



NIGERIAN SOCIETY OF CHEMICAL ENGINEERS

Newsletter

A Publication of Nigerian Society of Chemical Engineers
(A Division Of Nigerian Society Of Engineers)

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Issue No: 2019/2: APRIL - JUNE 2019



NSChE's 48th
Conference/AGM
Communique

Engr. Siky Aliyu, FNSChE
NSChE LOC Chairman 2018



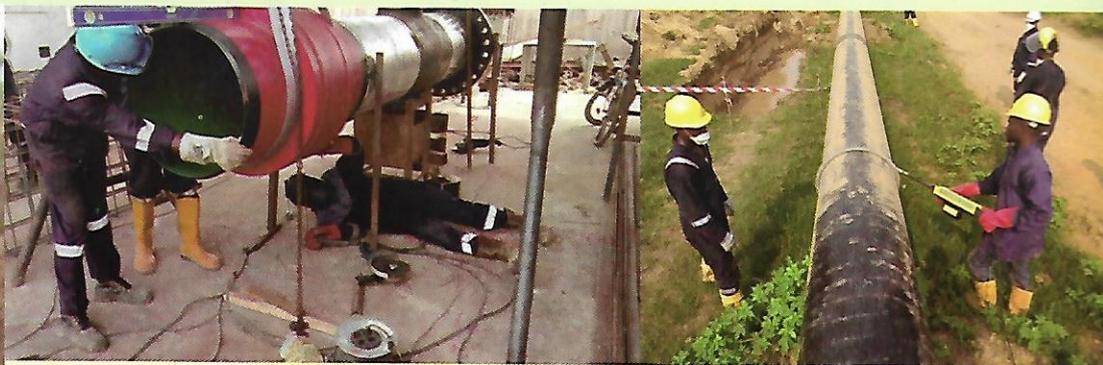
Lecture on
Future of
Chemical Eng

Dr. Emmanuel Dada
FNSChE, FAChE Seminar Speaker



Feature on
Amazon
Energy

Engr. Olayinka
Oluwatimehin
GCEO, Amazon Energy



OIL & GAS SECTOR
AMAZON ENERGY
EXCELS IN
SERVICE DELIVERY





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NSChE VISION



“To be the center of excellence for the Chemical Engineering Profession in Africa and the prime mover of Industrialization in Nigeria”



NSChE MISSION



“To organize the Nigerian Society of Chemical Engineers into a virile professional body capable of promoting the relevance and versatility of the profession, achieving better training and updating of Chemical Engineers through its activities. Fostering of relationships with the academia, research institutes, industries, other professional bodies and government will be the basis for stimulating accelerated industrialization of the country and improving the quality of life of the Nigerian people”

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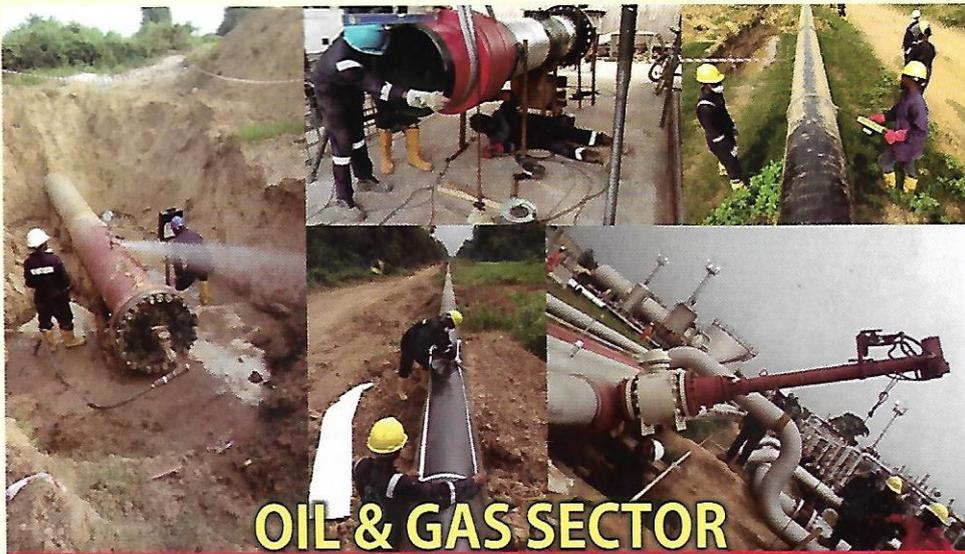
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FNSChE, FAIChe

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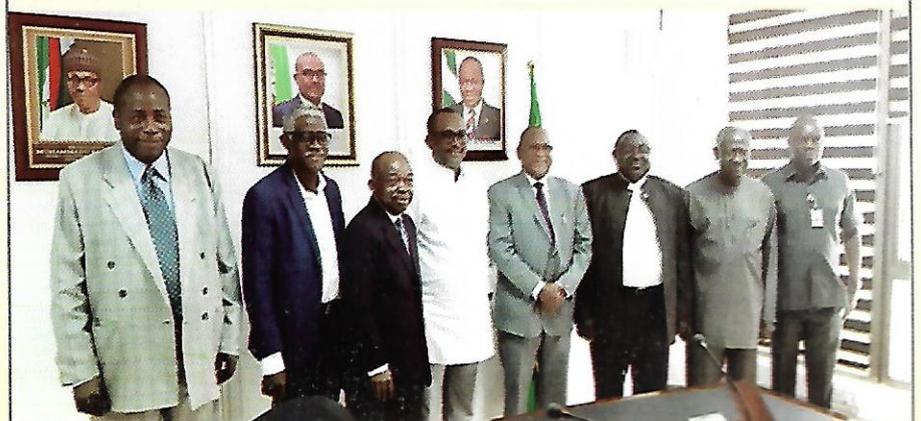
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MNSChE, MNSE
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SAVE HER LIFE

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FROM THE
Editorial
 SUITE



ENGR. DONATUS UWEH, MNSChE
 Editor-in-Chief

As always, we are delighted to serve our readers with an exciting, engaging and interesting package in this Edition. Our Society has diversified interests all of which are directed towards meeting the needs of the teeming population of our members. This explains why nine sectoral groups have been constituted. Chemical Engineers are very active practitioners in the various groups. The Executive Secretary in his column, throws more light on the constituted groups.

NSChE's 48th Annual Conference was held at Olusegun Obasanjo's Presidential Library Event Centre from 8th to 10th November 2018 on the theme "Promoting vibrant Micro, Small and Medium Scale Enterprises: Key to Industrialisation". We place on record in this Edition the Communiqué issued at the end of the Conference. Robust recommendations have been made and we look forward to all stakeholders getting to work to advance the course of MSMEs so

as to boost industrial growth.

The NSChE Annual Conference in 2017 held at Port Harcourt was on the theme "Nigerian Content Development: Catalyst for Industrialization". One of the outcomes of that Conference was NSChE's presentation of Actionable recommendations that would engender improvement in local content implementation process to Engr. Simbi Kesiye Wabote, Executive Secretary, Nigerian Content Development & Monitoring Board (NCDMB). This is one way that will make NSChE 'work the talk' in collaboration with NCDMB. This edition provides the details.

In the news segment, our readers will get to know the Senior Fellows of our Society who are to be inducted as Fellows of Nigerian Academy of Engineering. This event is scheduled to take place at the main auditorium of the University of Lagos on June 20, 2019. Also in this segment, we record the attainment of 80 years of age on May 5, 2019 by the co-founder of NSChE/Past President of NSChE, Engr. Ayokunle Babatunde Solanke, FNChE. We pray the Almighty God to continue to keep him in good health.

We grieve over the state of one of our dear members, Engr. Edith Chinasa Okengwu, who is on dialysis. She has made a passionate appeal to the Society's members to assist in defraying medical bills. Readers will see the details in this edition on how to respond to this appeal.

A peep into the future is always good for those who consider 'planning' as an essential part of

life. As a Society, there is need to project Chemical Engineering discipline into the future. This is exactly what was done in a Seminar organized by International Affairs Committee of NSChE in collaboration with the Department of Chemical Engineering, University of Lagos. In the Seminar, the public lecture entitled The Future of Chemical Engineering in a Global Economy was presented by Dr. Emmanuel A. Dada, FNSChE, FAChE, Assistant Professor of Chemical Engineering, Prairie view A & M University, Texas, USA, Chairman NSChE, USA Chapter. You will in this Edition, see the actionable recommendations in the Communiqué issued at the end of the Seminar. We also serve you with pictures taken during the Public Lecture.

In line with NSChE's vision of fostering relationships with key players in the Industrial Sector including Oil and Gas Sector, among others, we present a special spotlight on Amazon Energy. This company stands out. It is just full of life. What is the Secret? Over the years, competence in delivery of quality services to its clients in the Oil and Gas Industry, has kept it going. We share the joy of Success with the management and Staff of Amazon Energy and wish her greater accomplishments in the years ahead.

We use this opportunity to express our appreciation to all those who have contributed to the Successful publication of this Edition.

Happy reading!



NSChE ESTABLISHES 9 SECTORAL GROUPS FOR INCLUSIVE PARTICIPATION



SAM BOSORO, MNSChE
Executive Secretary, NSChE

The quest to establish and execute programs which cut across the broad spectrum of Chemical Engineering practice and which meet the needs and expectations of the wide array of members of NSChE has beleaguered the society over the years.

Sequel to this desire, NSChE Council has approved the establishment of 9 Sectoral Groups to cater to the breadth of Chemical Engineering practice in Nigeria. The prime objective is to provide an all inclusive platform for Chemical Engineers to participate in the activities and programmes of the Society. It is expected that from now on no Chemical Engineer will feel alienated as everyone would fit into one Group or the other.

It is envisaged that this action would create an enhanced sense of fulfilment in the societal activities among members, make our conferences more attractive and worthwhile and also encourage more Chemical Engineers to join the Society.

