

Edward (Ted) S. Beardwood (ESB)

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APPLIED SKILL SETS

45 years of experience in the industrial water conditioning industry that has ranged from Full Service, Sales Management, New Construction and Commissioning of Thermal Systems, Laboratory Management, Research & Development, Marketing, and Consulting.

Responsibilities include the development of products and problem-solving methods for the prevention of scale, corrosion, fouling, and microbiological growth applied to aqueous heat transfer and process systems. EH&S, governmental and environmental regulatory compliance, product quality, corrosion failure analysis, pretreatment evaluations and consulting are also within the job activities.

Production of many internal and external papers, manuals, training materials and patents. Presentations have been provided to technical societies such as NACE International, ASME, IWC, EPRI, IDEA, CTI and the International Fouling Conference (managed by the United Engineering Foundation, now HTRI).

Research and Development, Consulting, Product Application Performance and Failure Analysis are global in nature.

EDUCATION

Honors Bachelor of Science

1976

University of Western Ontario, London, Ontario, Canada

- Mainly mathematically applied (i.e. physical) chemistry and mathematics.

EMPLOYMENT

March 2019—Present

Founder and Principal Consultant at Beardwood Consulting & Technologies Inc (BC&T Inc), a global consulting practice associated with industrial water treatment, both chemical and physical methods.

See the website for the scope of work available and practiced by Edward S. Beardwood;
<https://www.bctinc.org>.

2008—March 2019

Senior Global Applications Consultant (Solenis LLC); consultation and training to customers, prospects, company sales, R&D and technical applications personnel on a global level as well as addressing the organization's highest level of concerns globally.

1985—2008

Technical Director of Canada's Ashland Water Technologies division of Ashland Canada Inc. Reorganized all laboratory and product management support for all product lines (i.e. water treatment, marine, additives, automotive and pulp and paper) in Canadian commerce. All ISO accreditation work, product stewardship, process services, government approvals of products, labeling, MSDS's, product cut sheets, reagent and test kit manufacture, product rationalization/standardization, product stewardship, acquisition uptake, product quality resolutions, product application consulting, sales cycle assistance, product development and (Global R&D), new product introductions, application guardrail development, field analytical equipment and product selection sheets were supported by this group of 12 people in Canada. Root cause failure analysis, corrective action and validation are directly handled by ESB. By 1995 ESB was both managing the Canadian Technical Department while operating at a run rate of 40% out of the country work, providing consultation and training to customers, prospects, company sales, R&D and technical applications personnel on a global level as well as addressing the organization's highest level of concerns globally.

1978—1985

Service Engineer (78/79), then Sales Representative (80-83) and then Area Manager (83-85) for Dearborn Chemical division of W.R. Grace. Worked in the customer service laboratory for 6 months then transferred out to handle 3 sales territory service requirements including full service. While operating as a sales rep, I field trained new hires between their laboratory and sales territory posting, also worked design build contractors (EPC's), consulting engineers and general and mechanical contractors in blue print take-offs of new construction bid jobs, sold and started up such jobs. Sold and started-up as well as trouble shoot pretreatment systems by Anderson Water (became Christ Water, then Nalco division of Ecolabs). Managed and trained 2 more sales territories and a common service rep (83-85) as an Area Manager. Met all sales budget forecasts and only 1 account was lost during this 7-year run.

1976—1978

Territory Salesman for Specialty Chemicals Limited. Sold water treatment chemicals for boiler, cooling, heating, chilled and HVAC systems. Started up new construction projects sold through head office. Met sales forecast and no lost accounts.

Note:

- Dearborn was purchased by Betz, which was then purchased by GE (became GE Water), then Suez and is now owned by Veolia.
- Specialty Chemicals was purchased by Ashland Chemical and rolled into their Drew Division. The Drew Division became Ashland Water Technologies and then Ashland Hercules.
- Ashland Hercules Division was sold to CD&R and was renamed Solenis LLC now owned by Platinum Equity.

PROFESSIONAL MEMBERSHIPS

- Institute of Power Engineers (IPE, Canadian, retired from)
- Chemical Institute of Canada (CIC, retired from)
- Refrigeration Service Engineers Society (RSES)
- National Association of Corrosion Engineers International (NACE, now AMPP),
- American Society for Testing and Materials International (ASTM)
- Optimist International (retired after 31 years of service)
- Association of Water Technologies.

PATENTS

Patents to date are 14 in number (plus 10 outstanding records of invention), about 1 every 2 years from 1986 on. A list and outline of patents is available upon request. 30+ products by ESB are still being sold after numerous product line consolidations. The patent synopsis and patent numbers are provided in ESB's "[LinkedIn Profile](#)".

