



Rahul Agrawal

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Summary

Innovation driven professional with 5+ years across two Fortune 500 companies, solving complex strategic challenges through structured problem solving and cross functional execution. Delivered impact across ₹36,000 Cr+ capital programs, commissioned ₹1,700 Cr+ first of its kind projects, and managed a ₹130 Cr+ procurement portfolio, achieving measurable results through performance improvement, cost optimization, stakeholder management, and data driven decision making.

Professional Experience

Indian Oil Corporation Limited, Panipat Refinery & Petrochemical Complex | Panipat, Haryana

Process Engineer | Technical Services

Dec'21 – April'26

Commercial Strategy & Cost Optimization

- Governed a **₹130 Cr annual** procurement portfolio across **35+ chemicals** through SAP workflows, delivering **10% savings** against estimate through internal cost estimation, competitive tendering and techno-commercial negotiation with bidders.
- Created **~₹1 Cr** in **annual** incremental waste-to-revenue transformation by identifying buyers for three byproduct streams, validating specifications and securing commercial agreements.
- Delivered **₹50L one-time** savings and avoided **~6 months procurement** lead time by redeploying redundant pumps, while generating **₹20L annual savings** by substituting an internal waste stream instead of an alternative solution.
- Owned planning for **~₹78 Cr** annual chemical spends through monthly material balances, RE/BE budgeting, and quarterly stock verification, establishing consumption and cost baselines for annual operating plans.
- Mentored **4+ new engineers** into procurement and plant operations, guiding cost estimation, specification preparation and SAP purchase workflows to accelerate their independent readiness.

Strategic Project Leadership & Stakeholder Management

- Strengthened design assurance for **₹36,225 Cr** Panipat Refinery Expansion Project by reviewing engineering designs, safety studies and 3D models across **5+** process units, identifying **100+** process, operability, and maintainability gaps.
- Secured **95%** acceptance of **100+** design observations across **5+** process units by influencing licensors and EPCM/LSTK partners, carrying the accepted changes through to issued-for-construction drawings.
- Commissioned **₹1,738 Cr of first-of-their-kind biofuel units**, driving Asia's first 2G Ethanol unit to **60%** throughput in 18 months and IOCL's first 3G Ethanol unit to **40%** in 24 months, resolving start-up constraints.
- Secured zero schedule impact by coordinating **3 global technology partners** across France and the US, navigating ministry approvals and site clearances for uninterrupted project execution.
- Coordinated launch readiness for **₹984 Cr** first-of-its-kind project, aligning refinery, ministry and external stakeholders to deliver the **Prime Minister**-led inauguration against a fixed deadline.

Performance Improvement & Value Creation

- Owned **₹4 Cr** process package end to end, resolving a critical operational bottleneck through vendor selection, procurement, installation, safety reviews and trials, achieving **~85%** of the removal efficiency.
- Developed **50+** process modifications using CHEMCAD / PRO-II based simulation across the multiple process units to eliminate recurring bottlenecks, thereby cutting unplanned downtime by **50%**.
- Designed and enforced quality-inspection controls across **30+ process chemicals**, validating COA and tender-specification compliance with Quality Control and other internal teams, preventing **10+ off-spec batches** from entering operations.
- Built the business case for a steam-availability fix by modelling **3 options** using simulation tools and selecting a **3-km pipeline** reusing redundant infrastructure, executed over three weeks and cutting trial downtime from steam failures by **100%**.

Reliance Industries Limited, Patalganga Manufacturing Division | Patalganga, Navi Mumbai

Graduate Engineer Trainee

Feb'21 – Dec'21

- Led a **4-member** frontline operations team during routine and shutdown activities, ensuring **zero safety incidents** and permit violations through structured task allocation, field supervision, and SOP compliance.
- Sustained **95% uptime** and **zero quality deviations** across three 24×7, **40 tonnes/day** Continuous Polymerization units via Distributed Control System monitoring-led fault resolution with quality, mechanical, electrical, instrumentation teams.

- Averted a **2-day shutdown**, ~**80 tonnes** of finished-product loss and ~**₹12 lakh revenue** impact by diagnosing and executing time critical corrective action during unit wide operational failure.
- Strengthened risk management across process units, issuing **100+ SAP** based work permits for high-risk jobs, assessing site hazards and ensuring **zero permit violations** and delays during operations and planned shutdowns.

Education

B. Tech (Chemical Engineering) - Maulana Azad National Institute of Technology, Bhopal

2016-20

Accomplishments and Awards

- Secured **Gold Medal** as Chemical Engineering departmental topper at MANIT Bhopal (2016–20) and **AIR 28** in GATE Chemical Engineering 2021, demonstrating academic excellence and strong analytical aptitude at national level.
- Promoted to Process Engineer within 9 months, **25% faster** than the standard 12-month Graduate Apprentice Engineer timeline, with **Excellent rating** for accelerated performance readiness.
- Earned “**Outstanding**” appraisal rating for **two consecutive years**, FY24 and FY25, as a Process Engineer, demonstrating sustained performance excellence, execution ownership, and delivery across initiatives.
- Contributed to a team selected from hundreds of ideas across Indian Oil’s refineries to present a 2G Ethanol byproduct initiative at **India Energy Week 2026**, Goa, highlighting waste to value innovation and revenue generation potential.
- Accelerated operational readiness through Reliance Industries’ Competency Assurance System (CAS), assuming independent charge in the Continuous Polymerization unit **within 3 months**, reducing the standard 6-month training timeline by **50%**.

License & Certifications

- KPMG - Lean Six Sigma Green Belt Certification
- BCG - Introduction to Strategy Consulting Job Simulation
- CSIR Indian Institute of Petroleum, Dehradun - Petroleum Refining Technology

Co/Extra-curricular

- **Core Committee Member, Profile Committee**, PGPM, IIM Ahmedabad - Contributed to shaping and managing external branding, cohort representation, and stakeholder engagement for one of India’s most prestigious MBA programs.
- **Events & Competitions Cell Head, Optima** - Operations Club, IIM Ahmedabad - Led end-to-end planning and execution of flagship events and competitions, enhancing student engagement.
- Served as **Event Coordinator** for the **Street Play Society** - Ae se Aenak, MANIT and **Think India** MANIT Chapter, supporting event execution, communication, and student engagement initiatives.
- Supported end to end campus placements as a **Training & Placement Student Volunteer** at the Training & Placement Cell, MANIT Bhopal, assisting in overall coordination, documentation, and process execution during the 2018-19 placement cycle.