**Expert Opinion Letter (Confidential)**

Analysis of Positional Requirements

Evaluator: Davide Piovesan, M.S.M.E., Ph.D.

Evaluator Info: Professor, Gannon University

**EDUCATION**

***Ph.D., Mechanical Measurements for Engineering***

University of Padua, Padua, Italy, 2004—2007

***Master of Science in Mechanical Engineering***

University of Padua, Padua, Italy, 1998—2003

**RESEARCH INTERESTS**

* System Identification for Biological, Naval, and space applications
* Solid mechanics
* Automation and robotics
* Design of Mechanism
* Assistive devices for physical rehabilitation
* Bio-mimetics
* Ethical Issues in Biomedical Engineering and Artificial Intelligence

**PROFESSIONAL EXPERIENCE**

***Associate Dean***

Gannon University, Erie, PA

*College of Engineering and Business, July 2022—Present*

***Director of the School of Engineering and Computing***

***Professor***

Gannon University, Erie, PA

***Department of Biomedical, Industrial and Systems Engineering (BISE), May 2021—Present***

***Department Chair***

Gannon University, Erie, PA

***Department of Biomedical, Industrial and Systems Engineering (BISE), July 2018—July 2022***

***Associate Professor***

Gannon University, Erie, PA

*Department of Biomedical, Industrial and Systems Engineering (BISE), July 2018—May 2021*

*Department of Mechanical Engineering, August 2017— June 2018*

***Director of Biomedical Engineering Program***

***Founder and President***

MP-Erie-Co. (pronounced empirico*),* Erie, PA

*Start-up research company housed in the Erie Technology Incubator*, January 2018—Present.

***Assistant Professor***

Gannon University, Erie, PA

*Department of Mechanical Engineering*, August 2013—2017.

***Director of Biomedical Engineering Program***

***Postdoctoral Fellow***

Rehabilitation Institute of Chicago - Northwestern University, Chicago, IL

*Sensory Motor Performance Program*, 2008—2013

Brandeis University, Waltham, MA

*Ashton Graybiel Spatial Orientation Laboratory*, 2007—2008

***Visiting Ph.D. candidate***

Brandeis University, Waltham, MA

*Ashton Graybiel Spatial Orientation Laboratory*, 2004—2006

***Consultant***

University of Padua, Italy

Modeled and analyzed vibration propagation in the finger-hand-arm system and aerospace mechanisms. Developed an instrumented set-up to control specific environmental variables for exobiology purposes.

*Center of Studies and Activities for Space (CISAS)*, 2006—2007

*Department of Astronomy,* 2005

*Center of Studies and Activities for Space (CISAS),* 2004

*Department of Mechanical Engineering*, 2003

**TEACHING EXPERIENCE**

***Associate Professor***

Gannon University, Erie, PA

*Department of Biomedical, Industrial and Systems Engineering (BISE)*, July 2018—Present

*Department of Mechanical Engineering*, August 2017— June 2018

***Assistant Professor***

Gannon University, Erie, PA

*Department of Mechanical Engineering/Biomedical Program*, 2013—2017

***Lecturer***

Northwestern University, Chicago, IL

*Department of Biomedical Engineering*, 2010—2013

The University of Illinois at Chicago, Chicago, IL

*Department of Biomedical Engineering*, 2012—2013

***Graduate Student Mentor***

Gannon University, Erie, PA 2018-2019

*Departments of Mechanical Engineering*

Gannon University, Erie, PA 2017

*Departments of Mechanical Engineering*

Gannon University, Erie, PA /San Luis Potosi, Mexico, 2017

*Departments of Mechanical Engineering* / *Mechatronics*

Gannon University, Erie, PA /University of Padua, Italy, 2016

*Departments of Mechanical Engineering* / *Computer Science*

Gannon University, Erie, PA /San Luis Potosi*,* Mexico, 2015

*Departments of Mechanical Engineering* / *Computer Science*

Northwestern University, Chicago, IL, 2010

*Department of Electrical Engineering*

University of Padua, Italy, 2004

*Department of Mechanical Engineering*

***Teaching Assistant***

University of Padua, Italy

*Department of Mechanical Engineering*, 2002—2004

**HONORS, AWARDS, and CERTIFICATIONS**

* Excellence in Undergraduate Advising Award for the College of Engineering and Business, *Gannon University,* 2016-2017
* Undergraduate Mentor Research Scholarship Award, *Gannon University,* 2015-2016
* ASB East Coast 2019 (ASB-EC) Poster Award (1st Place), 2019
* Northeast Bioengineering Conference (NEBEC) Poster Award (2nd Place), 2016
* North Western Pennsylvania (NWPA) Collegiate Innovation Showcase