PUBLICATIONS

As of January 2022, there are 280 publications which began in 1985 after leaving sales. The publications range from technical bulletins based upon poor applications and how to generate the performance required (based upon my F/A type investigations), to operating and maintenance manuals for equipment, to specialized subjects to improve understanding and expertise in the industries served, to purpose built papers to launch new products, processes or concepts to the industries served (i.e. pseudo-techno marketing) and the last 2 are really designed to enhance the brand "Company XYZ" marketed as both knowledgeable and worthy competitors with integrity. There is an associated subset of 204 training and presentation companions to this that would take a good presenter 350 hours to present. A list of all tech bulls, papers, manuals and presentations is available upon request. Produced the "Field Service Manual" and "Core Water Treatment Home Study Course" for new employees and was the editor of a number of chapters in the "Drew Principals of Water Treatment" handbook. Samples of a few are on the BC&T Inc website, <https://www.bctinc.org>.

PROFESSIONAL RECOGNITION

- Working member of ASME PTC-31; Performance Test Code for High Purity Water Production.
- Past Vice Chair & Chair of NACE International, formerly STG-11, now SC 08, "Water Treatment".
- Past Vice Chair & Chair of "ASME Research and Technology Committee on Water and Steam in Thermal Systems" and past Chair of the "Water Technologies Subcommittee".
- IPE Honorable Service Award, 1982 (Educational Programs Director 1979 – 1985)
- Dearborn Chemical; District Technical Excellence Award 1983
- Three time "Circle of Champions" award winner at Drew Industrial Division of Ashland Inc. 1990 for "Meritorious Contribution", 1991 for "Technical Excellence", the Jessie Beecher Award and again in 2003 for "Technical Excellence". While the Beecher Award is available annually, it is not granted annually, even if nominated, the nominee may not receive the award based upon senior staff evaluation.
- Chairman's Award 2005; Sonoxide
- 'Pinnacle Award' winner in 2009 and 2017.
- Ontario Volunteers Award for 25 Years of Continuing Community Services in the town of Aurora and associated with the Optimist Club, 2011.
- International Water Conference Merit Award 2015
- Phoenix Award 2016; SA Brazil.
- "Pinnacle / Life Achievement Award" winner in 2017.

OTHER NOTORIETIES

Interactions with consultants and OEM's that influence the industry, namely, Alstom, Siemens, Nooter Erikson, Homeyer, Water Technologies and Associates, Arthur Freedman and Associates, Pickorious and Associates, Cyrus Rice, Sheppard T Powell, MM Engineering, Structural Integrity.

Anthrax Remediation, Poultry Pathogen Processing with Chlorine Dioxide, Physical Treatment of aqueous fluids with Ultrasound, Performance Based to Knowledge Based Control for Cooling and Boiler Water (Initially conceptualized and defined in 1993), Food waste recycle into animal feed (1994). Handled IP with corporate lawyers and the patent's office/examiner including IP of others. Handled potential law suits up to the end of the discovery stage with corporate lawyers.

40% annualized Out of Office – Out of Country travel since 1995, making calls at existing customers or prospects to consult, ID problems, provide corrective solutions and validation methods (run rate of 50 customer + 50 prospect sites and reports on such per year), presenting at technical symposiums and doing technical society work.

Reformatted the set-up customer service, QC and RnD laboratory facilities in Canada, to reduce turnaround time, improved produced product quality and systematically filed for 1% of total sales in RnD tax credits. Installed both recipe management process for new / existing products that were integrated into DSL/NSN compliance, as well as, MSDS and Labeling creation based upon WHMIS and TDG compliance. Installed a reagent and test kit manufacture operation that generated \$500,000 profit per 10 million dollars of chemical sales(in 1991 dollars). Very favorable Lominger 360-degree Feedback results over the years (final assessment; no blind spots). Obtained Government in 1986 for the development of All Organic new technology.

Managed 4 company acquisition uptakes, ensuring WHMIS, TDG and DSL compliancy, established min/max, pre-consolidated raw materials and products and worked the time line of 12 to 24 months to remove special brands and convert to DID brands. Developed country, law, divisional chemical specific Product Stewardship Program and training of such. Four (93, 96, 00, 04) global product line and raw material consolidations to reduce complexity, SKU's and the associated costs per SKU.

Provided training of technical applications and sales personnel at company meetings and also customers and prospects at company funded seminars. Water Treatment and Combustion Teachings over the years associated with Fanshaw College, Technical University of Nova Scotia (TUNS) and Educational Programs Innovation Centre (EPIC).

Additional notorieties can be found in Edward Bearwood's "[Linkedin](#)" Profile.