1. THE SECTORAL GROUPS (SGs)

The list of the Sectoral Groups and their respective Co-ordinators are as follows:

SECTORAL GROUP (SG)	CO-ORDINATOR
a. Education & Research(ER)	Prof. Ayo Kuye
b. Solid Minerals Processing (SMP)	Engr. Ben Akaakar
c. Bio/Agro/Food/Pharma (BAFP)	Dr. Felix Ajuebor
d. Chemicals & Chemical Products (CCP)	Engr. Tunde Taiwo
e. Petroleum Upstream (PU)	Engr.(Mrs) Seyi Afolabi
f. Petroleum Midstream/Downstream (PMD)	Engr. M. T. H. Williams
g. Health/Safety/Environment (HSE)	Engr. Mamoud Abubakar
h. Management/Consulting/Construction/Services (MCCS)	Engr.(Mrs) O. Adekoje
i. Computing & Systems Technology (CST)	Dr. A. A. Akinola

2. AIMS & OBJECTIVES OF A SECTORAL GROUP

- i. To serve as rallying points for Chemical Engineers practicing in the sector, for networking, sharing of knowledge and sharing of experience.
- ii. To promote best Chemical Engineering practices and professional excellence in the sectoral area.
- iii. To promote the relevance and importance of Chemical Engineering in the sectoral area.
- iv. To create and foster a sense of belonging for Chemical Engineers in varied endeavours, within the NSChE family.
- v. To provide breadth and diversity in programs and activities of NSChE, thereby sustaining the interest, participation and membership of a broad spectrum of Chemical Engineers in the Society.
- vi. To identify relevant issues and trends in the sectoral area and apprise NSChE as appropriate.



- vii. To initiate professional positions on issues of policy and public interest arising in the sectoral area, in consultation with the Policy Advisory Committee of the Society.
- viii. To promote the spirit of Chemical Engineering entrepreneurship in the sectoral area.

3. OPERATING GUIDELINES FOR A SECTORAL GROUP

- i. Council shall designate a coordinator for each SG at the onset, for a tenure of 2 years. Once the SG activities commence, the Coordinator shall be expected to choose an Assistant Coordinator and a Secretary, after due consultation with subscribing members. These officers shall constitute the Working committee of the SG.
- ii. Each SG shall be expected to elect its Coordinator subsequently on expiry of the 2 year term of the appointed Coordinator. Elections shall also be held at the same time for positions of Assistant Coordinator and Secretary.
- iii. Members of the SG Working Committees may be eligible for election to office for three consecutive 2-year terms, after which they shall no longer be eligible.
- iv. The SGs shall be considered special organs of Council. The Coordinators shall therefore automatically become members of Council and shall be expected to attend quarterly Council Meetings, to represent their SGs.
- v. Each Coordinator shall submit a written report to Council in a format to be agreed with the Executive Secretary and approved by the BOD, quarterly.
- vi. SG activities shall be conducted mostly by electronic communication. Physical activities may also take place where there is a high aggregation of members in a location. Each SG is however expected to hold a session at the Annual Conference of the society. These activities shall be tailored to deliver on the aims and objectives, as outlined above.
- vii. An SG may request approval and obtain support from the National Secretariat or the BOD for major events which have potentials of providing value for the SG, NSChE and Chemical Engineers.

4. CORDIAL INVITATION TO JOIN ANY NSChE SECTORAL GROUP OF YOUR CHOICE

The 9 Sectoral Groups were officially launched during the 48th NSChE Annual Conference which took place at OOPL Event Centre, Presidential Boulevard, Oke Mosan, Abeokuta, Ogun State between 8th- 10th November, 2018.

Some of the Sectoral Groups have commenced activities.

All NSChE members are cordially invited to join a minimum of one or maximum of two Sectoral Groups.

For further information, kindly contact the National Secretariat:

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COMMUNIQUE OF THE 48th ANNUAL CONFERENCE, EXHIBITION AND ANNUAL GENERAL MEETING OF THE NIGERIAN SOCIETY OF CHEMICAL ENGINEERS

HELD AT OOPL EVENT CENTRE, PRESIDENTIAL BOULEVARD, OKE MOSAN, ABEOKUTA, NIGERIA FROM 8th – 10th NOVEMBER, 2018

CONFERENCE THEME:

PROMOTING VIBRANT MICRO, SMALL AND MEDIUM SCALE ENTERPRISES– KEY TO INDUSTRIALIZATION

PREAMBLE:

The 48th Annual Conference, Exhibition and Annual General Meeting (AGM) of the Nigerian Society of Chemical Engineers (NSChE) was held at the Olusegun Obasanjo Presidential Library Event Centre, in Abeokuta, Nigeria between Thursday, 8th to Saturday 10th, November 2018. The conference theme was 'Promoting Vibrant Micro, Small and Medium Scale Enterprises -Key to industrialization'. This is in consonance with the Federal Government's desire to provide gainful employment to its teeming youths through industrialization.

The Conference objectives were as follows:

To bring together members of industry, academia from within and outside the country and government agencies to provide a healthy forum for sharing of ideas, experiences and discussions by professionals and expertson how best Nigeria could be transformed through the diligent formulation and implementation of smart policies aimed at supporting domestic industries. The forum also took a critical look at the strategic importance of continued promotion of vibrant micro small medium scale enterprises (MSME) as key to successful industrialization of the country and creation of job opportunities which are worthy desires of government that are strongly supported by the Society.

The Conference/AGM is an annual three-day event which comprised a variety of activities including Opening Ceremony, Stakeholders forum, Plenary and Parallel Technical Sessions, Exhibition, AGM, Dinner, Sport (Golf) and Spouses activities. Nigeria Chemical Engineers met and discussed how their practice can add value to the Nigerian economy. All activities were well attended by Chemical Engineers from Research and Development Centres, Academia, Industry, Federal and State Ministries, Departments and Agencies. Others include Policy makers. Technocrats, Legislators, Development Partners, etc within and outside the country. Over three hundred and fifty (350) participants registered for the Conference and twenty (20) exhibitors participated. Five Lead papers were delivered by eminent personalities from Industry and Academia and Thirty five technical papers were presented on the following sub themes: Policy framework for MSME, Challenges & Opportunities of MSME in Nigeria: Agro-Processing, Solid minerals, Cosmetics &Pharmaceutical, Strategies for cost-effective infrastructure (power, water, roads), Entrepreneurship Development, Safety & Environmental Management, ICT & E-commerce, Access to new markets, Academia/Professional Societies interaction for innovation & Technology Development, Chemical Engineering Research & Development/Applications, Oil and Gas, Research and Development, General Engineering, Bio-Technology, Petroleum Technology, and Process Dynamics and Automation.

The conference was concluded with a dinner in which new Fellows were inducted and several awards were given.

INTRODUCTION

The theme of the Conference “Promoting Vibrant Micro, Small and Medium Scale Enterprises – Key to industrialization” was very apt in providing a forum to discuss the opportunities and challenges confronting Micro, Small, and Medium Scale Enterprises in Nigeria. The Chairman of the opening ceremony was Engr. Ahmed Mansur, President, Manufacturers Association of Nigeria. The keynote address was delivered by Mr. Olukayode Pitan, Managing Director, Bank of Industry. Quality papers were presented by Petroleum Technology Development Fund (PTDF), Bank of Agriculture, Small Medium Enterprises Development Agency of Nigeria (SMEDAN) and Standard Organization of Nigeria (SON). The conference provided a healthy forum for sharing experience by those in industry, government and academia on practical and robust real-life results.

With the high quality of papers presented based on the observation of practitioners in industry, government and academia, it was obvious that while Chemical Engineers play a big role in Nigeria’s MSME, there are many more opportunities which need to be explored.

OBSERVATIONS

The following observations were made at the end of the Conference, Exhibition and Annual General Meeting:

1. MSME Contribution to National Development:

The Micro, Small and Medium Enterprises (MSME) sector contributes significantly to economic growth world – over and also a major source of employment generation. It was reported in a survey conducted in 2013 that Nigeria had 37 million SMEs which employ 54 million skilled and unskilled labour and contribute 54% to the GDP of the Nigerian economy.

2. Role of Chemical Engineering:

Nigeria has abundant raw materials which can be harnessed for national development with the right policy framework especially on MSMEs. The professional engineer equipped with technical and practical knowledge to convert basic raw materials (including the ones that are already tagged as being useless) into a variety of valuable products at minimal production cost is the Chemical Engineer. Therefore, the role of Chemical Engineering in promoting vibrant micro, small and medium scale enterprises in any country and in developing nations like Nigeria in particular, cannot be overemphasized.

3. Identified MSME Policy Gaps in Nigeria.

In order to promote a vibrant MSME sub-sector in Nigeria, the following policy gaps were identified:

(i) Duplicity of Regulatory Authority

With the National Council on MSMEs under the Presidency, the National Technical Implementation Committee (NTIC) under headship of the Honourable Minister for Trade and Investment and the Small and Medium Enterprise Development Agency (SMEDAN) as yet another government Agency for MSMEs, it appears there is copious duplicity of regulatory authority and over bureaucratization which is contrary to the principle of regulatory cost effectiveness advocated in the Athens declaration.

(ii) Over - Centralization of Regulation

While the policy mentions in passing the integration of MSME into SEEDS and LEEDS as Strategic Economic Development plans at the state and local government levels respectively, the general regulatory framework of the sector is domiciled in SMEDAN, a solely federal agency. Whereas the nature of SME’s, being grassroots - based enterprises, have high proximity and affinity to the people at the grassroots.

(iii) Faulty Educational System

The policy outline for skills development is comprehensive enough to achieve set goals in that regard but rather unfortunately, the Nigerian society has an inexplicable propensity for tertiary education and “paper” qualification at the expense of skills acquisition and development.

(iv) Poor Market Access Strategy

Nigeria is a huge market for all kinds of imported goods that it presents a dumping ground of sort. The policy is copiously silent on this very serious menace of dealing with imported goods as a way to increase market access for domestic products.

(v) Lack of Exit Policy

The Nigerian MSME policy clearly lacks an exit policy which is critical to the solvency or otherwise of small businesses and the overall development of the sector. This is an unfortunate omission in the policy.

4. Finance

Micro small medium scale enterprises find it difficult to secure funding as a result of poor credit rating and when they do, the interest rates are prohibitive.

5. Management

Operators of MSMEs most times lack the necessary human resources and development skills to operate the businesses successfully. They therefore need to be supported through organized workshop and seminars that address their specific needs.

6. Opportunities in Agro-Processing Industry.

Opportunities abound in Agro Processing for MSMEs in Nigeria to exploit. While local production is increasing for agricultural produce by government's deliberate policy (such as rice and cassava), the same cannot be said of their processing which the Chemical Engineer can take advantage of through MSMEs.

7. Waste management and pollution control

The MSME subsector has not given due consideration to waste management and pollution control in their activities. This is contributing greatly to a lot of pollution problems we are experiencing in our villages and cities; and at the end contributing to climate change problems globally.