*Bio-Conduit* (GRAND PRIZE $2,000)

Description: Development of an antibiotic intramedullary rod. Students: Felice J., Bates K., Hendrix W., Mahle T., April 2015

* North Western Pennsylvania (NWPA) Collegiate Innovation Showcase

*Assessment of Hygienic Movements* (2nd Runner-Up $500)

Description: Development of an inexpensive apparatus for the assessment of hygienic movements. Students: Papich J., Kennett C.J., April 2014

* Passed certification examination for the **Italian Board of Professional Engineers** in Structural, Mechanical, Environmental, Industrial, and Information Engineering, Padua, Italy, 2004
* Honorary fellow in Mechanical and Thermal Measurements, University of Padua, 2004—2007
* Full merit-based doctoral scholarship: Mechanical Measurements, Italian Ministry of Education (MURST), Rome, Italy, 2004-2007
* Full merit-based scholarship for graduate study, Italian Ministry of Education (MURST), Rome, Italy,1997-2003

***Member of***

* IEEE Institute of Electrical and Electronics Engineers (EMBS, RAS)
* ASME American Society of Mechanical Engineers
* ASEE American Society of Engineering Education
* BMES Biomedical Engineering Society

**Department of Homeland Security**

Citizenship and Immigration Services

My name is Dr. Davide Piovesan, M.S.M.E., Ph.D., and I currently serve as Associate Dean and Professor in the Department of Biomedical, Industrial, and Systems Engineering at Gannon University. I hold a Ph.D. in Mechanical Measurements for Engineering from the University of Padua, Italy, and bring over two decades of expertise in solid mechanics, automation, robotics, and biomimetics. My professional experience spans both academia and industry, where I have conducted extensive research and teaching, with a focus on system identification and its applications in biological, naval, and space environments.

This letter is being provided in response to the Request for Evidence (RFE) issued regarding Bhanu Prasad Tuniki’s H1B petition. The objective of this response is to substantiate that Bhanu Prasad Tuniki possesses specialized knowledge and expertise in his field of mechanical engineering, achieved through rigorous academic training, progressively responsible work experience, and significant contributions recognized by authorities in his specialty. As a Mechanical Test Engineer, Bhanu Prasad Tuniki has undertaken a series of advanced roles in which he applied his technical skills to address complex engineering challenges, spanning industries from renewable energy to robotics. His work history exemplifies a consistent progression in responsibility and complexity, demonstrating not only his technical competence but also his increasing recognition within the field as an expert.

Through this letter, we will provide a comprehensive account of Bhanu Prasad Tuniki’s qualifications, highlighting his academic background, the depth of specialized knowledge he has gained, and the practical application of that knowledge in professional roles. This documentation will further illustrate his career progression, emphasizing his ability to manage and execute critical testing, validation, and product development tasks with precision and insight. The following sections will provide detailed evidence to affirm that Bhanu Prasad Tuniki’s training and experience are directly related to his specialty occupation and that he has earned recognition for his contributions to the field from recognized authorities, positioning him as an invaluable asset in his industry.

I submit this professional opinion as an Associate Dean and Professor in the College of Engineering and Business at Gannon University, where I oversee the School of Engineering and Computing and the School of Business. Gannon University, nationally recognized for its advanced facilities, houses state-of-the-art laboratories and offers both undergraduate and graduate programs in Biomedical, Electrical, Environmental, Mechanical, and Industrial and Robotics Engineering, as well as an MBA program with specializations in business analytics, supply chain management, and logistics.

In my academic career, I have published over 100 articles in peer-reviewed journals and conference proceedings, been cited in key engineering textbooks, and participated in numerous industry presentations. Among my professional distinctions, I have served as Chair of the Bio-Systems and Health Care (BSHC) and Robotics Technical Committee within the American Society of Mechanical Engineering (ASME) Dynamic Systems and Control Division. Additionally, as an evaluator, I am responsible for providing detailed credential assessments, analyzing both academic and professional qualifications for individuals trained internationally, to ensure comprehensive evaluations aligned with U.S. standards.

