



## Alan Towers Engineering Inc. Brochure

- Provide Engineering support for pumps and hydro generator improvement, failure analysis, maintenance, disassembly and reassembly, alignment, balancing, commissioning, upgrades, and life extensions.
- Registered as a Professional Engineer in British Columbia, Northwest Territories and Nunavut, Alberta, Yukon, Saskatchewan, and Ontario. Permit to Practice with APEGGA, APEGY, and Certificate of Authorization with APEGS and PEO.
- Machine shop experience with pumps and hydro generator maintenance.
- Field machining experience with pumps and hydro generator maintenance.
- Experience with Lean Manufacturing principles.
- Experience with ERP systems, projects, administration, estimating, production management, health & safety, quality systems, environmental, budgeting, forecasting, and invoicing.
- Category 1 Vibration Analyst.
- Just completed Canadian Welding Bureau Welding Supervisor course.
- Provide Project Management for all projects.
- Project Management Professional with the Project Management Institute.
- Professional and General Liability Insurance.
- Accounts with WCB in Alberta, BC, Saskatchewan, and Yukon.

Recent Major Projects done as Alan Towers Engineering Inc., and prior positions.

### Atco Power Joffre

- 2006 Joffre Power Station Unit 2, field disassembly of generator, remove rotor from stator and after refurbishment reinstalled, field reassembly of generator.

### BC Hydro Voith

- 2010 Revelstoke 5, designed custom tooling to machine headcover and bottom ring stationary sealing surfaces.

### Capital Power

- 2010 Mamquam 2, project managed shop refurbishment, and assisted in field reassembly.

### City of Calgary

- 2010 project managed shop refurbishment of IR pump.
- 2010 Glenmore Dam, project managed shop refurbishment of 36" check valve.
- 2010 Glenmore Dam, paper presented at Hydrovision on the Penstock valve seal engineering and upgrade at the City of Calgary's Glenmore Dam.
- 2008 Glenmore Dam, field disassembly of east valve, project managed shop refurbishment, field reassembly, and life extension.
- 2007 Glenmore Dam, field disassembly of west valve, project managed shop refurbishment, field reassembly, and life extension.
- 2005 Glenmore Dam inspection of 12' diameter East and West discharge of water valves.



#### Fortis

- 2009 South Slokan 1, project managed shop refurbishment, greaseless conversion and life extension upgrade.
- 2009 South Slokan 3, project managed shop refurbishment, greaseless conversion and life extension upgrade.
- 2008 South Slokan 2, project managed shop refurbishment, greaseless conversion and life extension upgrade.
- 2006 Waneta 4, project managed shop refurbishment, life extension upgrade.
- 2005 Lower Bonnington 3, project managed shop refurbishment, greaseless conversion and life extension upgrade.

#### Northwest Power Corporation

- 2005 Snare Rapids, project managed shop refurbishment, life extension upgrade.

#### OPG Voith

- 2006 Abitibi Canyon 5, project managed shop refurbishment, greaseless conversion and life extension upgrade.
- 2005 Abitibi Canyon 4, project managed shop refurbishment, greaseless conversion and life extension upgrade.

#### OPG

- 2007 Abitibi Canyon 3, project managed shop refurbishment, greaseless conversion and life extension upgrade.

#### Rio Tinto Alcan

- 2013 Kemano, Backup Tunnel Project commissioning (6 - 11ft Ø butterfly valves).
- 2013 Kemano, removal of old and installation of 2 new 225 ton cranes.
- 2011 Kemano 7, field alignment of unit and assisted in reassembly.
- 2010 Kemano 1, field alignment of unit and assisted in reassembly.
- 2008 Kemano 4, field alignment of unit and assisted in reassembly.
- 2007 Kemano 5, field alignment of unit and assisted in reassembly.

#### SaskPower

- 2011-2012 Coteau Creek 1, balancing, unit trouble shooting.

#### TransAlta

- 2014 Rundle 2, Project Engineer unit disassembly and reassembly, runner repair.
- 2014 Generator performance testing Ghost 4 and Brazeau 2.
- 2013 Cdam upgrade and Cascade governor systems.
- 2012 Surge Engineering, working on Engineering backlog.
- 2012 Bighorn 1, pre-upgrade and life extension unit inspection.
- 2012 Spray 1, investigated cavitation event on turbine components and managed repair, balancing and commissioning.
- 2012 Kananaskis 2, assisted field disassembly, reassembly, alignment, and commissioning.
- 2012 Kananaskis 1, unit alignment.
- 2010 Horseshoe 3, project managed shop refurbishment, life extension upgrade.



- 2010 Horseshoe 2, project managed shop refurbishment, life extension upgrade.
- 2010 Horseshoe 1, project managed shop refurbishment, life extension upgrade.
- 2010 Kananaskis 3, project managed shop refurbishment, greaseless conversion and life extension upgrade.
- 2009 Horseshoe 4, field disassembly project managed shop refurbishment, field reassembly, greaseless conversion and life extension upgrade.
- 2008 Kananaskis 1, project managed shop refurbishment, greaseless conversion and life extension upgrade.
- 2008 Spray 1, project managed shop refurbishment, greaseless conversion and life extension upgrade.
- 2007 Cascade 1, field disassembly project managed shop refurbishment, field reassembly, greaseless conversion and life extension upgrade.
- 2007 Ghost 2, project managed shop refurbishment, greaseless conversion and life extension upgrade.
- 2006 Rundle 1, field disassembly project managed shop refurbishment, field reassembly, greaseless conversion and life extension upgrade.
- Minor projects on Bighorn, Bearspaw, Barrier, Cdam, Taylor Chute, and Brazeau units.

Voith

- 2015-2016, installation of 2-30MW Peltons for Alterra at Jimmie Creek.