

PROFILE

Oskefer Consulting, headquartered in Singapore, is an engineering consultancy firm specialising in **incident investigation** (including failure analysis, forensic engineering investigation, and root cause analysis), **risk-based consulting** (such as risk-based design review, inspection, and condition assessment), and **expert witness** services.

Dr Andy Deng joined Oskefer Consulting Pte Ltd as General Manager (China) and Principal Consultant in July 2026 and is in charge of Oskefer's expansion into the Greater China market. With over 20 years of experience in materials science, failure analysis, forensic investigation, and judicial appraisal, Dr Deng brings extensive expertise to the company.

Dr Deng began his career as a failure analysis consultant at TÜV SÜD PSB Singapore. He then joined Suzhou FALAB as Technical Lead of the materials lab and later as R&D Manager, providing technical consulting services to courts, insurance companies, law firms, and OEMs. In 2021, he entered the renewable energy sector, leading failure and reliability analyses of fuel cells and pioneering materials research for PEM/AEM water electrolyzers.

Dr Deng is bilingual in Chinese and English.

LOCATION

Suzhou, China

CONTACT

T +86 18550516917

E andy.deng@oskefer.com

LINKEDIN

[linkedin.com/in/drandydeng](https://www.linkedin.com/in/drandydeng)

KEY STRENGTHS:

- Broad engineering knowledge across disciplines
- Expert knowledge and hands-on experience in Materials Science and Engineering, i.e., metals, polymers, biomaterials, ceramics, and composites
- Expert knowledge in fuel cells, i.e., failure modes, reliability analysis, durability and life prediction
- Rich experience in failure investigation, root cause analysis and risk assessment

INDUSTRY EXPERIENCE:

- **Conventional Power** (gas turbine, steam turbine, generator, transformer, power transmission, etc)
- **Renewable Energy** (lithium battery, solar PV, onshore & offshore wind, fuel cell, water electrolyser, etc)
- **Oil & Gas** (refinery, petrochemical)
- **Transportation** (train driving system, con-rods and shafts of land transport, etc)
- **Machinery** (cranes, motors, pumps, compressors, chillers, etc)

PROFESSIONAL EXPERIENCE

Jul 2026 – Present	Oskefer Consulting (China)	General Manager (China) & Principal Consultant
• Providing engineering consultancy services to all industrial sectors, e.g., insurance companies, law firms, OEMs, and end-users, etc. • As General Manager - China, responsible for business development, customer support, quality control, and day to day operations of Oskefer Consulting (China). • As Principal Consultant, responsible for the cases in charge, with special interests in Conventional Power, Renewable Energy, Oil & Gas, Transportation, Machinery and Medical Devices, etc.		
Jan 2021 – Jun 2026	Unilia Fuel Cell (Shanghai)	Senior Failure Analysis Engineer
• Led failure and reliability analysis throughout the full lifecycle of fuel cell stacks and core components, solving over 30 critical technical and quality challenges with cross-functional teams, including catalyst degradation, proton exchange membrane degradation, graphite bipolar plate cracking, cell reversal, cold-start failures, etc.		

- Pioneered research on key materials of PEM/AEM water electrolysis, including materials selection criteria, failure mechanism study, knowledge base and atlas construction.

Feb 2014 – Dec 2020

Suzhou FALAB

R&D Manager (2017-2020)

Technical Lead (2014-2017)

- ***As R&D Manager***
 - Directed the testing and judicial capability development of the company, expanding business into renewable energy (lithium battery, solar PV, wind power), semiconductors, automobile electronics, etc.
 - Completed municipal research projects regarding product quality defects and recalls, quality improvement of China's manufacturing.
 - Authored the industry standard "*General Procedures for Judicial Appraisal of Product Quality*".
- ***As Technical Lead***
 - Led failure analysis and judicial appraisal for various industrial products, providing technical consulting services to courts, insurance companies, law firms, and OEMs.
 - As Technical Lead, completed and supervised more than 100 failure cases and judicial appraisals, established a standardised FTA analysis protocol and developed corresponding corporate standards.
 - Completed a research project from TMRI of MPS regarding thermal degradation and brake failure in heavy-duty trucks.

Feb 2013 – Aug 2014

TÜV SÜD PSB (Singapore)

Failure Analysis Consultant

- Provided engineering consultation and risk assessment services to various industrial sectors, such as rail transport, medical devices, oil & gas, aerospace, power generation, marine, chemical plant, manufacturing, entertainment facilities, etc.
- As Principal Investigator, handled more than 30 high-profile cases, including steam turbine blade failure, MRT HV connector failure, train CV joint loosening, naval ship con-rod failure, roller coaster spindle failure, etc.

EDUCATION

Doctor of Philosophy (PhD) in Biophysics & Biomaterials

National University of Singapore, Singapore 2013

Master of Engineering (MEng) & Bachelor of Engineering (BEng) in Materials Science & Engineering

Harbin Institute of Technology, China 2008 & 2006

PROFESSIONAL AFFILIATIONS

- Certification of Senior Engineer in Metallurgical Engineering, China
- Project Management Professional (PMP), Project Management Institute (PMI), USA

PUBLICATIONS / PRESENTATIONS & OTHERS

- Authored and/or co-authored over 6 research papers related to transportation and materials
- Presented at 5 national/international conferences
- Holders of 3 patents