management System
- ❑ Enterprise resource planning (ERP) System
- ❑ ISO 3834 – Global welding quality – ongoing to commence pressure vessel fabrication
- ❑ Software – Tekla, P6 and STRUMIS
- ❑ Project Life Cycle (PLC)



Project Life Cycle

The journey so far (technology transferred and technology adopted)

Infrastructure/New Technologies: New Fabrication Workshop and Climate Control Painting Boot



- 3 Multipurpose Halls
- CNC machines specialised for our operations
- Production – 600+ tons monthly
- Connected to Project Office for faster communication

The journey so far (technology transferred and technology adopted)

Infrastructure/Technology:

- ❑ Rope Access facility
- ❑ Quayside Facility (Jetty Assembly Yard)
- ❑ Crane Yard



Rope Access Store



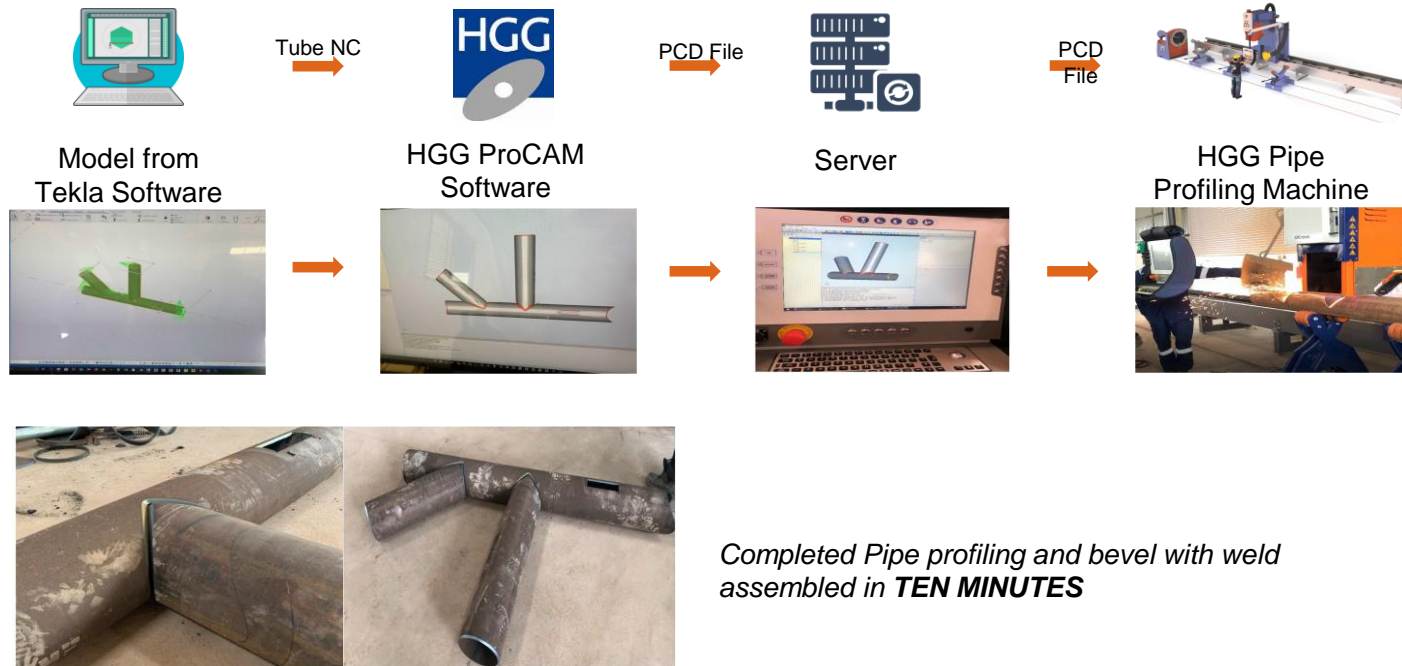
Quayside Facility

The journey so far (technology transferred and technology adopted)

Infrastructure/Technology:

- ❑ CNC Machines for our operation

Basic Workflow for CNC Machines in Operation



The journey so far (technology transferred and technology adopted)

Infrastructure/Technology: CNC Machines for our operations



HGG Pipe Profiling Machine SPC 1000 PT



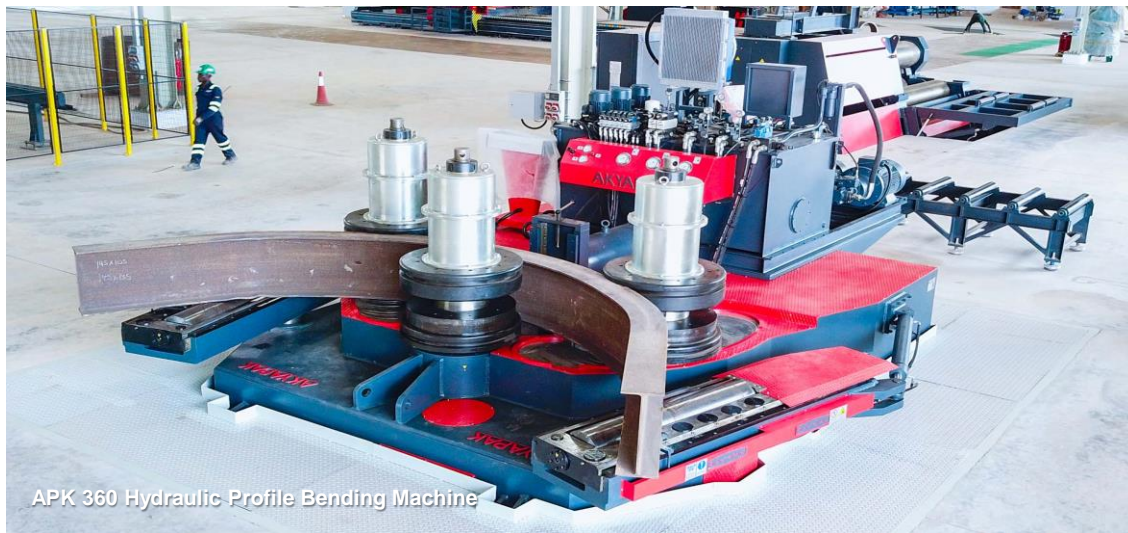
3ADM 1200 Three Spindle 10 Axis CNC Drill Line with AST-1200 Miter Bandsaw



FICEP HP 16 T4 - CNC Punching and Shearing Line for Angles



APLG CNC Plate Processor
(Gantry Combined CNC Drilling & Oxy-Fuel/Plasma Cutting Machine)



APK 360 Hydraulic Profile Bending Machine



CNC AHS 4-Roll Hydraulic Plate Rolling Machine - AHS 30/76





AFD 10 CNC Flange & Plate Drilling Machine



[CLICK HERE TO WATCH](#)

The journey so far (technology transferred and technology adopted)

Infrastructure/Technology:

- ❑ Climate Control Painting Booth – Capacity 15m²/hour



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Impacts & Challenges

- ❑ Competition between IOCs and Indigenous companies
- ❑ Opportunities for Indigenous companies
- ❑ Technological transfer through partnership with IOCs
- ❑ Procurement delays – specialised materials

THANK YOU