Suradech Kongkiatpaiboon

Senior Chemical & Process Engineer · Process safety & digital engineering

Bangkok, Thailand
k.suradech@gmail.com
suradech.com ·
linkedin.com/in/suradechk

Chemical engineer with 16+ years in process design, process safety and digital transformation of offshore hydrocarbon facilities. Alternate Local Technical Authority for process and flare/relief design. Builds AI/ML and automation tools that have delivered $10MM+ in documented value. Author of 15 SPE/OTC papers, curriculum committee member at Chulalongkorn University, and mentor to 60+ early-career engineers.

16+ years in process engineering	**$10MM+** documented value from digital tools	**2,000+** relief valves under technical authority	**15** SPE & OTC papers	**60+** engineers mentored

EXPERIENCE: CHEVRON, THAILAND

Senior Process Engineer | Alternate Local Technical Authority — Nov 2024 – present

- Alternate Local Technical Authority for process and flare/relief design: CCPS, API 520/521 and ASME applied to 2,000+ relief valves across multiple offshore assets.
- End-to-end digital product owner integrating AI/ML for process optimisation, debottlenecking and enterprise-scale flare assessments.
- Lead process engineer for flare optimisation and facility topside reuse.

Lead Process Engineer / Digital Translator — May 2020 – Nov 2024

- Remote compressor optimisation and anomaly detection; greenhouse-gas leading indicators; compressor profile optimisation.
- Machine-learning model for condensate RVP; heat-exchanger monitoring and tube-bundle design improvement.
- Adequacy checks of gas processing equipment for compression-profile changes and an asset transfer.

Lead Process / Facilities Engineer: greenfield offshore development — Aug 2016 – Apr 2020

- Conceptual, pre-FEED and FEED topside design for a central processing platform with FSO, and an FPSO alternative.
- Process simulation (HYSYS, HTRI), relief and flare sizing, pipeline-network optimisation, H&MB, PFD, UFD and P&ID.
- Lead process safety and piping engineer through conceptual and pre-FEED; HAZOP and value-improving practices.

Process Engineer: facilities engineering (process safety) — Jun 2014 – Aug 2016

- Led flare and relief gap assessment and closure across six offshore fields (2,000+ relief valves).
- HIPS design for gaps needing major modification; gap prioritisation workshops.
- Acoustic-induced vibration champion; HAZOP revalidation and brownfield troubleshooting.

Asset Engineer: major offshore processing complex — Jun 2010 – Jun 2014

- Lead process engineer for a $30MM gas compressor debottlenecking project.
- Chemical optimisation saving $2MM+ per year and adding 5,000+ bpd.
- Led shutdowns and recovery after an export-pipeline incident; high-CO_2 management and topside modifications.

SELECTED PAPERS

- Digital Transformation of Process Safety Valve Compliance and Deficiency Management in Offshore Operations (OTC-36708-MS, 2026)
- Turning Data into Action: Reducing Risks from Offshore Well Piping Growth (OTC-36360-MS, 2026)
- OnePetro Paper Recommendation System: Smarter Tools for Faster Insight (OTC-36312-MS, 2026)
- Enhancing Learning in Oil & Gas: SPE Podcast Analytics with Open-Source Tools (SPE-226402-MS, 2025)
- Common Mistakes in PSV Sizing: Lessons Learnt and Case Studies From Years of Operation (SPE-226340-MS, 2025)
- Data Driven Journey to Optimize Offshore Sand Management (SPE-226338-MS, 2025)

Full list with DOIs: suradech.com/#publications

AWARDS

- 2025: IT Hackathon winner. "PSV Insight", a proactive relief-valve monitoring and compliance tool.
- 2024: SPE Thailand Award. "Facilities for Tomorrow: Innovating for a Sustainable Future".
- 2023: Bronze award. High-sand reserve unlock project.
- 2023: Lower Carbon Prize. Compressor profile optimisation to reduce fuel gas.
- 2022: 1st place, data science challenge. Sea wave height prediction model.
- 2021: Silver award. Well unlock project.
- 2020: Silver award. AutoAD anomaly detection tool.

EDUCATION

- Master of Professional Studies, Data Analytics, Penn State University (2020 – 2022)
- Bachelor of Engineering, Chemical Engineering, Chulalongkorn University (2006 – 2010)

CERTIFICATIONS

Deep Learning Specialization · TensorFlow 2 for Deep Learning · Applied Data Science with Python Specialization ·