RECOMMENDATIONS

The following recommendations to the above observations were proffered:

(1) Role of Chemical Engineering

(i) Chemical Engineers are imbued with vast entrepreneurial potentials that can be deployed for personal and national economic growth and development especially in the area of product development which MSME will benefit from immensely. Indeed, Chemical Engineers have a critical role to play in the development of SMEs in Nigeria. Today, the processes and products that Chemical Engineers have helped to develop touch every aspect of our lives. Therefore, the Nigerian Society of Chemical Engineers (NSChE) should be given an Advisory role in government institutions like the Bank of Industry (BOI), Bank of Agriculture and Small Medium Enterprises Development Agency of Nigeria (SMEDAN) which are setups to assist the development of MSMEs in Nigeria.

(ii) For industrialization to thrive in any country and for a viable MSME sub-sector, process



equipment are critical for value addition to our vast natural resources. NSChE should take the driver's seat for the functionality of the National Foundation for Process Equipment Development (NAFPED) established by the Raw Materials Research and Development Council (RMRDC) in 2005 which has since gone moribund. Membership of the foundation was drawn from the industry, government and professional bodies, including the Nigerian Society of Chemical Engineers. Such a foundation should be funded directly by the Federal Government of Nigeria to enable her fulfil her mandate which include: (i) Establishment of a Centre - Satellite Factory System of Equipment Production (ii) Establishment of Standards for Components of Process Equipment (iii). Development of Computer-Aided Process Equipment Packages (iv) Upgrade of Indigenous Process Technologies.

(2) Remedies for Identified MSME Policy Gaps in Nigeria

The following are recommended remedies for identified gaps in Nigeria's MSME Policy:

- (i) Streamlining Regulatory Authority As stated earlier, implementation of the policy is regulated by both the National Technical Implementation Committee (NTIC) and SMEDAN with the latter having a better structure and resources to carry out such regulatory function. Consequently, strata of the NTIC can be eliminated by assigning to it roles of the National Council with necessary modification/alteration of its composition.
 - (ii) Decentralization of Regulation The regulatory structures should be strengthened at the local government and state levels than the Federal level to enhance effectiveness. The foregoing is also in line with the much advocated principle of true federalism for Nigeria. The mere presence of a Federal agency in every state and local government of the federation does not make it grassroots - based. A regulatory system empirical to a people may yield better results as against the present practice.
 - (iii) Skills Development Blueprint There is need to actualize the numerous vocational and entrepreneurial skills development strategies sufficiently enunciated in the policy. Strategic efforts should address skills acquisition rather than just "paper" qualification. We therefore lend our voices to the call for the entrepreneurship programmes to be embedded in our school curriculum from the Primary education level. In all, emphasis should be placed in skills development in the MSME Policy implementation. The Technical Schools should be revived with the governments at all levels investing in providing necessary equipments for practical training. The policy of upgrading Polytechnics to degree awarding institutions which will still end up in "paper" qualifications should be revisited.
- (3) Market Access for MSME Products For products of MSME's to have better market access, they should be protected from the influx from other economies goods that can be manufactured locally through appropriate regulations. Measures to discourage importation of competing foreign goods have to be initiated by policy.
- (4) MSME Financing MSME's need loans with single digit interest rate while amortization rate should be more friendly. The collateral requirements for obtaining loans from financial organizations should be looked into while the Central Bank of Nigeria should beam its regulatory searchlight on manipulative banking practices with regards to loans.
- (5) Integrating Waste management economics There is urgent need to consider the integration of small and medium enterprise businesses into waste management economic models as optimal tools to effectively combat climate change and its effect on the ecosystem. Regular inspections of industrial sites and operating environments by waste management experts are critical to cost reduction or reuse of wastes generated. Moreover, pollution management strategy of industry



operators should be regulated by relevant Government agencies such as NESREA, NOSDRA, Department of Petroleum Resources (DPR)[®] and the Federal Ministry of Environment in Nigeria.

- (6) Agricultural value addition In the light of the many technological advances that are presently being adopted in various parts of the world, the Micro, Small and Medium Enterprises (MSMEs) in Nigeria are enjoined to look towards the direction of adopting some of these Chemical Engineering based technologies in producing value added agricultural products which will in turn snowball and catalyze the development of the Nigerian MSMEs in Agro Processing.
- (7) Major Infrastructure for promoting vibrant MSME Generally, all industries whether big or small require electricity to carry out their manufacturing activities and good road to distribute the finished products. Without adequate provision of these two basic facilities, the industrialization of any nation remains a mere dream. Government needs to review their current strategies and seek the co-operation of relevant stakeholders to improve significantly on the state of these facilities and transform them to standard levels that can actually support industrialization.
- (8) Government Incentives. While government has established institutions like Bank of Industry (BOI), Bank of Agriculture and Small Medium Enterprises Development Agency of Nigeria (SMEDAN) to deal with certain aspects of the challenges faced by MSME, much still need to be done in the areas of incentives. MSME;
 - Should be spared the burden on payment of multiple levies and taxes
 - Should be exempted from paying corporate tax for the first ten years in operation to enable them stabilize properly
 - Should be supported with free and cheap information, workshops and seminars that can address their specific managerial needs
 - Need encouragement through the patronage of bigger industries that consume their outputs.
 - Should be encouraged by local consumers through patronage of their finished products with government leading by example.
- (9) Exit Policy Legislation to liquidate or close down an SME just as it is for bigger businesses is absolutely necessary as panacea for frivolous closures and migrations from one form of business to another. A well thought out policy will serve as deterrent for incessant closures or meaningless abandonment of MSMEs.

CONCLUSION

There is no doubt that if necessary steps are taken to properly reposition the Micro, Small and Medium Enterprises (MSMEs) sub-sector in Nigeria, it will go a long way in solving the unemployment problem which has been identified as a major cause of urban unrest and escalation of violent crimes. A vibrant MSME sub-sector is a panacea to the perennial economic malaise of the country with a great multiplier effect on most other social challenges of our nation.

SIGNED FOR AND ON BEHALF OF CONFERENCE ORGANIZERS AND PARTICIPANTS

Engr. Siky A. Aliyu, FNSChE
Chairman, 2018 Conference Organizing Committee

Samuel O. Bosoro, MNSChE
Executive Secretary, NSChE

Prof. Sam S. Adefila, FNSChE, FNSE, FAEng
National President, NSChE (2018)

NIGERIAN SOCIETY OF
CHEMICAL ENGINEERS

PAPER TO

ENGR. SIMBI KESIYE WABOTE
EXECUTIVE SECRETARY, NCDMB

MONDAY, 29TH APRIL, 2019

SPECIFIC ACTIONABLE RECOMMENDATIONS TO ENGENDER IMPROVEMENT IN LOCAL CONTENT IMPLEMENTATION PROCESS

Nigerian Society of Chemical Engineers (NSChE) is very pleased with your strong pedigree in the Oil & Gas sector which we consider necessary for effective implementation of the NCD Act. Our objective therefore is not to criticize NCDMB in any way, but to make input that may possibly raise the right queries that will trigger a more impactful step change in values retention and in-country multi disciplinary competence growth within the oil & gas value chain. We also seek to elaborate initiatives that could act as leverage to the entire economy of Nigeria through strategic linkage of the huge investments usually associated with Oil & Gas sector projects.

It is no overstatement to acknowledge that the enactment of the NCD Act and the subsequent take off of NCDMB has brought a sea change in the participation of indigenous companies and value capture of very significant proportion, in respect of the spend in oil and gas projects in the country.



R-L: Mr Kingdom Unwene, Engr. Tony Ogbuigwe, Engr. Ben Akaakar, Engr. Saïda Mohammad, Engr. Simbi Wabote, ES-NCDMB, Engr. Onochie Anyaoku, NP- NSChE, Engr. Bayo Olarenwaju-Ade and Samuel Bassey

In addition, achieving stable growth in local availability of talents pipeline for skills, craftsmen and management personnel requirements of the sector continues to pose considerable challenge. The cyclic nature of the sector economy due to the volatility of oil prices...

This is quite commendable because in such a short lifespan, local companies' participation has moved from near zero to the often quoted twenty five plus percent. Actual in-country value capture may be slightly less but the country is primed to radically improve if the right strategy is adopted.

Within the major job scope of a typical oil & gas upstream project, local value capture has been essentially in the areas of Engineering, Process Modules Fabrication, Installation and Supply Services. Big ticket items like Technologies Spend, Research & Development Spend, Steel Materials for all physical assets (e.g. Vessel Hauls, Process Modules, Pipes, Fittings, etc) are still procured offshore. Also, Drilling Fluids, Oilfield Chemicals and cement additives which were previously sourced and manufactured locally are now largely procured from outside our shores. Local manufacturing and sourcing of these oil field chemicals such as bentonite, calcium carbonate, etc. can be revived through NCDMB intervention. In addition, achieving stable growth in local availability of talents pipeline for skills, craftsmen and management personnel requirements of the sector continues to pose considerable challenge. The cyclic nature of the sector economy due to the volatility of oil prices has also compounded the challenges, thereby making steady growth of Human Resources capacity in the sector quite elusive.

With respect, it is becoming apparent that the gains in local content in the sector are slowly beginning to plateau out and therefore fresh impetus, incorporating very bold initiatives, is now required to rekindle the growth trajectory. Nigerian Society of Chemical Engineers {NSChE} does not claim to have all the answers to this challenge but a collaboration with NCDMB under a framework that encourages sustained intellectual exchanges can lead to a breakthrough. NSChE is also not trying to do the job of NCDMB but is striving to support the institution in realizing its most laudable goals. Indeed, the Society represents a body of relevant professionals highly impacted by the challenges of huge unemployment, especially for the teeming graduates that come out of our higher institutions every year, and this partly spells our concern in this regard.

What is evident is that the long duration for monetization of oil & gas assets from proof of prospects to commissioning should lend itself to integration into the overall National Economic Development Plan in a manner that aligns the implementation to drive a vibrant Micro, Small and Medium Scale Industries Sector, as well as the development of local supply for the huge volumes and tonnage of materials needed for the projects. In particular, it is doubtful if much more progress can be gained in local content enhancement without a robust local Iron & Steel Industry, given the dominant role of steel in the industry CAPEX and OPEX spend.

It is also evident that a cross disciplinary and cross sectorial understanding is necessary to fully evaluate strategies, define and understand the risks and evolve a robust plan, milestones and key

NSChE can work with NCDMB to host workshops that will have subject matter experts from within and outside the country present papers and hold discussion fora that will lead to the solution proposals we seek. There is no escaping the fact...

performance indicators that will elicit a buy-in from all stakeholders, particularly the asset owners, manufacturers, financiers and government.

