



TABLE OF CONTENTS

PRELIMINARY PAGES AND GENERAL ENGINEERING

Editor's Note	Editor, NIJOTECH	iii
Editorial Statistics of Nigerian Journal of Technology, Volume 39, 2020	Editor, NIJOTECH	iv
Table of Contents	Editor, NIJOTECH	v – viii

SECTION A: BUILDING, CIVIL & GEOTECHNICAL ENGINEERING

Formation Evaluation of the Petrophysical Properties of Wells in E - Field Onshore Niger Delta, Nigeria	M. Ilevbare and O. M. Omorogieva	962 – 971
Estimation of Trip Generation Rates for Residential Land Use in Uyo Akwa Ibom State, Nigeria	I. N. Usanga, R. K. Etim and V. Umoren	972 – 980
Factors Affecting the Performance of Small-Scale Construction Firms in Nigeria	I. F. Ali, S. H. Awad and D. Abdulsalam	981 – 991
An Evaluation of Safety Risk Factors during Installation and Dismantling of Tower Cranes in Construction Sites	A. A. Salihu, S. S. Aliyu and M. Abubakar	992 – 1000
Effect of Locally Sourced Nigerian Gypsum on the Strength and Microstructure of Portland Cement Mortar	A. D. Muhammad, Y. D. Amartey, J. M. Kaura, T. S. Ijimdiya and A. Lawan	1001 – 1010
Structural Reliability-Based Assessment of Nigerian Anogeissus schimperii Timber Bridge Beam in Shear and Bearing Forces	P. Abubakar, A. Iorkar, A. A. Adedeji, J. I. Aguwa and U. N. Wilson	1011 – 1020
Use of Expanded Polystyrene from Disposable Food Pack as a Modifier for Bitumen in Hot Mix Asphalt	A. A. Murana, K. Akilu and A. T. Olowosulu	1021 – 1028
An Assessment of Cost Escalation in Building Construction Project	A. Nazif, A. K. Mustapha and F. Sani	1029 – 1034
Evaluation of Collapse Mechanism of Telecommunication Tower	M. Yanda, O. S. Abejide and A. Ocholi	1035 – 1042



SECTION B: CHEMICAL, INDUSTRIAL, MATERIALS, MECHANICAL, METALLURGICAL, PETROLEUM & PRODUCTION ENGINEERING

Influence of Polyethylene from Waste Pure Water Sachet on Properties of Hot Mix Asphalt	A. A. Murana, A. A. Abdulkarim and A. T. Olowosulu	1043 – 1049
A Distribution Network Design for Fast-Moving Consumer Goods	O. S. Okunade and S. A. Daodu	1050 – 1057
Optimisation of a Microelectronic Assembly Package Using Response Surface Methodology	M. Ekpu	1058 – 1065
Production, Characterization and Application of Ternary Phase Diagrams for the Purification of Biodiesel Produced from Tropical Almond Seed Oil	K. K. Adama, U. P. Onochie and E. Gbeinzi	1066 – 1075
Coconut Shell-Based Activated Carbon as Adsorbent for the Removal of Dye from Aqueous Solution: Equilibrium, Kinetics, and Thermodynamic Studies	O. Oribayo, O. O. Olaleye, A. S. Akinyanju, K.O. Omoloja and S.O. Williams	1076 – 1084
Performance of a Prototype Windmill for Water Pumping in Kpakungu Community of Niger State, Nigeria	M. S. Dalero and N. A. Musa	1085 – 1092
Modelling of Clinker Cooler and Evaluation of its Performance in Clinker Cooling Process for Cement Plants	J. S. Oyepata, M. A. Akintunde, O. A. Dahunsi, S. S. Yaru and E. T. Idowu	1093 – 1099
Optimisation of Process Parameters for M.A.G Welding of Api X70m Material to Predict Tensile Strength Using Taguchi Method	N. S. Akonyi, O. A. Olugboji, E. A. P. Egbe, O. Adedipe and S. A. Lawal	1100 – 1107
Control of Vortex Shedding Around a Circular Cylinder using Bubble Tabs in the Laminar Flow Regime	E. O. Atofarati, A. O. Muritala, B.O. Malomo and S. A. Adio	1108 – 1116
Investigating the Effect of Vibration on the Stability of the Three-Wheeled Scooter Taxi	S. J. Ojolo, O. O. Ajayi and G. A. Asuelinmen	1117 – 1122



