

CURRICULUM VITAE FOR EDEN NGOWI

1 Personal Information

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2 Career Summary

Chemical and Process Engineer with **over 5 years** exposure to design, fabrication and installation of process equipment such as dryers, shredders, gasifiers, distillation columns; and truck semi-trailers. Conversant with CAD software such as SolidWorks and AutoCAD. Experienced in product inspections and industrial gap audits for quality and food safety management systems.

3 Academic Background

No.	Qualification	Institution	Duration
3.1	PhD Chemical Engineering	Norwegian University of Science and Technology (NTNU)	Aug. 2024 - Now
3.2	MSc. Chemical Engineering	Univ. of Dar es Salaam (UDSM)	Nov. 2020 – Nov. 2023
3.3	BSc. Chemical and Process Engineering (Hons)	Univ. of Dar es Salaam (UDSM)	Nov. 2015 – Nov. 2019
3.4	Advanced Certificate for Secondary Education - ACSE	Feza Boys' High School	Mar. 2013 – May 2015
3.5	Certificate for Secondary Education - CSE	Feza Boys' Secondary School	Jan. 2009 – Oct. 2012

4 Key Skills and Competencies

- 4.1 Technical Aptitude:** Design and fabrication of equipment using CAD software like SolidWorks and AutoCAD; Basic industrial electrical installation; Job Hazard Analysis (JHA); Lean Management.
- 4.2 Scientific Computing Skills:** Python, MATLAB, C++.

4.3 Communication Skills: Use of MS suite to analyse data, present results, and write reports; and use of CAD software to communicate technical concepts.

4.4 Multilingualism: *French* and *Turkish* (intermediary level) in addition to *English* (professional level) and *Swahili* (native language).

5 Engineering Work Experiences

No.	Company	Position	Duration
5.1	JOB PLAN (T) Ltd	Site Engineer	May - July 2024
	Duties and Responsibilities: Preparation and supervision of all engineering works at site; Preparation of daily erection reports of mechanical works; Inspection of fittings and welding works at site. The site was for a proposed 50 million litre oil terminal near the port of Dar es Salaam, Tanzania.		
5.2	PIVOTA Quality Solutions	Chief Technical Officer (free-lance)	Jan. 2023 - Now
	Duties and Responsibilities: (i) To perform industrial gap audits on quality, food safety and environmental management systems for ISO certification; (ii) To execute product inspections for import and export such as textile, foods and pipelines; (iii) To prepare technical reports of the said visits.		
5.3	TEKNOSENS Steel Service Center	Assistant Technical Manager	February – October 2022
	Duties and Responsibilities: (i) To design and fabricate semi-trailers using Computer Numerically Controlled (CNC) machines such as plasma cutters, press brakes and shears; (ii) Supervision of fabrication works; (iii) Conducting job hazard analyses; and (iv) Convening routine safety dialogues with technicians and artisans.		
5.4	University of Dar es Salaam (UDSM)	Research Assistant	2020 - 2021
	Duties and Responsibilities: (i) To assist in data collection and analysis of various research and consultancy works; (ii) Preparation of tender documents; (iii) Setting and marking various tests and examinations.		
5.5	BIOX Soaps and Detergents Ltd	Quality Control Engineer	September – December 2019
	Duties and Responsibilities: (i) To check and maintain quality parameters of detergents such as colour, pH, viscosity, foam; (ii) To oversee the general soap production process.		
5.6	Centre for Innovation and Technology Exchange (INTEX)	Engineering Trainee	2016 - 2019
	Duties and Responsibilities: To design and fabricate various innovative agricultural and process equipment such as biomass dryers, agricultural shredders, animal feed mill machines, biomass gasifiers, cassava washers, peelers and starch extractors.		

6 Other Work Experiences

No.	Company	Position	Key Assignment	Duration	
6.1	TPCC Limited (Twiga Cement)	Process Engineering trainee	Determination and Reduction of False Air Entry in the Kiln and Pre-Heater Tower Zone and Its Associated Cost Savings	July - September 2018	-
6.2	TPC Limited	Process Engineering trainee	Determination of Sugar Losses via Final Sugarcane Bagasse	July - September 2017	-
6.3	DarBrew Limited - TBL Group	Process Engineering trainee	Evaluating the Separation Efficiency of the Decanter Centrifuge for Cooked Mash	July - September 2016	-

7 Portfolio of Works Done

7.1 Works Done at UDSM

1. Consultancy on Establishment of the *Cost of Production of 1 Tonne of Sugar* in Mainland Tanzania for The Sugar Board of Tanzania (SBT) under UDSM's Bureau for Industrial Cooperation (BICO).
2. Rehabilitation of the Fermentation and *Distillation Unit for Ethanol Production* (1500 L/day) used in the Manufacture of Hand Sanitizers during the COVID-19 Pandemic at the Department of Chemical and Process Engineering (CPE).
3. Feasibility Study on *Group-Based Microfinance Institutions* for Beneficiaries of the Kizazi-Kipya Project supervised by PACT Tanzania under the University of Dar Es Salaam Business School (UDBS).

7.2 Works Done at INTEX

1. Design, Fabrication and Testing of a *Small-Scale Flash Dryer* – Masters Research Work in collaboration with UDSM.
2. *Subsea Hose Testing* for PUMA Oil Terminal near Malindi Port at Zanzibar in collaboration with Zanzibar Marine and Diving Services (ZMDS).
3. Design, Fabrication and Installation of *25 TPD Shredder for Agricultural Solid Waste* in Arusha and Mbeya City Council Dump Sites under *TSCP Initiative*.
4. Design, Fabrication and Testing of *Containerized and Cabinet Tray Dryers* for Various *Agricultural Produce* Like Cereals, Fish, Fruits, Vegetables and Spices.
5. Design and Implementation of an *Aquaponics System* including the Design and Fabrication of *Feed Dispensing System* and the Programming and Installation of the *PLC Control System*.
6. Production of Animal Feed at Maza Feed Mills Ltd (an INTEX Sister Company).

7. Design, Fabrication, Testing and Demonstration of a *Medical Waste Disposal System* for District Hospitals. The system consists of *180 L Autoclave, Compactor-Baler Unit and Waste Bins*. Tested at *Muhimbili* and Commissioned at *CCBRT Hospital, Dar es Salaam*.

8 Training Seminars Attended

- 8.1 East African Crude Oil Pipeline (EACOP) *Mass Open Online Course* (MOOC) on the Oil Industry organised by EACOP Tanzania [2023].
- 8.2 *Advancing Sustainable Waste to Energy in Tanzania: The Contribution in Circular Economy* organized by the College of Engineering and Technology [2020].
- 8.3 *Post-Harvest, Processing and Packaging Technologies* organized by the Tanzanian Education Authority (TEA) and UDSM [2019].

9 Research Publications

- 1 Ngowi, E., Jeremiah, J. M., Kaale, L., & Elisante, E. (2024). Development and Testing of Small-Scale Flash Dryer for Maize Bran. *Tanzania Journal of Engineering and Technology*, 43(2), 75-91. <https://doi.org/10.52339/tjet.v43i2.908>

10 Referees

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