NSChE can work with NCDMB to host workshops that will have subject matter experts from within and outside the country present papers and hold discussion fora that will lead to the solution proposals we seek. There is no escaping the fact that only an audacious but carefully executed strategic linkage of bankable off-take agreements duly executed by asset owners with syndicates of local and foreign investors for investments into the heavy industry sector of Nigerian economy under a favourable fiscal regime will yield the results we seek. Anything short may be tinkering at the edges and will be unlikely to produce the desired leap.

NSChE is also of the humble view that within the current orbit of low hanging fruits which the NCD Act currently operates, significant scope still exists for improving in-country value capture due to high level of offshore outsourcing. Increased uptake of Nigerian engineers and skilled workers is possible if we support NCDMB to evolve a more detailed mechanism for tracking and monitoring performance of industry service providers and contractors. This will assist to get rid of lingering vestiges of the deleterious rent seeking culture in the industry. Our profile as an independent professional body could help shield NCDMB from meddlesomeness of political leaders.

RECOMMENDATIONS:

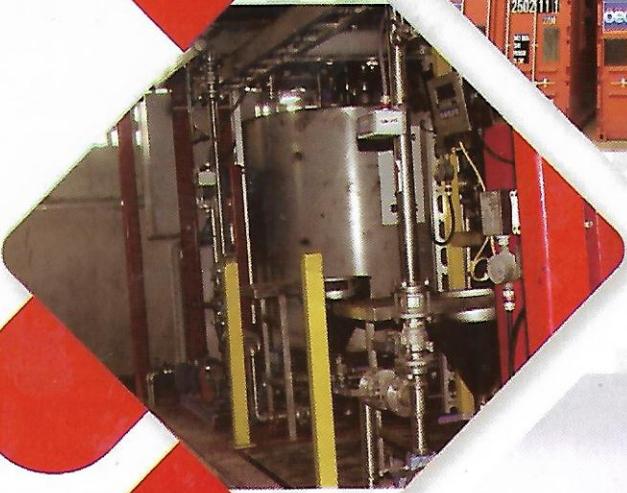
- 1) Local manufacturing and sourcing of oil field chemicals such as bentonite, calcium carbonate, cement additives and oil field services previously sourced locally, but now imported can be revived through NCDMB intervention. NSChE can make available the list of such chemicals, materials and services hitherto sourced locally, but for one reason or the other are now being imported.
- 2) Our society will be glad to partner with NCDMB in deepening R&D in the Nigerian Oil & Gas Sector, to further advance the cause of value addition increase and overall economic impact. We shall be glad to put our considerable pool of relevant resources in this respect at your disposal.
- 3) Review and assessment of Nigerian Content in completed projects like the recently commissioned EGINA project with a view to identifying the level of NCD compliance and identification of areas where Nigerian Content could be enhanced in the future.

NSChE is profoundly grateful for the valuable support and encouragement we have received from NCDMB under your able leadership. We do hope that the Communique for the 47th Annual Conference which gave rise to your letter requesting for further inputs has contributed even in a small way towards lightening the heavy burden of responsibilities on your organization.

We truly remain available to support you and NCDMB to take the bold steps needed to reposition not just the Oil & Gas Sector, but as stated, use the huge spend to leverage the economy of our country.



Librod Energy Services Limited



- ENGINEERED CHEMISTRY
- DRILLING FLUIDS
- BLENDING SERVICES
- EQUIPMENT SALES & RENTAL
- LOGISTICS MANAGEMENT
- WAREHOUSING & STORAGE
- OPERATIONS & MAINTENANCE (O&M)
- TRANSPORTATION & MARINE RELATED SERVICES
- COMPLETIONS & PRODUCTION SYSTEMS
- ENGINEERING PROCUREMENT & CONSTRUCTION (EPC)

CORPORATE OFFICE

118 ADEDEJI ADEKOLA CLOSE
OFF FREEDOM WAY
LEKKI PHASE I, LAGOS

+234 812 033 5697
info@librod.com
www.librod.com

OPERATIONAL HQ

PLOT 199, MABISEL HOTEL AVENUE
TRANS AMADI IND. LAYOUT PHASE II
PORT HARCOURT, RIVERS STATE

80
*Hearty
Cheers*

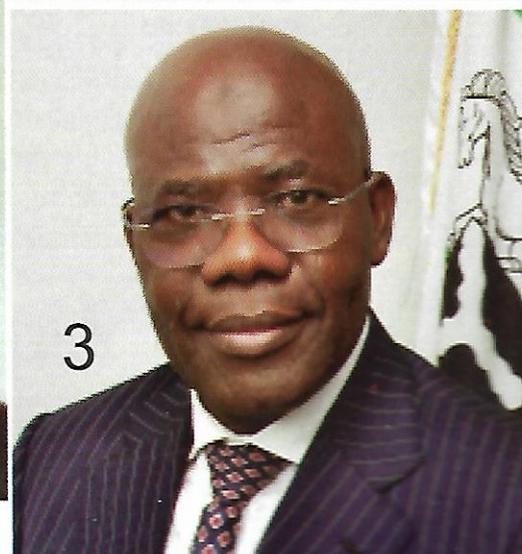
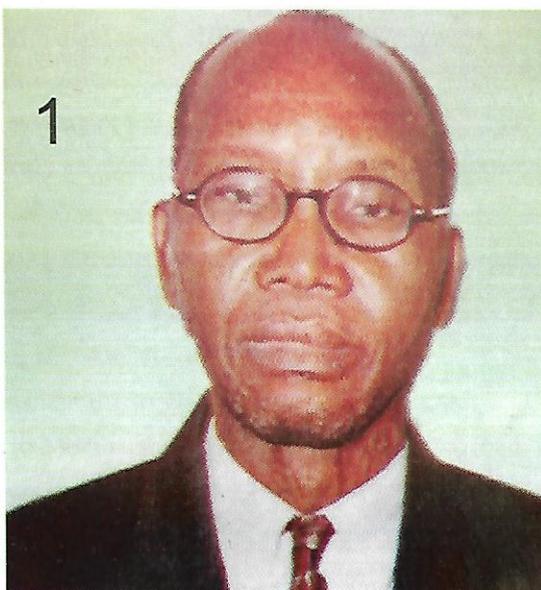
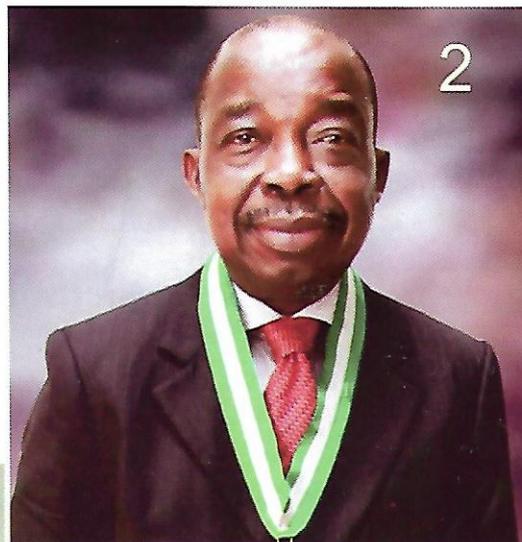


ENGR.
AYOKUNLE BABATUNDE SOLANKE PAST
PRESIDENT/CO-FOUNDER OF NSCHE
CLOCKED 80 YRS ON 5TH MAY, 2019

ELECTION OF SENIOR NSChE FELLOWS AS FAEng

The following Senior NSChE Fellows have been elected Fellows of Nigerian Academy of Engineering

1. Dr Sam Anyakora - Past President
2. Engr. Onochie Anyaoku - National President (2019)
3. Engr. Siky Aliyu - 2018 LOC Chairman



SAVE EDITH'S LIFE

ENGR. (Ms) EDITH CHINASA OKENGWU, MNSChE ,MNSE NEEDS YOUR GENEROUS DONATION TO SAVE HER LIFE

WHAT IS THE PROBLEM?

Engr. (Ms) Edith Chinasa Okengwu was a vibrant member of FCT/Nasarawa Chapter where she had anchored many of their programmes successfully especially holding Career Talks with students in the Tertiary Institutions. She was also an active member of the Nigerian Society of Engineers.

However, it is indeed very sad that Engr. (Ms) Edith Chinasa Okengwu is presently critically sick. She was diagnosed with renal (kidney) problem in September 2017 in Abuja and she started undergoing dialysis a couple of times in a week through the help of friends, colleagues and NSChE FCT/NAS Chapter etc.

In order to further save her life quickly, she travelled out about 8 months ago and currently still undergoing free dialysis three times a week in United States of America. The free dialysis she is entitled to presently would soon expire and she needs the sum of USD25,000 (twenty five thousand dollars) or (9 Million Naira) to secure proper documentation that would enable her get the appropriate treatment for her ailment in USA.

The essence of this appeal is to sensitize all NSChE members to rise up to her health challenge and save her life through their generous donations. She has cried out for help and this appeal is our humble way of transmitting her dire need of our collective support in a moment like this.

HOW CAN WE HELP?

Please remit your donation to the account below and pass on the information to others who are in position to help.

Name: **Edith Chinasa Okengwu**
 Bank: **Guaranty Trust Bank**
 Account No: **0121461130**

Many thanks in advance for your co operation

Samuel O. Bosoro
 Executive Secretary



COMMUNIQUE OF PUBLIC LECTURE ON 'THE FUTURE OF CHEMICAL ENGINEERING IN A GLOBAL ECONOMY'

HELD BY THE NIGERIAN SOCIETY OF CHEMICAL ENGINEERS IN COLLABORATION WITH THE
DEPARTMENT OF CHEMICAL AND PETROLEUM ENGINEERING, UNIVERSITY OF LAGOS

DATE: TUESDAY, FEBRUARY 26, 2019

VENUE: THE NEW JULIUS BERGER HALL, FACULTY OF ENGINEERING,
UNIVERSITY OF LAGOS, LAGOS

1. INTRODUCTION

The public lecture was organized by the International Affairs Committee of the Nigerian Society of Chemical Engineers (NSChE), a Division of the Nigerian Society of Engineers (NSE), in collaboration with the Department of Chemical and Petroleum Engineering of the University of Lagos. The theme was: THE FUTURE OF CHEMICAL ENGINEERING IN A GLOBAL ECONOMY. The one day event was chaired by Engr. Bayo Olarewaju-Alo, FNSChE, FNSE, former General Manager (Engineering), SHELL Petroleum Development Co Ltd. The Chief Host, the Vice Chancellor of the University of Lagos, was ably represented by Prof J. S. Ajiboye, Head of Department of Mechanical Engineering. The Guest Speaker was Dr. Emmanuel A. Dada, FNSChE, FAChE, Assistant Professor of Chemical Engineering, Prairie View A&M University, Texas, USA; President, ChemProcess Technologies LLC, Texas and Chairman, NSChEUSA Chapter.