This professional opinion is based solely on the information provided to me, combined with my educational background, professional experience, and expert judgment.

**Overview of the Proffered Position**

Bhanu Prasad Tuniki’s occupation as a Mechanical Test Engineer at Nevados Engineering, Inc. situates him in a critical role within the advanced field of mechanical engineering, focusing on the testing and development of cutting-edge renewable energy technologies. Nevados Engineering, Inc. is dedicated to creating innovative solar tracking systems, which are crucial components in maximizing the efficiency and output of solar energy installations. Solar trackers adjust the orientation of solar panels to follow the sun's movement, ensuring optimal energy capture throughout the day. This technology is essential to improving the overall efficiency of solar energy production, which has broad implications for the renewable energy industry and global sustainability initiatives.

Bhanu Prasad Tuniki’s responsibilities encompass the rigorous testing and qualification of these sophisticated solar trackers. As part of his role, he designs and executes comprehensive testing protocols to assess the performance, durability, and reliability of solar tracker components under various conditions. These protocols involve applying both theoretical principles and hands-on technical knowledge, showcasing his deep understanding of mechanical engineering fundamentals as they apply to the renewable energy sector. Bhanu Prasad Tuniki ensures that each solar tracker meets internal benchmarks set by Nevados Engineering, Inc. as well as regulatory standards established by relevant industry authorities. His work involves careful analysis of mechanical properties, including load-bearing capacities, resistance to environmental stressors, and overall system resilience, ensuring that products maintain functionality and safety even in demanding operational environments.

One of the key aspects of Bhanu Prasad Tuniki’s role is his responsibility for coordinating external testing programs with independent third-party laboratories. This involves developing test plans that align with industry standards and often includes direct collaboration with external engineers and technical specialists. By managing these external testing initiatives, Bhanu Prasad Tuniki not only verifies the reliability of solar tracking products but also provides independent validation that supports the company’s commitment to quality and innovation. This external testing phase is critical in securing the reputation of Nevados Engineering, Inc. as a leader in solar technology, and Bhanu Prasad Tuniki’s role in overseeing these processes highlights his expertise in the field. His work ensures that products perform consistently and safely across diverse geographical locations and under varied environmental conditions, which is paramount in an industry where reliability directly impacts project outcomes and client satisfaction.

In addition to his technical testing responsibilities, Bhanu Prasad Tuniki contributes to product improvement initiatives by identifying areas where design and manufacturing can be enhanced. His extensive involvement in the testing phase allows him to recognize potential weaknesses or inefficiencies in product design, which he communicates to the development team for iterative improvements. This continuous feedback loop underscores his role not only as a test engineer but also as a collaborative contributor to the overall engineering and design process. His input helps guide design modifications that enhance product durability, reduce material costs, and optimize performance metrics, contributing to the broader goal of developing efficient and cost-effective renewable energy solutions.

Bhanu Prasad Tuniki also plays a pivotal role in maintaining compliance with industry standards and regulatory guidelines. Renewable energy technology, particularly in the realm of solar engineering, is governed by a host of stringent standards, including those from the International Electrotechnical Commission (IEC) and the American Society of Mechanical Engineers (ASME). His work requires a comprehensive understanding of these standards, as he ensures that every aspect of testing aligns with regulatory guidelines, thereby enabling Nevados Engineering, Inc. to achieve necessary certifications and market-ready status for its solar tracker products. This adherence to regulatory standards not only protects the end users but also reinforces the company's position as a compliant and forward-thinking organization within the renewable energy industry.

Bhanu Prasad Tuniki’s role as a Mechanical Test Engineer is integral to the advancement of solar tracking technology at Nevados Engineering, Inc. His expertise in testing protocols, regulatory compliance, and collaborative product improvement underscores his valuable contributions to the mechanical engineering field and renewable energy sector. Through progressively responsible positions that have honed his technical acumen and leadership in test engineering, Bhanu Prasad Tuniki exemplifies the advanced skill set and dedication necessary to push the boundaries of renewable energy technology, meeting the growing demand for sustainable energy solutions.

