

# Ryan Tufts, P.Eng. (AB 78780, BC 61452)

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## Summary

- Adaptive, results-driven Mechanical Engineer with 20+ years delivering oil & gas and industrial projects end-to-end, combining hands-on technical depth with highly responsive stakeholder engagement to keep scope, schedule, and cost on track.
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## Core Competencies

- Oil & gas facilities engineering (Alberta and BC focus): brownfield tie-ins, MOC support, and greenfield scope definition
- Project deliverables (support): DBMs, PFDs, P&IDs, plot plans, and tie-in packages
- Mechanical deliverables: equipment lists, line lists, tie-point lists, SP item lists; piping class and specifications support
- Designs and datasheets for static equipment, rotating equipment, and piping items; equipment sizing and hydraulic/transient calculations
- Procurement: Material Requisitions (MRQs), Technical Bid Evaluations (TBEs), and vendor package coordination
- Vendor drawing/document review and engineering calculation review/approval; deviation and RFI resolution
- Regulatory and code compliance: ABSA submissions; interprovincial registration experience; knowledgeable and experienced with TSBC requirements; CSA Z662/B51; ASME B31.3/B31.4/B31.8 & BPVC; API; NACE
- Construction support: mechanical Construction Work Packages (CWPs), fabrication/field support, commissioning and turnover

## Education

### **B.Sc. Mechanical Engineering** (Co-op Program)

University of Alberta, Dec 2004

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## Highlighted Experience

### Project Engineer, acting Process and Mechanical Lead

#### **FWS | April 2024 – October 2025**

- Delivered 30 engineering work packages on schedule for a 1MM tonnes/year transloading facility (DP World, Surrey, BC).

- Owned scope and deliverable review for contract compliance; coordinated engineering, procurement, vendor packages, and construction priorities in a fast-paced, multi-discipline environment.
- Provided project reporting and risk management; supported change orders and cost approvals to maintain budget control.
- Stepped in mid-project as Acting Mechanical/Process Lead, completing hydraulic calculations, equipment sizing, P&IDs, process narrative, shutdown key, and instrument list alarm/range development.
- Provided critical regulatory guidance to marine loading arm vendor to registered the design and construction with TSBC. Obtained approval on initial submittal.
- Authored commissioning documentation and provided on-site/remote commissioning support through successful handover (Aug 2025), including two custody-transfer flowmeters.

## Senior Mechanical Engineer

### Anvil Engineering | Jan 2020 – May 2020

- Lead mechanical engineer for a \$200M biodiesel facility (project cancelled during COVID).
- Performed pipe stress analysis for refineries (Phillips 66 Los Angeles; BP Cherry Point).
- Developed purchase specifications for marine loading arms and evaluated long-travel dampers for high-thermal movement piping.

## Reliability Engineer (Static Equipment)

### BP Cherry Point Refinery (2-year contract secondee from Worley) | Sep 2017 – Aug 2019

- Developed and managed mechanical work scopes during two major 6-week turnarounds (2018, 2019), including repair packages, tie-ins, and field support.
- Coordinated repair/installation scopes with unit inspectors and operations
- Responsible for Coker and SRU (2018) and Hydrocracker (2019) day-to-day static equipment issues and operations support.
- Engineered and managed piping, vessel, compressor, valve, and flange repairs/installs in accordance with applicable ASME/API/NBIC codes; reviewed vendor documents and calculations and supported fabrication/field implementation.
- Managed welding activities in compliance with BP welding QMS; designed and approved modifications to all piping in the Coker and SRU. (CS, 316 & 309SS, 5-Cr, 9-Cr, Alloy 625)
- Supported fitness-for-service evaluations and damage mechanism reviews (API RP571).
- Developed a corrosion prediction algorithm to augment risk-based inspection workflows (API RP 580).
- Design, stress analysis (**CAE Pipe**), and construction for hydrogen service piping in both Coker and Hydrocracker units. *API RP 941 (Nelson curve)*.

## Facility Operations Engineer

### Plains Midstream Canada | Jan 2016 – Sep 2017

- Owned engineering work requests for the Plains Empress NGL straddle plant and the Rainbow Pipeline system.
- Restored 2-3% NGL recovery by diagnosing overhead/deep-cut vessel interaction; modified piping and updated operating procedures.
- Designed and executed cryogenic butane service piping and vessel modifications (stress analysis and field implementation).
- Designed blowdown and flare system modifications accommodating large thermal expansion (CAESAR II).
- Completed a 5-year HAZOP revalidation of the main production train and supported process safety program improvements.
- Scoped terminal expansion and an additional truck loading rack (\$15MM CAD), including tankage, pumps, vessels, piping, and controls.
- Developed maintenance and testing programs for firewater systems (NFPA 25) and process safety critical check valves in the CMMS.

## Reliability Engineer & Maintenance Manager

### Energkem Alberta Biofuels | Jan 2013 – Sep 2014

- Coordinated scope, budget, and schedule for C&SU of 50+ mechanical packages, pressure vessels, and piping for a first-of-its-kind biofuels facility.
- Authored the ABSA Owner-User Program Quality Manual and achieved on-time inspection approvals for pressure equipment installations.
- Produced commissioning plans for mechanical equipment and piping; supported field execution.
- Built the maintenance organization: hired the Chief Inspector and maintenance staff; appointed maintenance lead.
- Developed and implemented the work order and asset management system; structured and populated the CMMS (GuideTI).
- Trained staff on work order planning and scheduling.

### Technical Proficiencies

**Software:** MS Project, Primavera P6, CAESAR II, HTRI, Compress, MS Teams, CMMS (GuideTI) ;

**Standards:** CSA Z662; ASME (B31.1, B31.3, B31.4, B31.8, BPVC, FFS-1); API (510, 570, RP 571, RP 580); NBIC; NACE MR0175/ISO 15156 and MR0103 ;

**Regulations:** ABSA; TSBC; TSSA Pressure Piping; pressure equipment regulations in BC, AB, ON; ABSA AB-505/506/512/513/518/524/525/529/531; local government compliance ;

**Methodologies:** HAZOP, risk assessment, project controls, quality management systems (ISO 9001), task/document management, commissioning and turnaround planning