Other special guests at the event include:

- President of the Nigerian Society of Chemical Engineers (NSChE), Engr. Onochie Anyaoku, FNSChE, FNSE, represented by Prof. S. S. Adefila, FNSChE, FNSE, FAEng., the Immediate Past President of the Society.
- Prof. Funso Falade, FNIStructE, FNSE, FAEng, Dean Faculty of Engineering, University of Lagos, represented also by Prof. J. S. Ajiboye, Head of Dept. of Mechanical Engineering, University of Lagos.
- Prof. Stan Aribike, FNSChE, Head of Department of Chemical and Petroleum Engineering, University of Lagos, as the Host.
- Dr. John Erinne, FNSChE, FNSE, FAEng., Chairman of International Affairs Committee, NSChE.

2. HIGHLIGHTS

Highlights of the seminar and the discussions were as follows:

- i. That Chemical Engineering has made enormous contributions to the development of contemporary society and sustenance of modern civilization, notably in the areas of: semi-conductor manufacturing, environmental protection, industrial safety, synthetic plastics/polymers/fibers/rubber, fossil energy value chain, renewable energy development, biomolecular technology, pharmaceuticals processing, biomedical processes, new agricultural products & food processing, optimum use of water resources, desalination technology, nanotechnology, etc. Hence it can be readily summarized that Chemical Engineering has been at the fore-front in the delivery of the basic needs of man, including: food, water, energy, clothing and shelter.
- ii. That technological advancements have reduced the world to a global village, characterized by free trade between nations and within regional blocks, diminishing the importance of

international boundaries, with the attendant opportunities and challenges. Meanwhile, the world population continues to surge, growing from about 3 billion to 8 billion in the last 50 years, and creating huge, new challenges, in the process.

- iii. That in line with these global changes, Chemical Engineering training and practice have also evolved in the last few decades from concentration on unit operations, biochemical engineering, manually or primitive computer driven designs, etc to process simulation & design backed by modern software tools and very fast computers, biomolecular & biomedical applications, nanotechnology, etc.
- iv. That even in the advanced economies the manufacturing industry however remains the dominant employer of chemical engineers, but with a paradigm shift from large volume commodity chemicals and bulk petrochemicals to higher value and lower volume specialty chemical products.
- v. That the next 25 years will experience upsurge in improved technologies and such concepts as process intensification, robotics, data & process analytics will be key. It is expected that there will be increased importance of biology in chemical engineering, as well as application of chemical engineering in life sciences-based industries. There will be a growing role of biomolecular process technologies in health-related industries and in agro-processing.
- vi. That renewable energy is one area expected to play a significant role in the development of the energy mix in the years to come. And in the same light, there will be a gradual but steady shift from fossil fuels to biodegradable fuels, such as ethanol made from biomass, which currently accounts for about 10% of US automotive fuels. Notable advances have already been made in bioengineering of marine algae which are convertible to biodiesel, driven by Chemical Engineers.
- vii. That another emerging area of Chemical Engineering application is the biomedical development of life support systems for humans, entailing the provision of oxygen, water, food and a temperate environment, while efficiently managing waste and carbon dioxide, being a spin off from earlier development in life support systems in space exploration.
- viii. That in addition, Chemical Engineers are increasingly challenged by the menace of electronic wastes (discarded batteries, cell phones, computers, televisions, printers, industrial instrumentation & controls, etc). Hazardous components of these e-wastes must be managed efficiently while valuable components, especially glass, plastics & metals are gainfully recycled.
- ix. That evidently, there are huge opportunities and enormous challenges for Chemical Engineers in the emerging world, though requiring new skill sets and applications in new frontiers.
- x. That consequently, Chemical Engineering education while retaining the core of the traditional concepts is expected to be expanded to accommodate such new areas as process intensification, environmental life cycle evaluation, supply and value chain management, multivariate analysis, etc. These will assist to provide the needed platform for professional diversification that will guaranty employment opportunities for chemical engineers, and ensure sustained relevance and contribution of Chemical Engineering to Society.



- xi. That Nigeria should not be insulated from global challenges and developments, even though it is also faced with its own peculiar developmental challenges. Nigerian Chemical Engineers are therefore expected to be trained to global standards but with focus on addressing real problems and challenges facing the country, especially in such areas as agro-allied /food processing, local raw materials, water resources, energy, sustainability, research & development, entrepreneurship, etc.
- xii. That Nigerian Chemical Engineering graduates need to have strong entrepreneurial spirit and drive required to spearhead development of small and medium enterprises in the process related industries. Several technical and financial support programs and platforms which they can leverage on to realize such projects exist, including the NSChE Foundation (NSChEF) Angel Fund Initiative.

3. RECOMMENDATIONS

- i. That the Chemical Engineering curriculum in Nigerian universities should be reviewed and updated, in order to align with global trends while strongly focusing on local challenges and problems.
Action: NSChE (EducCom/ER SG) /NSE/COREN/NUC.
- ii. That in particular, student design and research projects should be re-focused on aspects of local resource improvement, raw materials development or solutions to other relevant technological challenges.
Action: NSChE (EducCom/ER SG/PAC)
- iii. That collaborative research in the universities, between Chemical Engineering and other related scientific and technological disciplines, including the life and health sciences, should be strongly encouraged, in order to foster multi disciplinary approach to problem solving and to enhance capacity of future graduates.
Action: NSChE (EducCom/ER SG).
- iv. That skills of practicing Chemical Engineers in Nigeria need to be continuously updated through training and continued education in order to sustain alignment with global developments.
Action: NSChE/NVL
- v. That it is imperative that young Nigerian Chemical Engineers should become more adventurous and entrepreneurial.
They should avail themselves of various support facilities and programs available in the country for MSMEs and start-ups.
Action: Graduate Chemical Engineers.
- vi. That the re-packaged NSChEF Angel Fund Initiative should be launched as soon as possible and put at the disposal of desirous young Chemical Engineers, with viable business ideas.
Action: NSChEF.
- vii. That NSChE should sustain and strengthen collaborative relationships with AIChE and other relevant international professional bodies, to leverage on their global programs and capabilities, for the enhancement of Chemical Engineering education, training and practice in Nigeria in particular and for the economic advancement of the country in general.
Action: NSChE (IAC)

Engr. Dr. John Erinne, FNSChE, FNSE, FAEng
Chairman, International Affairs Committee, NSChE

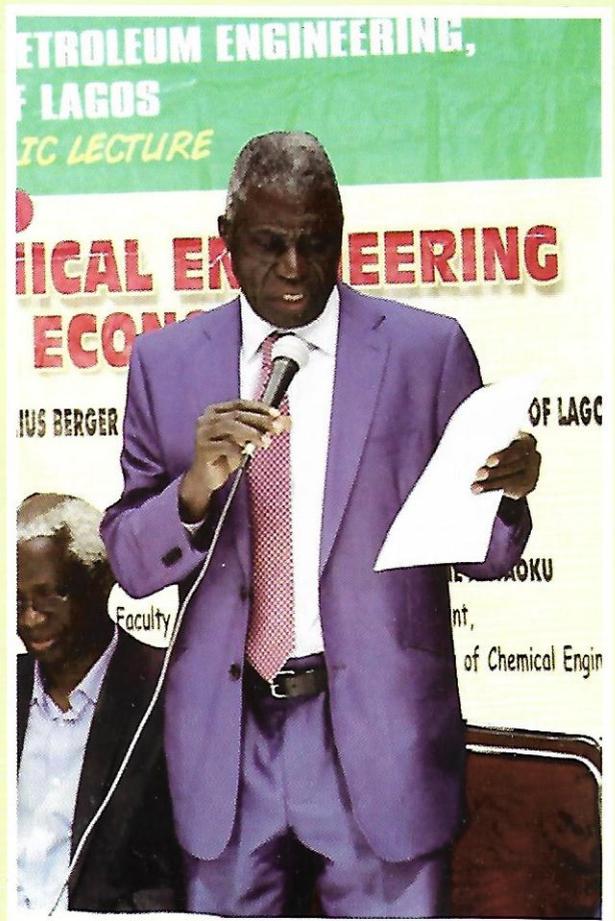
Engr. Onochie Anyaoku, FNSChE, FNSE, FAEng
National President, NSChE (2019)



From Left: Dr. John Erinne, Prof Stan Aribike, Engr. Bayo Olarewaju-Alo, Prof. J. S. Ajiboye, Prof. Sam Adefila, Dr. Emmanuel Dada at a public lecture held at the new Julius Berger Hall, University of Lagos on Tuesday, February 26, 2019.



Engr. Bayo Olarewaju-Alo, FNSChE
CHAIRMAN



Prof. Sam S. Adefila, FNSChE, FNSE, FAEng
IMMEDIATE PAST PRESIDENT

SPOTLIGHT ON AMAZON ENERGY



AMAZON ENERGY

Vision

To be Africa's premier energy services provider.

Mission

Is to provide our clients with the highest quality of efficiently delivered services to satisfy their project objectives; we will seek to exceed their expectations, putting them first always!

Company's Brief Profile

Amazon Energy Limited was incorporated in 1999. Amazon Energy is a leader in the provision of innovative Integrated Energy

Services, primarily to the Oil & Gas and Power sectors with interests in downstream trading and shipping. Amazon Energy supports clients from project inception to completion, by delivering world-class Engineering, Procurement, Construction (EPC), Asset Management and Project consultancy services amongst other offerings. The company is built on strong values such as Execution, Quality, Creativity, Integrity, and Teamwork (ExQCIT). We leverage our creativity and knowledge of the industry and our customers' businesses to deliver time value and are committed to the pursuit of excellence always.