**Specialized Nature of the Duties**

The specialized nature of the duties outlined for Bhanu Prasad Tuniki’s position as a Mechanical Test Engineer at Nevados Engineering, Inc. lies in the high level of technical knowledge, precision, and specialized engineering skills required to fulfill each responsibility. His role demands an advanced understanding of mechanical principles, material science, and testing methodologies, as well as proficiency in state-of-the-art technology and software applications relevant to engineering and design.

Managing product testing internally with the mechanical design engineering team and externally with testing labs requires extensive expertise in collaboration and technical coordination. This aspect of his role is complex because it involves harmonizing testing processes with design requirements, ensuring that all mechanical components meet stringent standards of durability, reliability, and performance. This duty requires a nuanced understanding of how to interpret and implement engineering specifications across diverse testing scenarios, both in-house and at third-party facilities.

The role’s focus on durability and strength testing of mechanical parts and assemblies is particularly specialized. This responsibility involves not only setting up and executing tests but also analyzing how mechanical structures respond to stress, load, and environmental factors. The knowledge required to perform such testing is highly specialized, as it requires expertise in mechanics, materials science, and data interpretation to ensure that each component can withstand expected operational conditions. Additionally, the hands-on nature of setting up, executing, and monitoring tests demands a familiarity with complex testing equipment and the ability to troubleshoot or adapt testing procedures to meet precise standards, underscoring the technical depth of this duty.

The maintenance and repair of test equipment and the calibration of instruments also reflect the specialized skills necessary for this role. Calibration, an exact science requiring detailed knowledge of measurement standards and precision engineering, is essential to ensure accurate test results. This aspect of the role highlights the importance of technical knowledge and meticulous attention to detail, as even minor deviations in calibration can lead to significant discrepancies in product testing outcomes.

Designing and modifying test fixtures and equipment using CAD software, such as SolidWorks, underscores the specialized nature of the position. This responsibility necessitates an advanced understanding of mechanical design principles, as well as CAD proficiency. The ability to conceptualize, design, and implement custom fixtures is crucial in ensuring that testing protocols can accommodate unique product geometries and specifications, particularly in the field of solar energy where Bhanu Prasad Tuniki’s work is focused. This skillset is highly specialized and requires both formal engineering education and practical experience.

The tasks of automating testing, expanding capabilities, and generating comprehensive reports reflect a level of expertise required to improve and adapt testing methodologies continuously. Automating data collection, for example, requires proficiency in both programming and engineering, as well as an understanding of data management, to ensure efficient and accurate results. This element of the role is indicative of a specialized engineer who can integrate mechanical and digital systems to enhance testing efficacy and accuracy.

Bhanu Prasad Tuniki’s role involves developing test procedures and plans based on specific product requirements and project needs. This responsibility demands not only an understanding of engineering principles but also the capacity to interpret complex specifications and translate them into precise testing strategies. Regular collaboration with design engineers to communicate results and optimize test verification processes further highlights the role’s specialization, as it involves expert knowledge of mechanical systems and the ability to influence design based on testing feedback.

Each of these responsibilities reflects the advanced level of specialized knowledge and skill required for Bhanu Prasad Tuniki’s role. The technical rigor, interdisciplinary demands, and precise expertise essential for each duty underscore the highly specialized nature of his position as a Mechanical Test Engineer.

**Relevance of Educational Background**

Bhanu Prasad Tuniki’s academic journey in mechanical engineering laid a robust foundation for his specialized skills and deep technical expertise, which directly support his professional career in validation, testing, and product development. His academic credentials include a Bachelor’s degree in Mechanical Engineering with a focus on Mechatronics from M.G.I.T. Hyderabad, completed in 2010, and a Master of Science in Mechanical Engineering from the University of New Haven, awarded in 2017. Together, these degrees provided him with a comprehensive understanding of both the theoretical principles and the practical applications central to the mechanical engineering field, especially in specialized areas such as robotics, renewable energy technology, and complex testing protocols.