Characterization of Train Brake-Blocks Composite Reinforced with Aluminum-Dross	E. O. Obidiegwu, H. E. Mgbemere, E. F. Ochulor and P. A. Ajayi	1123 – 1130
Issues and Perspectives of Capacity Development in Embodied Energy Indices for Building Materials Sourced in Nigeria: A Review	S. C. Nwanya and H. N. Ononiwu	1131 – 1141
Effects of Chemically Treated and Carbonized Spear Grass Fibre on the Curing and Mechanical Properties of Natural Rubber Vulcanizates	A. C. Ezika and V. U. Okpechi	1142 – 1149
Techno-Economic Analysis of the Influence of Various Operating Conditions on the Gas Turbine Centrifugal Compressor Set Performance	R. Agbadede and B. Kainga	1150 – 1157
Typical Performance Reductions in PV Modules Subject to Soiling in a Tropical Climate	H. O. Njoku, K. M. Ifediora, P. A. Ozor and J. M. Dzah	1158 – 1168

**SECTION C: COMPUTER, TELECOMMUNICATIONS,
SOFTWARE, ELECTRICAL &
ELECTRONICS ENGINEERING**

Sustainable Cloud Computing for Cognitive Intent Based Networks	A. A. Periola and E. Obayiuwana	1169 – 1182
Media Motion-Based Resource Distribution for Mobile Video Networking	U.S. Ukommi	1183 – 1189
Optimization of RBF-SVM Hyperparameters Using Genetic Algorithm for Face Recognition	Y. Ibrahim, E. Okafor and B. Yahaya	1190 – 1197
Reliability and Protection in Distribution Power System Considering Customer-Based Indices	J. N. Nweke, A. G. Gusau and L. M. Isah	1198 – 1205
A Review on Wireless Power Transfer: Concepts, Implementations, Challenges, and Mitigation Schemes.	M. B. Sidiku, E. M. Eronu and E. C. Ashigwuike	1206 – 1215
Statistical Tuning of Cost 231 Hata Model in Deployed 1800mhz Gsm Networks for a Rural Environment	E. L Omoze and F. O. Edeko	1216 – 1222



A Low-Cost Printed Circuit Board Design Technique and Processes Using Ferric Chloride Solution	C. T. Obe, S. E. Oti, C. U. Eya, D. B. N. Nnadi and O. E. Nnadi	1223 – 1231
An Efficacy of Zobe Dam for Hydroelectricity Generation in Katsina State, Nigeria	I. Nuhu and H. Abdulsalam	1232 – 1236

SECTION D: AGRICULTURAL, BIORESOURCES, BIOMEDICAL, FOOD, ENVIRONMENTAL & WATER ENGINEERING

Development of Optimized Substitution Ratio for Wheat-Cassava-African Yam Bean Flour Composite for Nigerian Bread Industries	O. C. Nwanjinka, I. E. Nwatu and A. B. Muochebe	1237 – 1246
Determination of Optimal Parboiling Conditions for Nigerian <i>Faro-44</i> Rice Variety	A. B. Muochebe, C. O. Nwajinka and I. E. Nwatu	1247 – 1254
Modeling Water Demand in a Growing Public University in Nigeria	A. Sobowale and K. S. Adeyemo	1255 – 1262
A Review of Stakeholders Participation Importance in the Development of Water Diversion Systems in Developing Countries: A Case from Gurara Water Diversion System, Nigeria	F. I. Oseke, G. K. Anornu, K. A. Adjei and O. M. Eduvie	1263 – 1275
Optimization Technique in Rainfall – Intensity – Duration - Frequency Modelling for Ikeja, South West, Nigeria	A. O. David and I. L. Nwaogazie	1276 – 1285
