E.S. Fox Limited Mining Capabilities



COMPANY CONTACT

E.S. Fox Limited — Mining www.esfox.com 905-354-3700 x1210

HEAD OFFICE

P.O. Box 1010 9127 Montrose Road

Niagara Falls, Ontario L2E 7J9 TELEPHONE: 905-354-3700 WEBSITE: www.esfox.com





SERVICES

- ENGINEERING
- FABRICATION
- STRUCTURAL DESIGN
- STRUCTURAL STEEL ERECTION
- BRIDGE DESIGN
- MILLWRIGHTING | RIGGING
- BOILERMAKING
- MECHANICAL
- ELECTRICAL
- SHEET METAL
- REFRIGERATION
- HVAC



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E.S. Fox Limited

CORPORATE OVERVIEW

Since 1934, E.S. Fox Limited (ESFL) has set the standard for safety and quality in the fabrication and construction industry. ESFL, a privately owned, Canadian, multi-trade company, providing a single source for Industrial, Institutional, Commercial, and Power Generation projects. With over 3.0 million direct-hire man-hours last year, we self-perform Structural Steel Fabrication and Erection, Mechanical, Electrical, Sheet Metal, HVAC, Refrigeration, Millwright / Rigging, and Boiler Making.

The strength of our company stems from the vast experience of its people, the integration of a variety of skilled trades, and dedication to total control of construction through computerized planning and monitoring techniques.

ESFL has established a reputation for high quality workmanship, operational flexibility, efficiency, and timely project completion.

CONSTRUCTION CAPABILITIES

As a fully integrated, multi-trade construction firm, E.S. Fox Limited provides clients with a single source solution for their detail engineering, fabrication, construction, and maintenance needs. We are a solutions based provider that delivers a superior level of service from "cradle-to-grave," as we offer multi-trade, service oriented solutions for all your ICI and power generation projects.

FABRICATION CAPABILITIES

E.S. Fox Limited is proud to operate three state-of-the-art fabrication facilities across Ontario. At our main fabrication facility in Port Robinson, Ontario, we offer over 83,000 square feet of production space. We work to the highest standards to produce Cryogenic Cold Boxes, Pipe Spools, Modules, and Pressure Vessels. With over 800 weld procedures and over 40 weld certifications including nuclear, E.S. Fox Limited continues to be a leader and a symbol of Canadian strength and tradition in the supply of Quality Fabrication Services for the Industrial, Commercial, Institutional, and Power Generation markets for over eight decades.



E.S. Fox Limited **Environmental Health and Safety**

SAFETY CULTURE

At ESFL, employee safety, protection of the environment, and work quality are the main focus of our safety culture. Both management and employees work together in an effort to further advance knowledge of safety and incident prevention. Together we work to ensure a safe work environment for all. Our employees believe in the fundamental principle that safety is everyone's responsibility.

One of our core values is to "Prevent the Event." Incident prevention is the integral part of every job with the safety and well-being of each individual the number one priority.

SAFETY PROGRAM KEY ELEMENTS

- Corporate Safety Manual
- Site Specific Safety Plans
- Orientation and Training
- Incident Investigation
- **Lessons Learned Bulletins**
- Job Safety Analysis
- Workplace Inspections
- Senior Management Review

- Safety First Attitude
- Trending and Analysis
- **Setting Objectives and Targets**
- Safety Workshops
- Mentoring Program
- J.H.S.C.
- **Strong Communication**
- Accountable Supervision
- Safety Meetings







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E.S. Fox Limited

Quality Assurance



ISO

- ISO 9001:2015
- ISO 14001
- ISO 18001

CWB

Structural Steel CWB W47.1 Div. 1

Structural Aluminum CWB W47.2 Div. 1

CSA

- CSA N285.0 Nuclear Class 1,2,3, & 4 Parts, Components & Support (Shop & Field)
- CSA N285.0 Nuclear Material Supply Ferrous and Non-Ferrous (3 Locations)
- CSA N286-12 Nuclear
- CSA N299 1 2016
- CSA B51 Boiler, Pressure Vessels & Pressure Piping & Repairs (Shop & Field)
- CSA B51 Category A, B, C, E & H Type Welded Non-Welded Fittings (Shop & Field)
- CSA B51 Hot Tap & Line Stopping (Shop & Field)
- CSA Z7396. 1-17 Medical Gas Pipeline Systems Part 1

ASME

- National Board Registration for ASME Section III, R, VIII (Shop & Field)
- ASME Section III, Division 1: N, NPT, NA, NS
- ASME Section VIII, Division 1 & 2 Pressure Vessels (Shop & Field)
- ASME U, U2, S, & PP Stamps (Shop & Field)
- ASME U, UM Stamps: Edmonton Division (Shop & Field)
- ASME B31.1 Power Piping (Shop & Field)
- ASME B31.3 Process Piping (Shop & Field)
- ASME B31.5 Refrigeration Piping (Shop & Field)
- CSA B52 Mechanical Refrigeration Code









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E.S. Fox Limited

Locations & Facilities

Head Office: Niagara Falls, ON —240,000 square feet

Branch Location	Capabilities		Square Footage
Darlington, ON	Construction		
Hamilton, ON	Construction	Fabrication	3,000 sq. ft.
Kingston, ON	Construction	Fabrication	17,000 sq. ft.
Port Robinson, ON		Fabrication	83,000 sq. ft.
Sudbury, ON	Construction		
Thunder Bay, ON	Construction	Fabrication	5,000 sq. ft.
Tiverton (Kincardine), ON	Construction		
Vaughan (Toronto), ON	Construction		
Oshawa, ON	Construction		
		Total Fabrication	108,000 sq. ft.