At M.G.I.T. Hyderabad, Bhanu Prasad Tuniki’s Bachelor’s degree program in Mechanical Engineering (Mechatronics) involved an extensive curriculum that emphasized interdisciplinary skills bridging mechanical systems and electronic controls. His coursework included subjects like Mechanics of Solids, Thermal Science, Probability and Statistics, Industrial Management, and Microcontrollers, which collectively developed his expertise in analyzing and designing mechanical systems integrated with control electronics. His training in mechatronics—a field known for its emphasis on robotics, control systems, and automation—introduced him to complex systems involving mechanical components, sensors, and computing elements. This foundation proved instrumental in his early career, where he applied knowledge in mechanical load testing, environmental simulations, and robotics integration, essential skills that formed the basis for his progressively responsible roles in various technical engineering domains.

Building upon this foundational knowledge, Bhanu Prasad Tuniki pursued a Master of Science in Mechanical Engineering at the University of New Haven, an advanced program that further deepened his theoretical and practical knowledge. This graduate program, awarded to him in January 2017, focused intensively on advanced topics such as Thermodynamics, Fluid Dynamics, Computational Mechanics, Advanced Strength of Materials, and Mechanical Vibrations. Courses like Advanced Fluid Mechanics and Advanced Dynamics provided him with the analytical tools necessary to evaluate complex mechanical systems under dynamic and variable conditions. Through rigorous training in both classical mechanics and modern computational methods, he honed his ability to approach engineering problems with precision and creativity, a skillset that has become essential in his professional roles involving complex validation and testing requirements.

Notably, his Master’s program also included applied learning components, where he gained hands-on experience in experimental setups, design validation, and advanced testing procedures. This advanced academic training in applied mechanics, engineering analysis, and structural testing established his capacity to manage and conduct high-level validation tests. Additionally, his familiarity with international engineering standards, such as those defined by the International Electrotechnical Commission (IEC) and the American Society of Mechanical Engineers (ASME), stemmed from this period, as he studied regulatory guidelines relevant to mechanical testing and safety. This knowledge has been instrumental in Bhanu Prasad Tuniki’s professional work, where adherence to precise technical standards is crucial in certifying new products for market compliance.

Bhanu Prasad Tuniki’s academic background reflects a progression from foundational knowledge in mechanical and electronic systems integration to specialized expertise in mechanical engineering applications for high-stakes fields like robotics, renewable energy technology, and validation engineering. His education has equipped him with a unique blend of analytical and technical skills, making him exceptionally qualified for roles that require meticulous testing, regulatory compliance, and interdisciplinary engineering problem-solving. This academic rigor has not only underpinned his career achievements but has also positioned him as a knowledgeable expert capable of advancing complex engineering projects in dynamic and evolving technological fields.

**Comparison to Industry Standards**

Bhanu Prasad Tuniki’s role as a Mechanical Test Engineer aligns with and meets industry standards for similar positions, as evidenced by job postings from various companies that outline comparable expectations and qualifications. Positions such as those at West Coast Consulting, Business Integra Inc., Medtronic, and Moog Inc. highlight the industry’s standard requirements, validating Bhanu Prasad Tuniki’s position and qualifications as essential and specialized within mechanical engineering.

The job postings from [West Coast Consulting](https://www.glassdoor.com/job-listing/mechanical-test-engineer-west-coast-consulting-JV_IC1150499_KO0,24_KE25,46.htm?jl=1009505322593&src=GD_JOB_AD&uido=BA7A491104E69F1A26B9CB58D38AA6A1&ao=1136043&jrtk=5-yul1-0-1ibdlg4q6k8jj800-bd2aa497d113dd0a&cs=1_46dbfcd3&s=58&t=SR&pos=101&guid=00000192db5812f5a45992bf2d504da4&jobListingId=1009505322593&ea=1&vt=w&cb=1730256835687&ctt=1730256849502) and [Business Integra Inc.](https://www.glassdoor.com/job-listing/mechanical-test-engineer-calibration-business-integra-JV_IC1154247_KO0,36_KE37,53.htm?jl=1009499781076&src=GD_JOB_AD&uido=BA7A491104E69F1A26B9CB58D38AA6A1&ao=1136043&jrtk=5-yul1-0-1ibdlg4q6k8jj800-afe52f8db9ebf945&cs=1_a3d71ac8&s=58&t=SR&pos=107&guid=00000192db5812f5a45992bf2d504da4&jobListingId=1009499781076&ea=1&vt=w&cb=1730256835689&ctt=1730256859920) show that employers typically expect Mechanical Test Engineers to possess a Bachelor’s degree in Mechanical Engineering, Mechatronics, or a closely related field, with experience in testing methods and the use of CAD design software, mirroring Bhanu Prasad Tuniki’s educational background and experience in developing complex testing systems. Additionally, the [Medtronic](https://www.indeed.com/viewjob?jk=5700fee9961d99f4&tk=1ibdlephjggm4856&from=serp&vjs=3) position for a Senior Test Engineer emphasizes skills in reliability testing, verification, failure analysis, and Design of Experiments (DOE)—all of which are integral parts of Bhanu Prasad Tuniki’s current and previous roles, where he performed accelerated lifetime testing, mechanical load testing, and high-frequency vibration testing to ensure the durability of mechanical components.