Services

- Engineering, Procurement & Construction
- Manpower & Training
- Power & Automation
- Energy Development
- Asset Management
- Project Management

Milestones/Key Projects

Client	Project Name	Year Executed
ExxonMobil	Drill Workover Rig Flowlines Project (10 Platforms)	2019 - Ongoing
Nigerian LNG Limited	LNG Train 7 FEED Project	2018 - Ongoing
Nigerian Agip Oil Coy	Akri Flowstation Gas Recovery Project	2018 - Commission
Nigerian Agip Oil Coy	Kwale Flaredown Project	2017 - Ongoing
ExxonMobil	JV Structural Repair Project – Ubit Platform	2017
Addax Petroleum	Njaba Process Facilities Detailed Engineering Design Project	2017
ExxonMobil	QIT Master Plan – Engineering Verification & Site Surveillance	2015
ExxonMobil	Etim-Inim Life Extension Project (Phase II)	2015
Addax Petroleum	Engineering Design of Njaba-Izombe Pipeline Proj.	2014
Nigeria Gas Company	EPC of Gas Supply to Abeokuta Project	2014

Community/Corporate Social Responsibility (CSR)

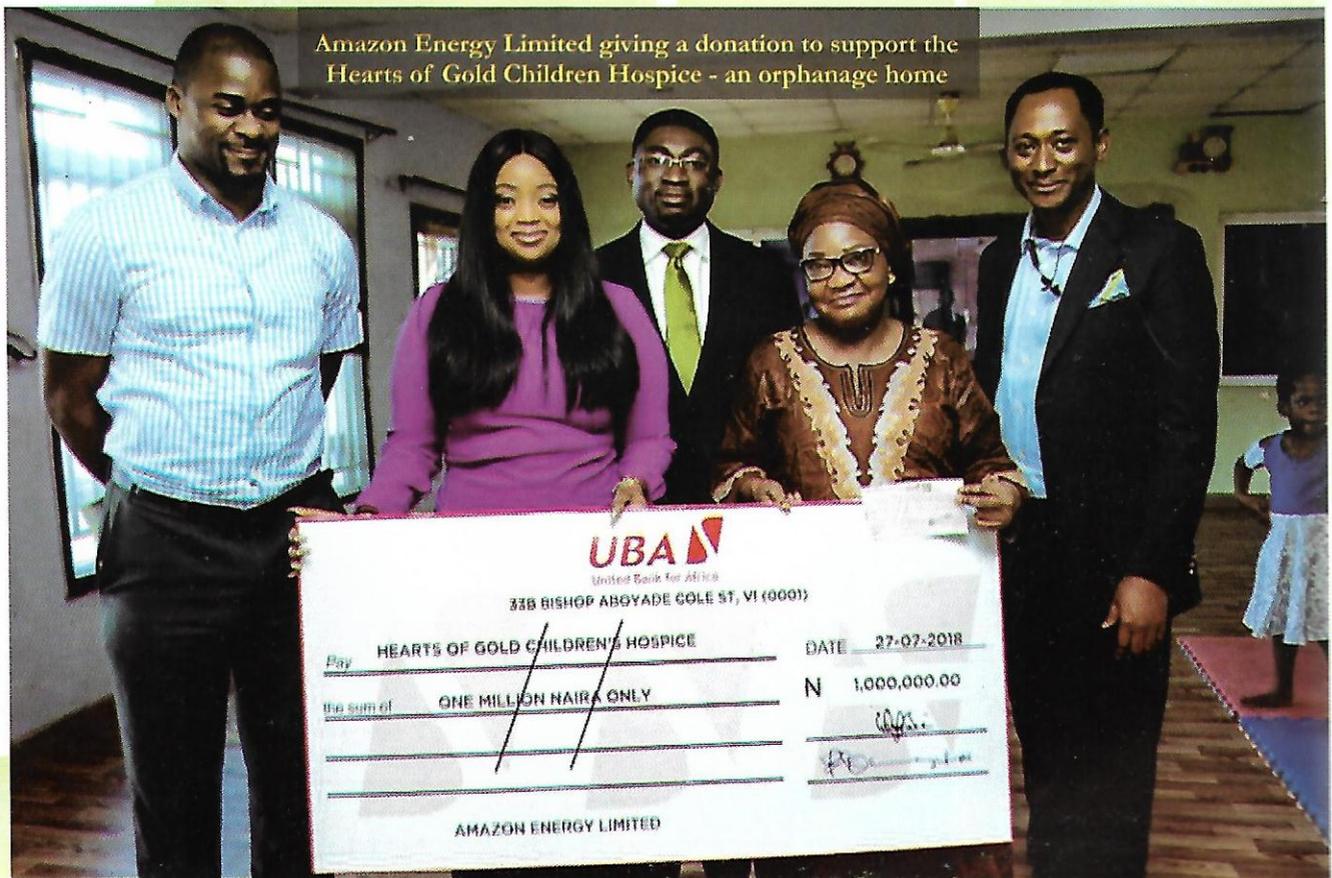


Recognizing and being committed to our Corporate Social Responsibility has always been at the core of Amazon Energy. In light of this, we continue to seek ways to contribute to the society and give back to host communities in line with our Corporate Strategy and Vision. Amazon Energy is dedicated to supporting

Corporate Social Responsibility activities in its operating locations. All our Corporate Social Responsibility interventions have measurable impact and aligns with our strategic business objectives. Our goal is to continually create sustainable long term benefits.

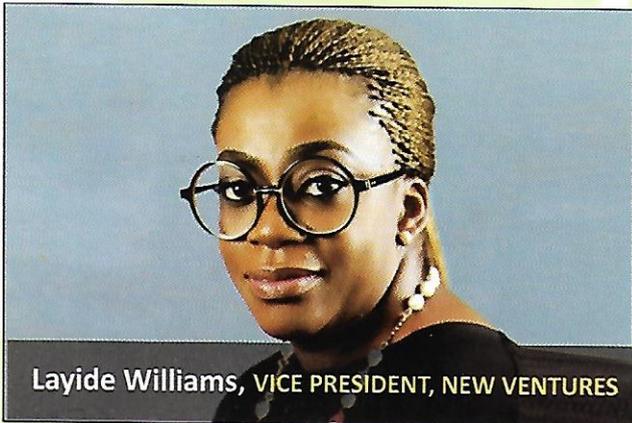
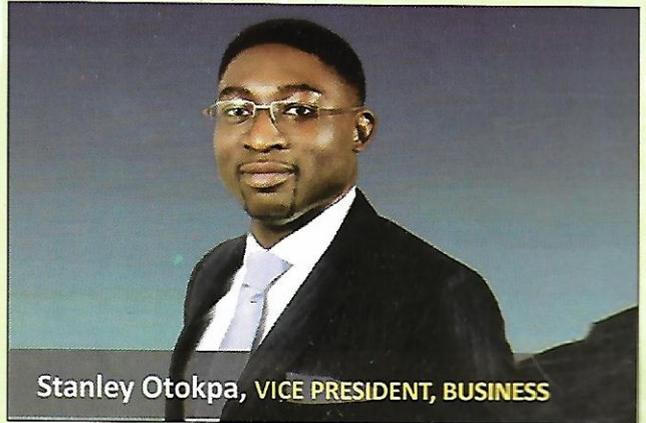
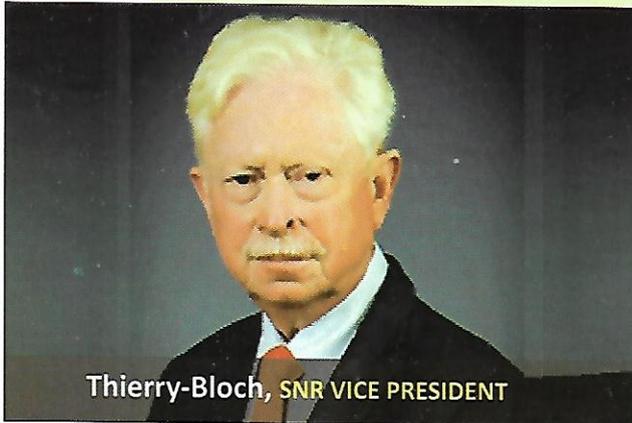
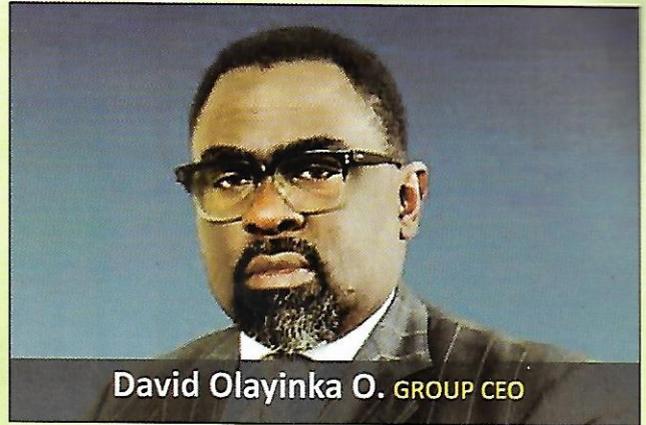
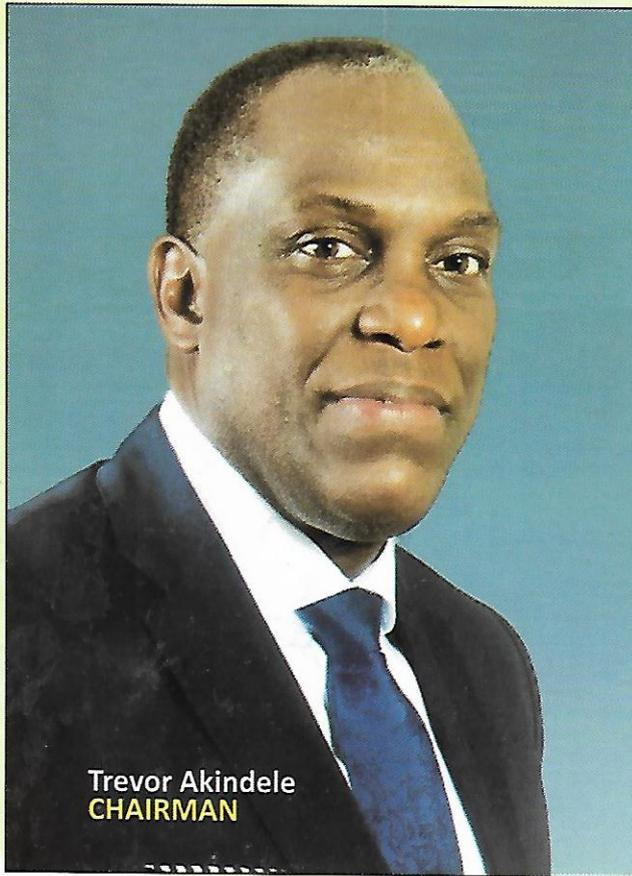
Some of our Corporate Social Responsibility Initiatives include;

Beneficiary	Contribution
Various students in tertiary institutions	School Fees Grant
Akri Flood – Host Community	Relief Materials
Hearts of Gold Children's Hospice	Cash Donation
Living Mercy Orphanage	Cash Donation
North East Children Trust Fund	Cash Donation
Italian Consulate	Cash Donation
Oginigba Community (TransAmadi Facilities Ltd)	Cash Donation
Guwori Foundation	Relief Materials



Amazon Energy Limited giving a donation to support the Hearts of Gold Children Hospice - an orphanage home

Executive Management



AMAZON ENERGY PROJECTS IN PICTURES

Rising from a humble beginning, AMAZON ENERGY has found its footing in Nigeria's Oil and Gas Industry. A number of projects are currently being handled by the company while some have been competently completed and delivered to its clients. Figures 1 to 10 show Akri Recovery Project pictures. Figures 12-24 show Kwale Gas Flaredown project pictures among the numerous projects executed by the company.

