

HEARTLAND ENGINEERING (ALBERTA) LTD.

Sherwood Park, Alberta | Industrial, Oil & Gas, Petrochemical & Power

Structural Engineer – Junior / Intermediate

Full-Time • Sherwood Park, AB (In-Office) • Industrial Projects

About Heartland Engineering

Heartland Engineering (Alberta) Ltd. is a Sherwood Park-based multi-discipline engineering firm delivering practical, fit-for-purpose solutions across the oil and gas, petrochemical, power, municipal, and heavy industrial sectors. We work alongside long-standing clients—including major operators in Alberta's Industrial Heartland—on projects that range from small brownfield modifications to greenfield facility expansions. Our engineers solve real problems on real sites, with the support of a tight-knit, technically specialized team.

The Opportunity

We are seeking a Junior to Intermediate Structural Engineer to join our Sherwood Park office. In this role, you will support the design, analysis, and field execution of structural scopes on industrial projects—pipe racks, equipment supports, foundations, modules, vessel and tank structures, buildings, and miscellaneous steel. You will work directly with senior structural engineers, project managers, and clients, taking ownership of deliverables from concept through construction support.

This is a hands-on technical role suited to an engineer who wants to grow quickly, work on a varied project portfolio, and have visible impact on outcomes our clients care about.

Key Responsibilities

- **Structural design and analysis** of pipe racks, equipment supports, platforms, ladders, stairs, access structures, and miscellaneous steel for industrial facilities.
- **Foundation design** for static and dynamic equipment, vessels, tanks, compressors, and buildings, including shallow and pile foundations.
- **Structural calculations** for wind, snow, seismic, thermal, blast, and equipment loads in accordance with NBC, Alberta Building Code, ASCE 7, and applicable client and site standards.
- **Use of structural analysis software** such as STAAD.Pro, or equivalent, plus spreadsheet/MathCAD calculations.
- **Preparation and review of engineering drawings** (general arrangements, foundation plans, steel details, anchor bolt plans) in coordination with drafters using AutoCAD and/or Revit.
- **Steel and concrete design** in accordance with CSA S16, CSA A23.3, AISC, and ACI standards.
- **Brownfield assessments**—site visits, field measurements, structural condition assessments, and retrofit/upgrade design for aging infrastructure.
- **Coordination with multidisciplinary teams**—piping, mechanical, civil, electrical, instrumentation, and process—to deliver integrated, constructable designs.

- **Preparation of technical reports, specifications, MTOs** and stamped engineering deliverables under the supervision of a senior P.Eng., progressing toward independent stamping authority.
- **Construction support**—responding to RFIs, reviewing shop drawings, attending site meetings, and supporting commissioning as required.
- **Proposal support**—contributing to scopes of work, hour estimates, and technical narratives for new business pursuits.

Required Qualifications

- **Bachelor's degree** in Civil or Structural Engineering from an accredited university.
- **Registered as a Professional Engineer (P.Eng.) with APEGA** in good standing. (Candidates currently registered as an EIT with imminent P.Eng. eligibility may be considered for the Junior level.)
- **Minimum 5 years of post-graduation structural engineering experience**, with a clearly demonstrated focus on industrial projects (oil and gas, petrochemical, power, mining, or similar heavy industrial).
- **Strong working knowledge of Canadian codes and standards:** NBC, Alberta Building Code, CSA S16, CSA A23.3, and ASCE 7.
- **Hands-on proficiency with at least one structural analysis package** (STAAD.Pro, S-Frame, RISA-3D, SAP2000, or equivalent) and AutoCAD.
- **Demonstrated experience designing** industrial steel structures (pipe racks, equipment supports, modules) and reinforced concrete foundations for static and/or dynamic equipment.
- **Strong technical writing** and the ability to produce clear, well-organized calculation packages and reports.
- **Valid Class 5 Alberta driver's licence** and willingness to travel to client sites in Alberta's Industrial Heartland and elsewhere as required.
- **Legally entitled to work in Canada.**

Considered an Asset

- Experience working in or around operating facilities in Alberta's Industrial Heartland (Fort Saskatchewan, Sherwood Park, Edmonton refinery row).
- Familiarity with client engineering specifications (e.g., CNRL, Suncor, Pembina, Syncrude, Shell Canada, Dow).
- Experience with modular design and fabrication coordination.
- Foundation design for vibrating and reciprocating equipment (compressors, pumps, packaged units).
- Knowledge of ASCE Wind Loads for Petrochemical and Other Industrial Facilities, AISC Design Guide 7 (Industrial Buildings), and Process Industry Practices (PIP) standards.
- Experience with Tekla Structures, Revit, or 3D plant design coordination (SmartPlant / S3D / E3D).
- Pipe stress interface experience (Caesar II, AutoPIPE) or coordination with stress engineers on dynamic equipment supports.
- Field experience: site walk-downs, as-built verification, and construction surveillance.
- PMP or working toward it; interest in growing into project lead or technical specialist roles.

What Heartland Offers

- Competitive salary commensurate with experience.
- Comprehensive health, dental, and extended benefits.
- Direct mentorship from senior P.Eng.s with decades of Alberta industrial experience.
- A varied project portfolio—you will not be doing the same building over and over.
- Clear technical and leadership growth paths, including support toward independent stamping authority and discipline lead roles.
- A collegial, low-bureaucracy environment where good engineering and good judgement are recognized.

How to Apply

Please submit a resume and a brief cover letter outlining your industrial project experience and APEGA registration status. Applications will be reviewed on a rolling basis. We thank all applicants for their interest; only those selected for an interview will be contacted.

Heartland Engineering (Alberta) Ltd. is an equal opportunity employer and welcomes applications from all qualified candidates.