

Gaurav Shah

Process Engineering Manager, Refinery & Petrochemicals

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PROFILE

Chemical engineer with 12 years in refinery process design, energy optimisation and safety. Led revamps that saved ₹65 crore a year in energy and cut flaring by half.

SKILLS

Process: Process simulation, pinch analysis, HAZOP/LOPA, distillation design

Tools: Aspen HYSYS, Aspen Plus, HTRI, PIPESIM

Languages: Gujarati (native), Hindi, English

PROFESSIONAL EXPERIENCE

Process Engineering Manager

2020 – Present

Gujarat Coastal Refinery Ltd.

- Lead a 14-member process team for a 15-MMTPA refinery.
- Heat-integration revamp of the crude unit saves ₹65 crore a year in fuel (sample data).
- Cut routine flaring by 52% through a flare-gas recovery project.

Senior Process Engineer

2016 – 2020

Sabar Engineering Consultants

- Process design for 3 petrochemical units: PFDs, P&IDs, HAZOP.

Graduate Engineer

2013 – 2016

Narmada Fertilisers

- Ammonia plant operations and troubleshooting.

SELECTED PROJECTS

Crude unit heat-integration revamp

2022

Gujarat Coastal Refinery

- Pinch analysis and 18 new exchangers; payback in 14 months.

Green hydrogen pilot

2024

Gujarat Coastal Refinery

- 1 MW electrolyser feasibility and pilot design.

EDUCATION

M.Tech., Chemical Engineering

2011 – 2013

Western Institute of Chemical Technology

Thesis on heat-exchanger network design

B.E., Chemical Engineering

2007 – 2011

Narmada Valley Engineering College

Distinction

CERTIFICATIONS -----

- Certified Functional Safety Engineer (process sector)
- HAZOP leader certification
- Six Sigma Green Belt

PUBLICATIONS -----

- [1] **Shah, G.**, & Banerjee, P. (2026). Measuring process safety in batch reactors. *Chemical Engineering Practice Letters*, 7(7), 118–140.
- [2] Menon, V., **Shah, G.**, Sato, Y., & Gupta, R. (2026). Designing for wastewater zero-liquid discharge. *Chemical Engineering Practice Letters*, 5(1), 166–183.

AWARDS & HONOURS -----

- Energy Conservation Award, national refining association (2023)

TALKS & PRESENTATIONS -----

- Invited talk: “Revisiting catalyst life extension”, Symposium on Process Safety and Design, Kyoto, 2026.
- Poster: “Designing for catalyst life extension”, Proceedings of the Indian Chemical Engineering Congress, Berlin, 2026.

TEACHING & TRAINING -----

- Visiting faculty, process safety course, Western Institute of Chemical Technology

COMMITTEES & COMMUNITY -----

- Member, Indian institute of chemical engineers (national body)

REFERENCES -----

Available on request.