Akri Recovery Project

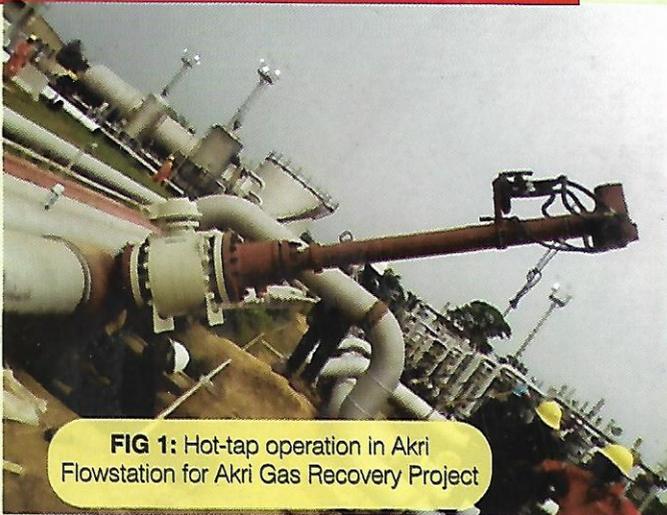


FIG 1: Hot-tap operation in Akri Flowstation for Akri Gas Recovery Project

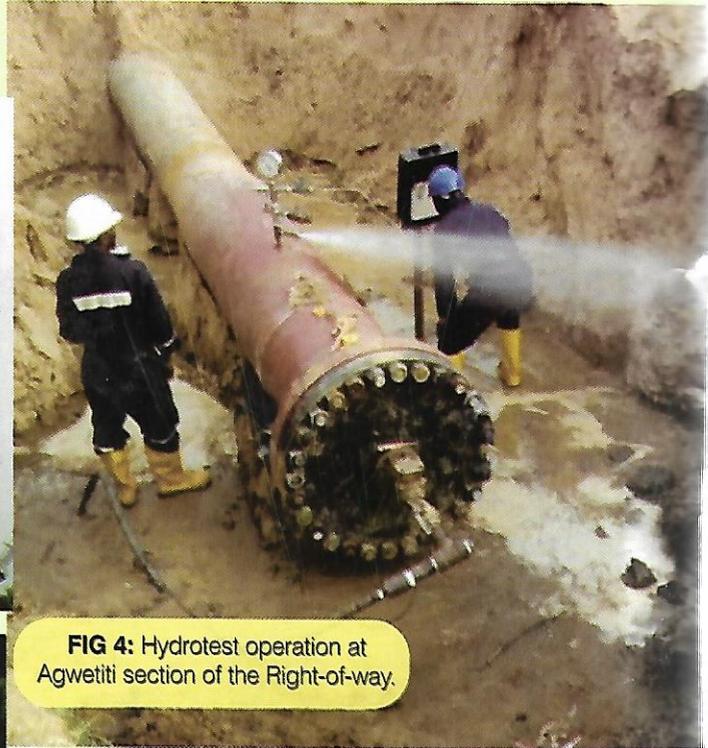


FIG 4: Hydrotest operation at Agwetiti section of the Right-of-way.



FIG 2: Field Joint Coating of Welded Joint

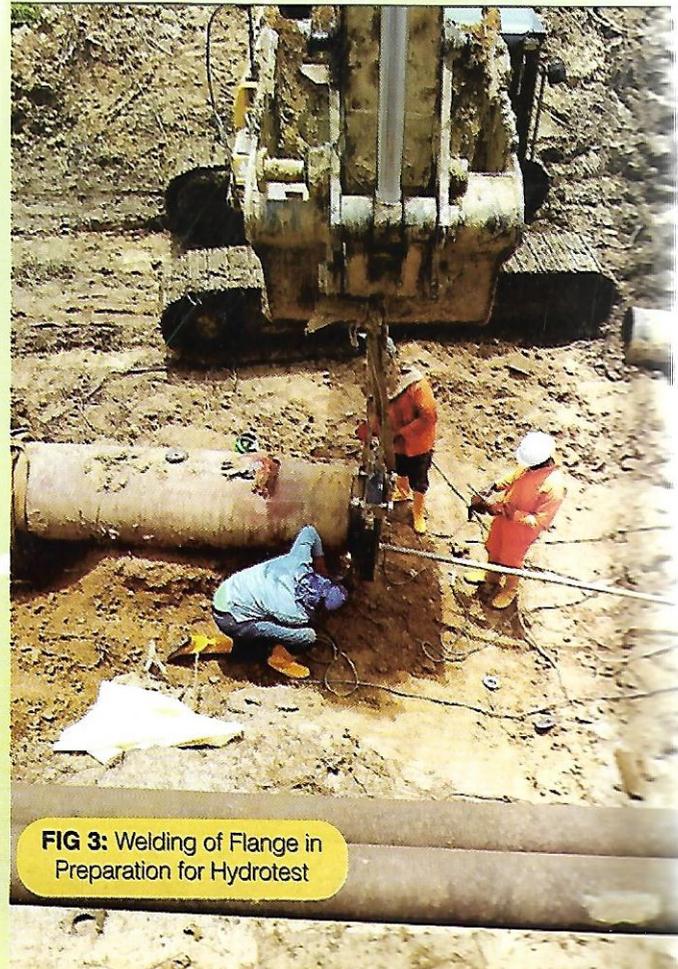


FIG 3: Welding of Flange in Preparation for Hydrotest

FIG 5: Hot-tap operation in Akri Flowstation for Akri Gas Recovery Project-2



FIG 7: Holiday detection for Pipe Spool before Lowering



FIG 6: Welding operation at River-Niger Crossing Section

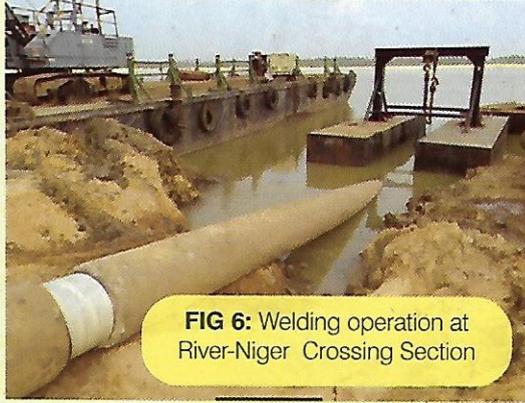


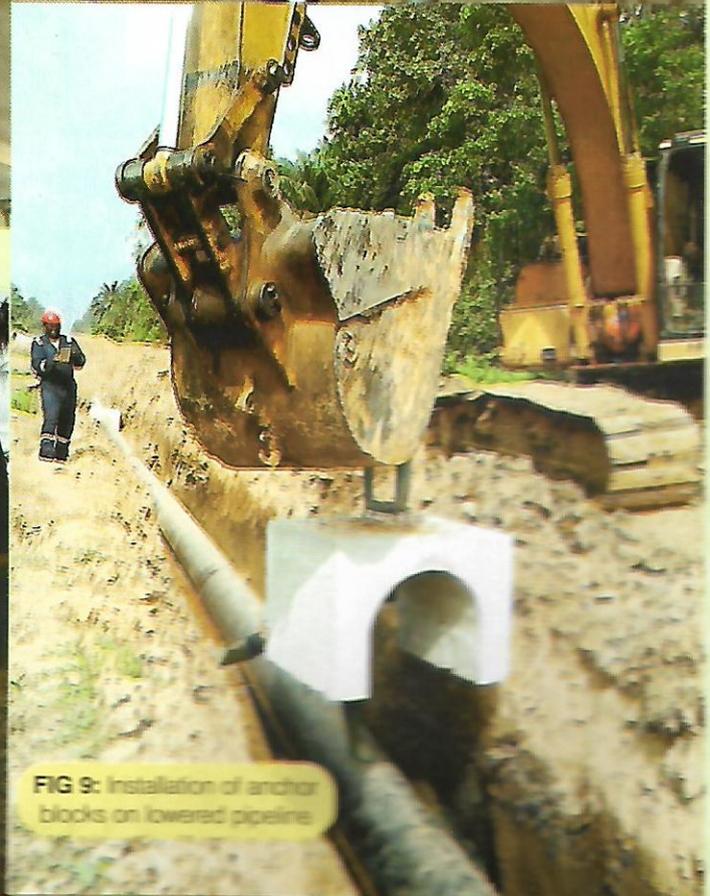
FIG 8: Fabrication for Pipeline approach In-plant works in Kwale Gas Plant A



FIG 10: Swamp crossing at Odugiri section of Pipeline Right-of-way



FIG 9: Installation of anchor blocks on lowered pipeline



SPOTLIGHT



Tool box Meeting in Kwale Gas Plant before Commencement of Work

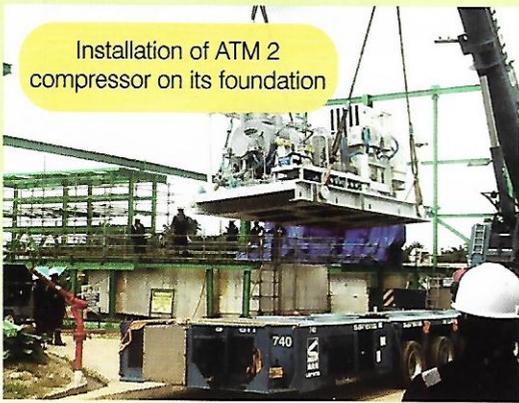
KEY PROJECTS

Kwale Gas Flaredown Project

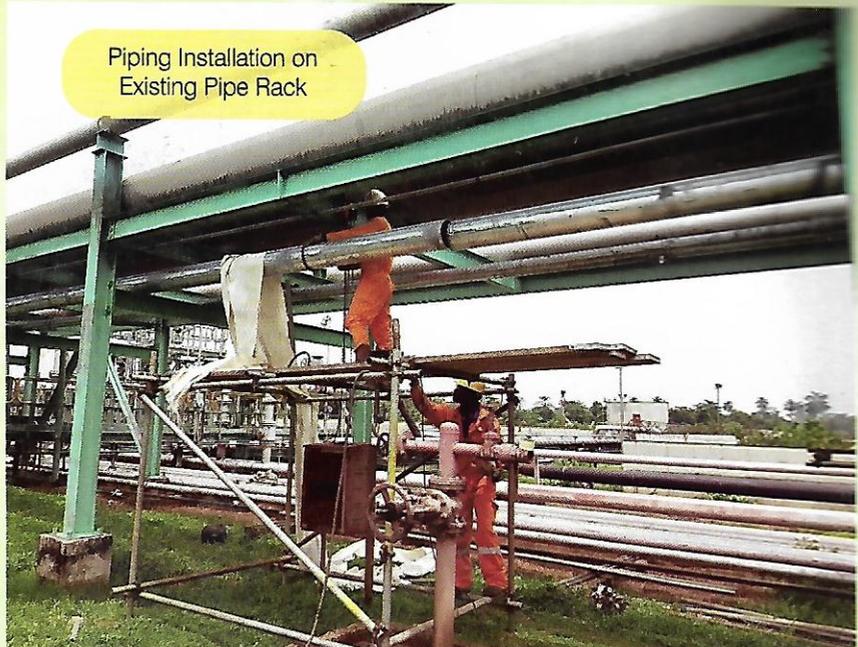
We will meet and surpass our client expectations, putting them first always...