Furthermore, the Business Integra Inc. position, which involves mechanical testing for aerospace-grade materials and prototypes, parallels Bhanu Prasad Tuniki’s work with solar trackers and disinfection robots that require precision, structural testing, and adherence to regulatory standards. This company’s expectation for proficiency with ASTM specifications, similar to Bhanu Prasad Tuniki’s familiarity with industry standards, underscores the specialized knowledge expected in his field. In addition, the Medtronic role involving the development and validation of test methods for electromechanical products aligns with Bhanu Prasad Tuniki’s skills in creating test fixtures, protocols, and methods for validating various mechanical and electromechanical components, essential to his current role at Nevados Engineering.

The job at [Moog Inc.](https://www.indeed.com/viewjob?jk=680faefbfaab8be0&tk=1ibdlephjggm4856&from=serp&vjs=3) details responsibilities in managing testing from the proposal stage to execution, involving skills in technical writing, communication, and coordination with customers—all competencies that Bhanu Prasad Tuniki has demonstrated in his previous positions through managing external testing programs, preparing detailed reports, and maintaining effective communication with design engineers. This similarity in responsibilities further highlights the relevance of Bhanu Prasad Tuniki’s role within the mechanical engineering industry, as the industry’s complex and safety-critical sectors, like aerospace and medical devices, also recognize and uphold rigorous testing and validation processes.

The qualifications, technical expertise, and responsibilities outlined in Bhanu Prasad Tuniki’s current and past roles meet the high standards common within the industry for Mechanical Test Engineers. His specialized experience aligns closely with these industry norms, underscoring that his expertise and progressively responsible roles are commensurate with the specialized, high-demand skill set that defines his occupation. This comparison supports his H1B petition by demonstrating that his role requires a high degree of specialized knowledge consistent with industry expectations for similar positions across mechanical engineering fields.

**Career Progression and Specialized Knowledge**

Bhanu Prasad Tuniki’s career trajectory exemplifies a series of progressively responsible roles that have allowed him to cultivate and expand his specialized knowledge in mechanical engineering. Beginning as a Product Development Engineer at Tek Signature from 2015 to 2017, Bhanu Prasad Tuniki was responsible for overseeing key stages of product development, from design and material procurement to corrosion testing and performance analysis. In this role, he applied theoretical principles learned during his academic studies, such as mechanics of materials and thermodynamics, to real-world engineering challenges. He directed continuous improvement initiatives focused on cost reduction and optimized product design by collaborating closely with the drafting unit to develop precise computer-aided designs. This position honed his analytical skills and introduced him to the collaborative dynamics of engineering, where he liaised with clients and third-party laboratories, communicating technical results and ensuring alignment with client specifications. His efforts to standardize torque values and installation sequences were pivotal in enhancing product reliability, marking his early foray into creating long-lasting technical solutions.

In 2017, Bhanu Prasad Tuniki advanced to the role of Design Validation and Testing Engineer at Array Technologies, where he served until 2022. This position represented a step forward in both responsibility and technical complexity, as he took on the challenge of validating the structural and functional integrity of solar tracking systems—critical components in renewable energy infrastructure. At Array Technologies, he conducted rigorous mechanical and structural load testing on various solar tracking components, including motors, drivelines, and gearboxes, using advanced load and force sensors. This role allowed him to apply his expertise in mechanical systems and structural analysis, ensuring that each component could withstand demanding operational conditions. Additionally, Bhanu Prasad Tuniki was responsible for failure analysis and quality control, routinely traveling to field sites to conduct on-site evaluations, troubleshoot issues, and assess performance in real-time. He meticulously maintained validation master plans and testing protocols that aligned with ISO standards, contributing to process standardization within the company. One of his significant contributions was the creation of a high-frequency vibration tester, which enabled the company to identify potential weaknesses in fastening components, effectively eliminating third-party testing requirements through the implementation of an in-house thermal chamber. These innovations streamlined the testing process, enhanced productivity, and underscored his growing expertise in mechanical validation.

