

PHILLIP A. SOUCY

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ABOUT

Versatile, hands-on engineer seeking to explore green and humanitarian industries. Broad experiences with fast-paced startup culture. Fluent in material mechanics, and skilled in practical engineering, technical communication, and project management.

PROFESSIONAL EXPERIENCE

MAKE Composites, Inc. / Desktop Metal

Senior Mechanical Engineer

January 2019 – October 2019

- Collaborated with small, fast-paced team to deliver a proof-of-concept, desktop-scale carbon fiber “3D printer,” resulting in company acquisition by partner, Desktop Metal.
- Designed, prototyped, and integrated kinematic coupling mechanism for tool changing. New design utilized more affordable machined parts and more COTS components.
- Managed vendors and technical experts to maintain lead and development timelines.

N12 Technologies, Inc.

Lead Mechanical Engineer, Ohio Operations

January 2018 – November 2018

- Technical lead for industrial nanotube reactor projects surrounding stand-up of out-of-state manufacturing facility, including retrofits and upgrades of facility and equipment.
- Managed the design, fabrication and installation of robot-loaded high-temperature conveying system, enabling 3x increase in system capacity. Project budget of \$0.5M.
- Oversaw all simulations performed for engineering consideration. Worked with external vendors to ensure on-time and on-budget delivery of realistic and reliable results.

Production Engineer

May 2017 – December 2017

- Spearheaded CVD reactor improvement program, resulting in 40-point improvement in production factor of OEE within 5-month period.
- Introduced “customer-focused” internal engineering model; solicited direct feedback from system operators, resulting in significant improvement in operator quality-of-work.
- Designed, built, and supported custom laser micrometry equipment to replace SEM quality control, reducing feedback time of quality metrics from weeks to minutes.
- Developed, implemented, and maintained CVD reactor maintenance log, resulting in reduced downtime during planned maintenance and problem-solving efforts.

Massachusetts Materials Technologies LLC

Co-Founder, Research Engineer, Safety Officer

March 2015 – April 2017

- Designed and fabricated proof-of-concept method and apparatus capable of non-destructive evaluation of ductile metal fracture toughness.
- Supported mechanical design team during production phases by proofing technical drawings, sourcing material, milling and turning parts, and assembling sub-assemblies.
- Drafted sections of, created illustrations for, and coordinated submission of 4 US utility patent applications (2 awarded), as well as several provisional applications.

Materials and Engineering Group LLC

Engineering Consultant

October 2013 – April 2017

- Designed, fabricated, and operated test fixtures and teardown procedures for exemplar samples to verify failure hypotheses and analytical findings.
- Drafted memos and reports for clients on analytical and experimental results.

Northeastern University

Master of Science, Mechanical Engineering, Mechanics of Materials

December 2017 – GPA 3.87 / 4.00

Bachelor of Science, Mechanical Engineering

May 2016 – GPA 3.76 / 4.00

SKILLS

Hands-On
Competency



Technical
Communication



SolidWorks/NX



Engineering Design



Project Management



Abaqus/CAE



HOBBIES

Cooking
Guitar
Hiking
Video Games
SCUBA Diving

EDUCATION