Casting of LP Compressor Foundation Train 2





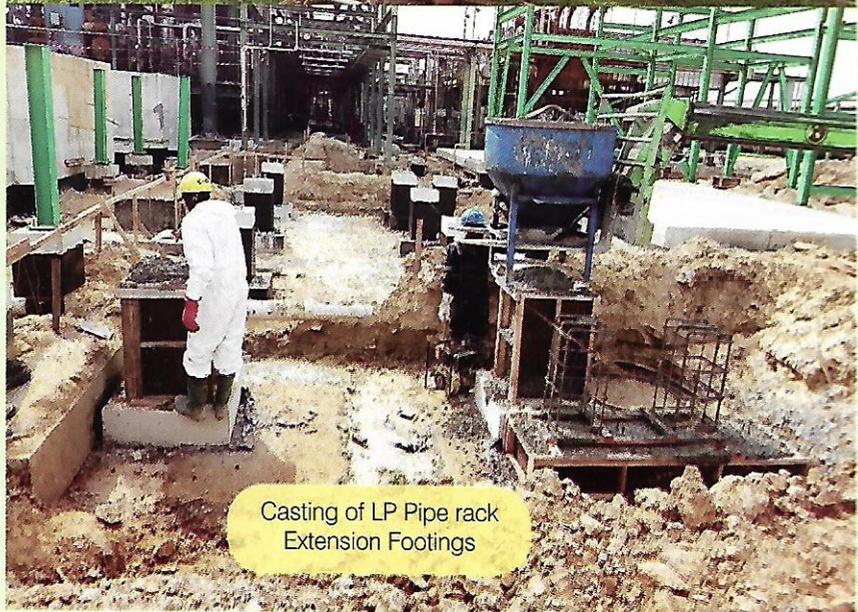
Installation of ATM 2 compressor on its foundation



Piping Installation on Existing Pipe Rack



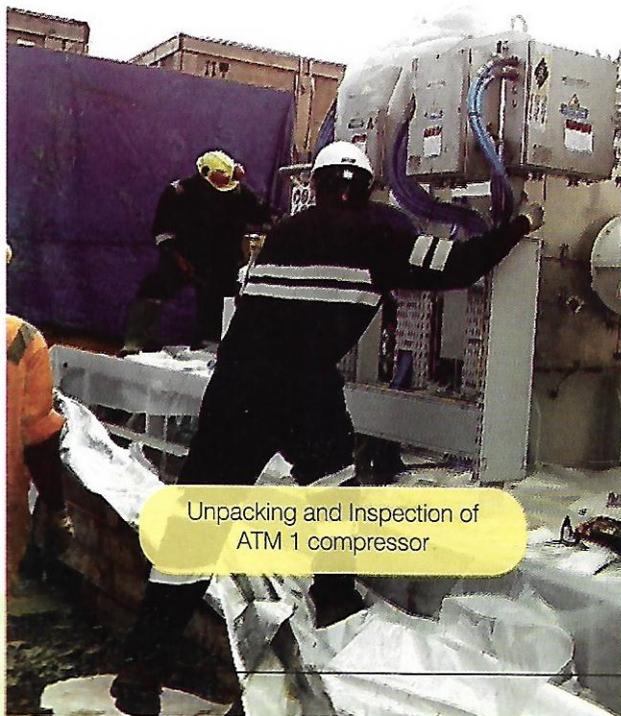
Structural Erection of LP Pipe Rack Extension



Casting of LP Pipe rack Extension Footings



Casting of LP Knock-out Drum Foundation Train 2



Unpacking and Inspection of ATM 1 compressor



Piping Installation on Existing Pipe Rack 2



MORPOL

Engineering Services Limited



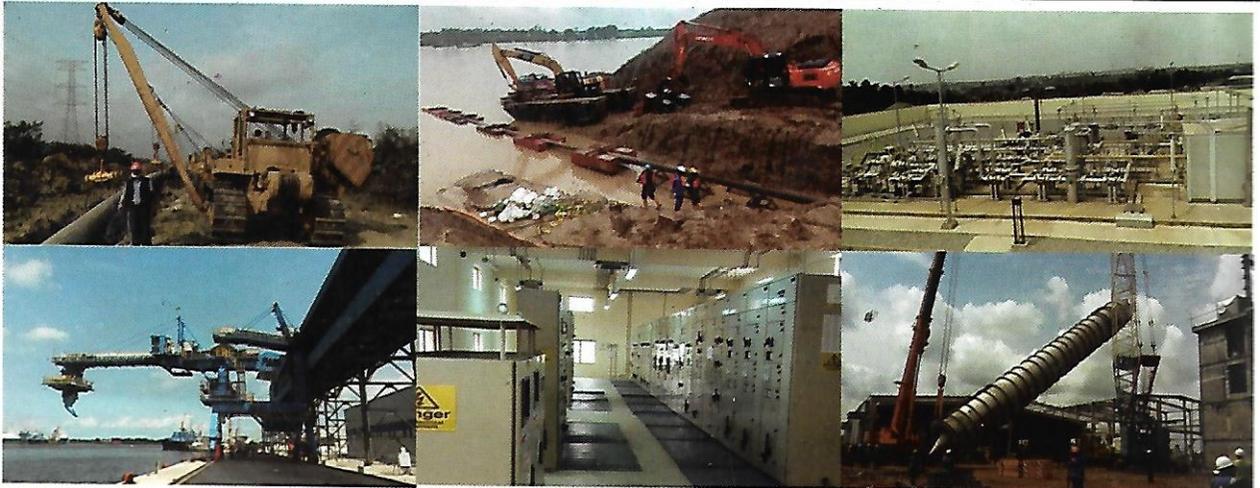
1968 – 2018

MORPOL's story started when the company was incorporated in Nigeria on 14th June, 1968.

Today, we are like those whose dream is becoming a reality, as we witness MORPOL celebrating half a century in the provision of valuable services to the Nigerian industry. We, the management and staff, are joyfully celebrating the golden jubilee (50th Anniversary) of the company with thanks and gratitude to the almighty God for divine support in the existence and the growth trends of the company from inception to date; making MORPOL one of the leading indigenous companies rendering top-class Engineering, Procurement & Construction (EPC) services to the Oil & Gas, Power, Water & Waste Water Treatment industries in Nigeria.

We remember and appreciate, at this time, the immense contribution of the founding fathers and staff of the company who are no more to see today.

We also thank all our clients and partners without whose business relationship our story cannot be complete.



Our Services:

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Contacts us:

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P.O. Box 187, Apapa, Lagos
Tel: +234-702-7956798
+234-709-8767097

Port Harcourt Office:

Plot 40, Chief Wopara Street
Rumuobiakani, Port Harcourt, Rivers State.
Tel: +234-84-750237, 0803-3023051

Abuja Area Office:

No. 5 Leribe Close, Off Kolda Link
(Behind Oceanic Bakery),
Wuse II, Abuja.
Tel: +234-8023271735,
+234-0803-4503387

Our Clients



Edo State Water Corporation
Ondo State Water Corporation



**High
Performance
Closed-cell**

Rigid POLYURETHANE Insulation

▼ **PU & PIC**

32 Kg/m³ - 50 kg/m³

▼ **Benefits**

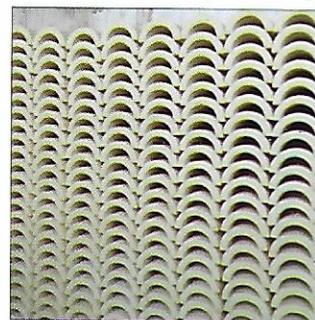
Energy Efficient
Ecologically Clean
Architecturally Adaptable
Cost Effective
Air Tightness
Low Maintenance
Easy Installation
Cost and Time Savings

▼ **Applications**

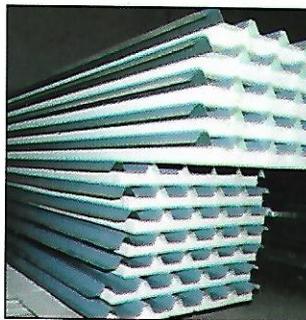
Cold Rooms, Freezers, Chillers, mass-housing units, Site Offices, Clean Rooms, Kiosks, Telecom Shelters, Prefab Structures, Portakabins, Partitioning, Warehouses and insulation of cryogenic & process installations/flow lines.



Sandwich Panels



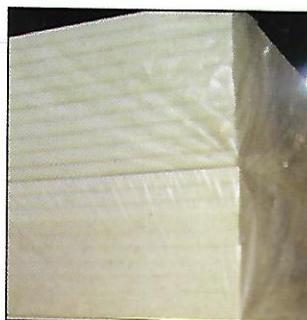
Pre-cut Pipe Sections



Pre-insulated Roof



Spray Foam



Insulation Boards



Prefabricated Structure



Contact ▶

Vitapur Nigeria Limited
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0818 651 0238, 0817 458 9724, 0817 458 9733
info@vitapurinsulation.com.ng
www.vitapurinsulation.com

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- Armoured Patrol Boats
- Ballistic Helmets & Vests

Proforce

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Contact Us

54, Balarabe Musa Crescent, Victoria Island, Lagos, Nigeria.

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