Continuing his upward progression, Bhanu Prasad Tuniki took on the role of Validation Engineer at Build With Robots in 2022. In this capacity, he expanded his scope to the robotics sector, specializing in validation processes for disinfection robots. This role introduced new technical challenges, as he was tasked with developing testing protocols that assessed the performance, reliability, and safety of robotic components under various conditions. Bhanu Prasad Tuniki authored and executed the Design Validation and Testing (DVT) master plan, managing the validation process from the inception of the robot’s design through to its commercialization. His responsibilities included performing accelerated lifetime testing on robotic components and conducting extensive tests on disinfection chemicals to measure their efficacy against bacteria such as *E. coli* and spores. In addition, he tested Bluetooth protocols and designed test fixtures for PCB assemblies, ensuring the operational stability of electronic and communication components within the robots. His hands-on experience with air quality sensors, including particulate matter (PM1, PM2.5, PM10), temperature, motion, and volatile organic compound (VOC) sensors, demonstrated his ability to integrate diverse systems into a cohesive testing framework. His collaboration with MET Safety Lab to certify the disinfection robot according to IEC 61010-01 standards reflected his deepening understanding of regulatory compliance, a vital component in producing safe and market-ready technology.

Through each progressively responsible position, Bhanu Prasad Tuniki has consistently applied both theoretical and practical knowledge, adapting his skills to meet the demands of diverse engineering fields. His roles have showcased his capacity to tackle increasingly complex challenges, from improving structural reliability in solar technology to advancing safety and efficacy in robotics. Bhanu Prasad Tuniki’s career progression highlights his dedication to innovation and precision, establishing him as a technically proficient engineer whose expertise in testing, validation, and compliance has made substantial contributions to the fields of renewable energy and robotics.

**Collaborative Work with Qualified Professionals**

Throughout his career, Bhanu Prasad Tuniki has worked closely with a variety of highly qualified professionals, including peers, supervisors, and subordinates with relevant degrees and extensive experience in engineering, all of which have contributed significantly to his growth and expertise in mechanical testing and engineering validation. His collaborations with such individuals have not only facilitated his technical development but also reinforced his practical understanding of engineering standards and methodologies that are integral to his field.

At Array Technologies, Bhanu Prasad Tuniki reported to Senior Test Engineer Oliver Stickroth, who holds a Bachelor of Science in Engineering and possesses over fifteen years of experience in mechanical testing and engineering. As outlined in Stickroth’s support letter, he has managed a team of six Mechanical Test Engineers, providing guidance, setting industry-standard testing protocols, and developing validation procedures in line with ISO standards. Working under the supervision of Stickroth, Bhanu Prasad Tuniki gained valuable insights into advanced testing methodologies and the rigorous standards of failure analysis and field validation. Stickroth’s leadership and wealth of knowledge in mechanical test engineering provided Bhanu Prasad Tuniki with a robust framework within which he could expand his own technical skill set, particularly in structural load testing, accelerated lifetime testing, and vibration analysis for solar tracking components.

In his current role at Nevados Engineering, Inc., Bhanu Prasad Tuniki’s responsibilities include working with the mechanical design engineering team and external testing laboratories, which has further immersed him in an environment where specialized knowledge and collaboration with expert engineers are essential. His interactions with design engineers are integral to his role, as he frequently communicates test results, collaborates on testing strategies, and jointly develops improvements to verification processes. Working alongside highly qualified mechanical engineers with advanced technical expertise has deepened his understanding of product requirements, durability testing, and compliance with industry standards for solar technology. The complex nature of his work with peers and supervisors at Nevados Engineering, as demonstrated by his company’s support letter, necessitates a high level of specialization that is directly relevant to his field of expertise.