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We provide the following construction services:

- Piping
- Electrical
- Structural Steel
- Ironworkers
- Millwrights
- Boiler Making
- Sheet Metal

- HVAC
- Instrumentation & Controls
- Operating Engineering
- Insulation
- Carpenters
- Labourers
- Refrigeration



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FABRICATION CAPABILITIES

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Modules and Vessels

- Process Modules and Equipment Skids
- Cryogenic Air Distillation Columns for: Oxygen, Nitrogen, and Argon
- Air Liquefaction / Separation
- Hydrogen Purification
- Catalyst Reclamation
- Oil/Water Purification

Pipe Fabrication

- Stand alone contracts & support of field projects and other fabrication projects
- Area of expertise is high alloy materials: Stainless Steel, Aluminum, Titanium, Chrome-Moly
- Carbon Steel up to 84" Diameter
- Victaulic—Roll Grooved Piping up to 48" Dia.
- Jacketed Pipe



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E.S. Fox Limited Capabilities

PORT ROBINSON SHIPPING

We are unique in that we have access to the Welland Canal at our Port Robinson facility. This includes our own loading docks, where we can ship oversized modules from up to 800 tons to any water accessible location in the world.

Transportation Access & Dock Facilities

- ◆ 1/2 mile from Highway 406 extension providing direct access to Queen Elizabeth Highway
- ◆ 1/4 mile from Canadian National Railroad line
- Heavy Barge Roll On/Roll Off Loading Dock extending into the Welland Ship Canal turning basin providing 10' draught and 400 ton capacity
- Heavy Lift Dock of 800 ton capacity, dock face 475 ft. draught 25 ft. The dock can accommodate maximum Seaway length vessels
- The site incorporates 5 acres of level, well compacted, crushed stone assembly area



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Rainy River Gold Mine MPEI Grinding Building—Structural

Client

New Gold Inc.

Scope

- Supply & Installation of Structural Steel and miscellaneous metals
- Cladding, Roofing, Metal Deck, Grouting, Windows, Man Doors, Overhead Doors
- 6,000 Tons of structure total
- Erection of (15) modules consisting of pre-fabricated structural steel frames c/w equipment, mechanical, and electrical services

Trades

Ironworkers | Sheet Metal

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Rainy River Gold Mine MPEI Grinding Building—Interior

Client

New Gold Inc.

Scope

ESFL was the Prime Contractor for the MPEI Contract 015—Crusher Building for a new Gold Mine in Northern Ontario. Project Management, cost control, safety, scheduling, and quality control was performed by the site project team and supported by our Thunder Bay and Niagara offices. The trade manpower, staff, support and subcontracts will exceed 150,000 man-hours.

There was no permanent power; ESFL supplied and maintained generators and a temporary power grid for the offices, warehousing and worksite. ESFL was also in charge of the supply and installation of all piping, electrical, and HVAC systems as well as the installation of all major owner supplied equipment associated with the following:

- ◆ SAG Mill
- Ball Mill
- Pebble Crusher
- ♦ Pre-leach Thickener
- ◆ Concentrator
- Cyclopack
- ♦ Screens

- Conveyor Systems
- Transformers and MCC's
- ♦ Modular Electrical Rooms
- ◆ Intensive Cyanidization Unit
- Process Pumps
- Wet Scrubber Cyclone

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Clarabelle Mill Site—CORe Flotation Building

Client

Vale Canada

Scope

- E.S. Fox Limited was the Primary Contractor for Vale's Challenging Ore Recovery (CORe) project. The CORe project is an integration project within the Clarabelle Mill in Sudbury, ON
- The new flotation circuit will improve nickel recovery from the existing ore while improving operations and enabling better control of concentrate grades to the smelter.
- Building floating slabs and floor slab elevations
- Pump and tank bases
- Structural Steel for engineered supports, stairs and platforms
- Full HVAC and controls, MUA's and heaters
- All Mechanical installations including 20 100m³ flotation cells, pumps, tanks, PO columns, blowers, and motors

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Clarabelle Mill Site—CORe Flotation Building (continued)

Client

Vale Canada

Scope

- Blower Air, Plant Air
- HDPE Drains, Launderer and Sample Piping, Slurry Piping
- Reagents including Sulphuric Acid, Lime, NaS, Xanthate and Frother
- Instrument Air
- Natural Gas
- Process and Gland Water systems
- Clean and Potable Water including Safety Showers
- Fire Suppression System
- Compressed air and Hydrostatic testing of piping & components to TSSA
- Pre-Operational Support and Turnover for start-up & commissioning
- 400 contract trades on site

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Clean AER Project

Client

Vale Canada

Scope

ESFL was the Primary Contractor for Vale's Convertor Flues and FRP Ducting for the Clean AER Project. The specific scope was related to the supply and installation of all primary and secondary off-gas flue systems.

- Demolition work as required
- New structural towers for ducting support (approx. 1200 ton)
- New Carbon Steel & FRP Ducting including saddles, guides, flanges, nozzles (400 Ton)
- New FRP Ducting (approx. 920' of 66")
- Expansion joints and dampers
- Effluent piping
- 24" cooling water supply and return
- Misc systems including flue drains, natural gas, plaint air, vacuum
- Power and control wiring including cable tray
- Piping Heat Tracing
- Instrumentation

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Mosaic Potash K3 Production Shaft Head Frame

Client

Associated Mining Construction Inc.

Scope

- Supply and installation of a new production shaft headframe, collar house and muck pad building for Mosaic Potash's new mine located in Esterhazy, Saskatchewan
- The overall tonnage on the project was 820 tons with the head frame rising to 132' over the mine shaft

Service Shaft Head Frame

- Supply and installation of steelwork primarily located within the concrete core of the Service Shaft Headframe
- Additional steelwork was also provided for an external crane runway and a muck pad building
- The overall tonnage for this portion was 260 tons of steel

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