

Ben Vanderloo, P.Eng

Senior Mechanical Engineer

Qualification highlights:

- Mechanical design/drafting using SolidWorks and AutoCAD
- Finite Element Analysis (FEA) with SolidWorks Simulation, Abaqus and Ansys
- FEA report writing in compliance with Alberta's standard, AB-520 and CSA B51 Annex J
- Advanced understanding of commercial vessel software: Compress, PV Elite, CodeCalc, DesignCalcs and NozzlePro
- Design of pressure vessels and pressure retaining devices
- Managing multiple projects from quotation to fabrication
- Pressure vessel support design for wind and seismic
- Equipment design for lifting and transportation

Relevant Courses:

- ASME VIII-2 Part 5 Design by Analysis
- API 579 Fitness for Service
- ASME PCC-2 Repair of Pressure Equipment and Piping
- Fracture Mechanics
- TSSA Welding Training Workshop

Code Knowledge:

- ASME Section VIII-1, VIII-2, VIII-3, I, IV, B31.1, B31.3, B31.5 various other ASME standards, API 530

Work Experience:

January 2008 to Present: **Pressure Vessel Engineering Ltd**

- October 2013 to Present: **Senior Mechanical Engineer**
 - o Similar to below
- September 2008 to October 2013: **Mechanical Engineer**
 - o FEA on various pressure equipment including:
 - Fatigue Analysis
 - Linear and nonlinear analysis
 - Seismic analyses.
 - o Perform code calculations using commercial pressure vessel software
 - o 3D modelling and pressure vessel drafting
 - o Assist clients with ASME and CRN compliance
 - o Review and markup drawings for ASME compliance
 - o Design and analysis of pressure equipment using FEA and analytical methods
 - o Fatigue assessment of pressure equipment per ASME VIII-2
 - o Solid models and drawings
 - o Consulting with customers regarding Canadian registration numbers (CRN)
 - o Peer review of engineering work prepared in house and by third parties

Education

Graduated in 2008 - Bachelor of Applied Technologies in Mechanical Systems Engineering
Conestoga College Institute of Technology and Advanced Learning

Professional Credentials

Licensed Professional Engineer in the province of Ontario, Alberta, British Columbia, and Saskatchewan