

TURAN YANIK

Mechanical Design Engineer | MSc. Advanced Product Design Engineering & Manufacturing
SolidWorks CSWP

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SUMMARY

Mechanical design engineer with hands-on experience taking products from concept to validated prototype: design calculations, SolidWorks CAD, CFD simulation (ANSYS FLUENT), DFMA, 3D printing, and physical testing. Led R&D of UAV systems achieving a 3-hour continuous tethered flight, with analytical models validated against field tests to within 9% deviation. Complemented by multi-year site engineering experience that grounds designs in real-world manufacturing, assembly, and inspection practice. Seeking a Design / R&D engineering role delivering products from concept to market.

CORE SKILLS

- **CAD & Simulation:** SolidWorks (CSWP Design Professional), ANSYS FLUENT, Blender, AutoCAD
- **Design methods:** DFMA, DFX, FMEA, GD&T, design calculations, verification & validation, LCA
- **Prototyping & manufacturing:** 3D printing, fabrication, assembly, BOM & cut-list preparation, test rig design
- **Engineering practice:** Technical reporting, project coordination (SMSTS - Site Management Safety Training Scheme), team leadership, MS Excel-based design tools

DESIGN AND R&D EXPERIENCE

Research Assistant, Part-time, Kingston University, London Sep 2025 - Nov 2025

- **Project: CA21127 - COST Action:** Techno-economic analysis of carbon mitigation technologies (TrANsMIT) Evaluating the Environmental Profile of CO2 Capture Integrated with Thermochemical Heat Storage Technology

Freelance Design Engineer, Turkiye Mar 2024 - Jan 2025

- **E-Foil Wing Design and Simulation,** CAD with SolidWorks and flow simulation with ANSYS FLUENT. Microsoft Excel for design calculation to define expected dimensions, loads, lift coefficient, power consumption. (Start-up: PalmTech)

Lead Research & Development Engineer, baibars Mechatronics and Aviation, Mersin/Turkiye Sep 2021 - Mar 2024

- **Tethered drone** design calculations for system power consumption, propulsion system selection, elevation vs. remaining power for payload analysis, BOM for purchase order, cut-list for manufacturing. 3-hour continuous flight achieved with prototype. Analytical vs. field test (validation) comparison (deviation below 9%).
- **Fire-Fighting Drone,** High-performance fire-fighting drone, from design to field testing. Ability to work up to 37m with modular nozzle.
- **Motor-Propeller Test Stand,** conducting successful tests on over 80 motors for improved performance and reliability. Able to get power, ampere, thrust values up to 48 inch propeller.
- **Battery Discharge Unit,** discharge and balance battery cells to a certain voltage, Tested and discharged over 100 batteries.

- Drone Spare Parts Design for 3D Printing, reducing drone repair and maintenance time by designing custom spare parts for 3D printing, enhancing agility and cost-effectiveness.

Freelance Design Engineer, Turkiye

Dec 2019 - Sep 2021

- Printable products support for small-business and machine parts for hobbyists

SITE & FIELD ENGINEERING EXPERIENCE

Mechanical Engineer, Self-employed, IMECH Engineering, Shotton

Apr 2026 - Aug 2026

- **Shotton Mill Project:** Piping works (CS and 316L), team management, reporting, and project coordination

Mechanical Field Engineer, Teknokon Group, Turkiye

Apr 2018 - Dec 2019

- Led experienced teams nationwide: Siemens 4000F gas turbine CHS replacement and HGP inspection; SST-600 steam turbine assembly; valve, pump, and HRSG component maintenance.

Mechanical Field Engineer, INCO Group, Qatar

May 2016 - Dec 2016

- HRSG casing, module, and steel structure assembly; critical lifting plans in AutoCAD; RFI/NCR/TQ/MS documentation and construction reporting.

Mechanical Engineer, Ever Industry, Mardin/Turkiye

Feb 2015 - Jul 2015

- Hydrotesting and inspection of storage tanks (API 650), fire-fighting (HDPE) and NG pipelines; punch-list management and test-package documentation.
- Procedure design: Method of Statement (MS), Inspection Test Plan (ITP), Request for Inspection (RFI), Non-conformance Report (NCR), Technical Query (TQ), Test Package preparation.

Intern Engineer, Turkiye

Worked on storage tanks manufacturing, heating coil design, manufacturing follow-up, and reporting (Sep 2014-Jan 2015), steel structure fabrication and dimensional control, coating thickness checks (Aug 2011), gear pump manufacturing follow-up (Aug 2010)

EDUCATION

Kingston University, London

MSc Advanced Product Design Engineering & Manufacturing

Jan 2025 - Jan 2026

Gaziantep University, Gaziantep

BSc Mechanical Engineering

Sep 2009 - Mar 2015