

# Hugo Chenghao Hou

NATIONAL ENGINEERING REGISTER (NER) |  
SENIOR MECHANICAL DESIGN ENGINEER |  
SENIOR PRODUCT ENGINEER |

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*PROBLEM DIAGNOSIS AND SOLVING / POSITIVE / SELF-MOTIVATED / COLLABORATIVE / ATTENTION TO DETAIL*

## PROFILE

A qualified, experienced, and dedicated mechanical/product engineer with the experience and technical expertise to provide the highest quality mechanical component and system support.

- › Technical Product Design
- › Product Compliance
- › Assisting Product Installation, Operations and Maintenance Documentation
- › Cost Control
- › Coordinating Supply Activities
- › Deliver Design and Assembly Drawings
- › Reviewing Manufactures
- › Safety Analysis
- › Product Testing and Delivered
- › Project Communication
- › Updating Design and Provide Recommendations to Corresponding Teams
- › Project Management

## EDUCATION & MEMBERSHIP

- ✓ National Engineering Register issued by Engineers Australia, NIEAust NER | Issued on Mar 2023
- ✓ Member of the Institution of Engineers Australia | *Processional*
- ✓ Web Development | *Monash University Coding Boot Camp 2022 – Current*
- ✓ Master of Engineering Science in Mechanical Engineering | *The University of New South Wales Australia 2010-2012*

## EMPLOYMENT HISTORY

### SENIOR PRODUCT ENGINEER

Apr 2021 to Present

#### Purple Line Limited, Keysborough

Purple Line is a leading manufacturer of accessories for Caravans, Camper Trailers and RVs and the official home of the award-winning OPUS Camper Trailer and Hybrid Caravan range. Purple Line's portfolio of innovative products includes: Inflatable annexes; Caravan Movers; Caravan Security and Caravan Lifting & Levelling aids ad Lithium Power & Charging solutions. The role of Senior Product Engineer reports directly to the directors and my responsibilities are including but not limited to:

- Engage with stakeholders for ideas, problems, and potential products to develop.
- Prospect and qualify new product leads providing commercially viable options to the business.
- Design, develop and modify components and finished assemblies.
- Ensuring the design is in accordance with relevant local standards, statutory requirements, technical specifications, and industry standard methodology.
- Understanding of different material, tolling quotations, cost control and liaise with local and international sourcing and suppliers.
- Liaise with appropriate departments including quality, purchasing, production and manufacture.
- Coordinate and assist in the component's productions and assemblies.
- Follow up and rectify problems found with components and assemblies throughout the process.
- Provide timely and accurate progress tracking and report to the stakeholders.
- Build up and maintain strong and good relationships with the team and as well as customers.

#### Achievement and Highlights

- ★ Developed new hybrid caravan models which including OP15L1, OP13L1 and OP12.
- ★ Developed caravan accessories including Light-weight nemesis off-road wheel clamp, hitch lock and gear bags.
- ★ Incorporated 12V lithium battery system to caravan.
- ★ Developed ISO9001 Quality Management System Manual to meet industry requirements.
- ★ Obtained Vehicle Type Approvals to meet the new Road Vehicle Standards Act (RVSA), which is the biggest legislative change applied to Vehicle manufactures in Australia. Campervan manufactures need to transition MVSA approvals to RVSA approvals.

- ★ Prepared R&D report and obtained Government incentives, helps company innovation, grow and offsetting costs.

## SENIOR MECHANICAL DESIGN ENGINEER

Apr 2019 to Apr 2021

### Truflow Spray Booth (Aust) Pty Ltd, Keysborough

Truflow specialize in the manufacturing and fabrication of high quality spray painting booths and it has a long history of providing solutions to the entire refinishing and surface protection industry. Specializing in engineered solutions for the Aerospace, Defence, Mining, Automotive industries. The role of Senior Mechanical Design Engineer reports to General Manager and accountable for following:

- Job evaluation and interpretation of sales documents.
- Mechanical equipment design, selection of mechanical and electrical device and sheet metal CAM programming, Laser, and TURRET.
- 3D modelling using Solid works.
- Steel Structure design and FEA analysis.
- Prepare and detail production drawings for factory.
- Generate BOM's and Packing Lists for production.
- Applied airflow principals and completing computations.
- Complete job specific documentation.
- Providing detailed drawings to fabricator.
- Identifying hazardous area and continues improvement of quality methods.
- Ensure that all products manufactured meet the specifications, performance, and quality of the end user.

### Achievement and Highlights

- ★ Designed spray booth and relevant equipment for following major projects but not limited to: Leonardo, AA Semi Trailer, ASCENT, Department of Defence, RMIT Bundoora, Geotech and Lindsay Australia.

## Mechatronic Engineer

Jan 2013 to Mar 2019

### CKAS Mechatronics Pty Ltd, Tullamarine

CKAS Mechatronics is Australia's leading simulation company, produces high quality training simulators for Aviation, Driving, Defence, Industrial and Entertainment applications. CKAS specialised first and foremost in motion solution robotics and has a large fleet of motion systems in both the 2DOF and full motion 6DOF categories.

- Design simulators and provide detail drawing.
- Electrical circuit design.
- 3D modelling.
- Simulator installation and provide training to customer end.
- Prototype design and testing.
- Inventory management.
- Create SOP documentation.
- Software development and incorporate into simulators.

### Achievement and Highlights

- ★ Developed and built the 7 DOF motion system.
- ★ Assisting and participating in the following major simulation projects:
  - Truck simulator for China National Petroleum Corporation
  - Jetpack simulator for Martin Jetpack.
  - MotionSim VR and Aviation Simulators for entertainment and training.

#### SOFTWARE USED

- |                    |                   |                    |
|--------------------|-------------------|--------------------|
| › Solidworks       | › AutoCAD         | › ANSYS            |
| › Siemens NX       | › Catia           | › Microchip Studio |
| › Arduino          | › Metalix CAD/CAM | › CAM Duct         |
| › HTML             | › CSS             | › JavaScript       |
| › Node.js          | › MySQL           | › C Language       |
| › Microsoft Office |                   |                    |

#### OTHER INFORMATION

- An Australian Citizen.
- Reference available on request.