Furthermore, Bhanu Prasad Tuniki’s roles have frequently placed him in environments where he collaborates with peers who hold bachelor’s and master’s degrees in engineering disciplines, reinforcing his own technical knowledge. By working in such collaborative settings, he has had continual exposure to a broad range of engineering approaches and has been able to refine his understanding of advanced mechanical testing, calibration processes, and product design validation. These interactions have honed his skills in developing test fixtures, optimizing testing protocols, and maintaining compliance with industry regulations. The knowledge and mentorship provided by these highly qualified peers and supervisors have been instrumental in his professional growth, positioning him as a knowledgeable expert within the specialty occupation of mechanical testing and validation.

The environment in which Bhanu Prasad Tuniki has operated—surrounded by knowledgeable and credentialed professionals in mechanical engineering—has been crucial in advancing his development in this specialty occupation. His exposure to the expertise of his peers and mentors has enabled him to consistently elevate his technical capabilities, adhere to stringent industry standards, and cultivate a skill set that is indispensable to his current role as a Mechanical Test Engineer.

**Conclusions**

In conclusion, the evidence provided establishes Bhanu Prasad Tuniki’s qualifications and expertise, affirming his role in a specialty occupation that requires a high degree of specialized knowledge and technical proficiency. His academic background, with a Master of Science in Mechanical Engineering and a Bachelor’s degree in Mechanical Engineering (Mechatronics), provides a solid foundation of theoretical and practical knowledge essential to his field. This education, paired with his progressively responsible roles, illustrates his ability to apply complex engineering principles across industries such as renewable energy and robotics, reflecting a depth of expertise that is well-aligned with the expectations of his position.

Bhanu Prasad Tuniki’s work history showcases his consistent advancement in technical responsibility, from initial roles in product development and testing to his current position as a Mechanical Test Engineer, where he oversees critical testing and validation processes for Nevados Engineering, Inc. The specialized duties he performs—such as managing product testing, conducting durability assessments, and designing test fixtures with CAD software—further emphasize his expertise. These tasks require extensive technical knowledge in areas such as mechanical analysis, materials science, and quality assurance, all of which are indispensable to ensuring the integrity and compliance of complex mechanical systems.

Furthermore, Bhanu Prasad Tuniki’s collaboration with qualified peers and supervisors in each role has been instrumental in enhancing his technical acumen and has positioned him as a valuable contributor to engineering projects requiring precision and innovation. The industry comparison provided demonstrates that his role, qualifications, and responsibilities align with standard expectations for Mechanical Test Engineers in similar fields, underscoring the necessity of his advanced skills for fulfilling the requirements of this position.

Additionally, it is important to note that Professional Engineer (PE) state licensure is not a requirement for Bhanu Prasad Tuniki to fully perform and practice in his specific role as a Mechanical Test Engineer. His position focuses on internal product testing, validation, and development, all of which align with industry standards that do not mandate PE licensure for these specialized responsibilities.

Collectively, the documentation meets the RFE’s requirements, demonstrating that Bhanu Prasad Tuniki’s academic training, progressively responsible experience, and specialized skills make him uniquely qualified for his role. His expertise in mechanical engineering not only fulfills the demands of his position but also reflects his recognized contributions and value in the specialty occupation of Mechanical Test Engineering.

The USCIS specifically states that any “position must meet one of the following criteria to qualify as a Specialty Occupation: *(1) a bachelor’s or higher degree or its equivalent is normally the minimum entry requirement for the position; (2) the degree requirement is common to the industry in parallel positions among similar organizations or, in the alternative, the position is so complex or unique that it can be performed only by an individual with a degree; (3) the employer normally requires a degree or its equivalent for the position; or (4) the nature of the specific duties is so specialized and complex that the knowledge required to perform the duties is usually associated with attainment of a bachelor’s or higher degree…”* See 8 CFR 214.2(h)(4)(iii)(A).

It is my opinion that this Mechanical Test Engineer position meets all the requirements and qualifies as a USCIS Specialty Occupation, and that the beneficiary, Bhanu Prasad Tuniki, is fittingly qualified for the position.

Please feel free to contact me if you have any questions or concerns.

Sincerely,

A close-up of some words

Description automatically generated

Davide Piovesan

Professor and Associate Dean

School of Engineering and Computing

Gannon University

October 30, 2024