

## Appendix C

### Pre-purchased Equipment



**FOURNIER INDUSTRIES INC.**  
**Slump test GUARANTEE**

Date: March 2, 2023

**The City of Winnipeg**

North End Water Pollution Control Centre  
2230 Main St, Winnipeg, MB R2V 4TB

**Attention: Mr. Matt Kowalski, Water/Wastewater Process Engineer**

Telephone: +1 204-928-9258

[matt.kowalski@aecom.com](mailto:matt.kowalski@aecom.com)

Project: **The City of Winnipeg,  
Supply of Rotary Press and Appurtenances  
Tender No.1003-2022**

Manufacturier: **Fournier Industries Inc.**

Equipement: **Two (2) Rotary Presses Model 3(4)900/4000CVP  
Three (3) channels units expandable to four (4) channels units.**

Fournier industries wish to confirm and guarantee that:

- ❖ the concrete slump requirement will be met at all times from the dewatered biosolids (cake) discharging of the Rotary Press.

By:

Name and Title:



**Francis Caouette**

**Sales Director - Dewatering equipment**

Date:

March 2, 2023



Thetford Mines (Quebec) Canada  
February 24, 2023

**The City of Winnipeg**  
North End Water Pollution Control Centre  
2230 Main St, Winnipeg, MB R2V 4TB

**Attention: Mr. Matt Kowalski, Water/Wastewater Process Engineer**

Telephone: +1 204-928-9258

[matt.kowalski@aecom.com](mailto:matt.kowalski@aecom.com)

**Subject: The City of Winnipeg, Supply of Rotary Press and Appurtenances**  
**Tender No.1003-2022**  
**Item No. 1 - Rotary Press System and Appurtenances-Section 44 46 16**  
**Item No.2 - Polymer Feed Skid and Appurtenances -**  
**Section 43 21 20 and 43 21 20A**  
**Item No.3 - Storage - Section 01 61 00**

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Dear Mr. Kowalski,

In reference to Tender No.1003-2022 for the supply of dewatering equipment for City of Winnipeg and according to our local representative agent, Waste'n Watertech Ltd, Mr. Dominic Janssen, we are pleased to submit our scope of supply for an integrated sludge dewatering system. This proposal respects design criteria, advantageously addresses your evaluation criteria and answers additional considerations.

**[You will find attached the documents forming an integral part of our proposal:](#)**

- Cover Letter (this document)
- Form A - Bid/Proposal
  - 1003-2022\_Form A: Bid/Proposal
  - Scope of Supply
  - Appendix A: Drawings
  - Appendix B: Reference
  - Appendix C: Lab & Pilot report
  - Appendix D: Brochure & System Description
  - Appendix E: Certifications
- Form B – Prices:
  - 1003-2022\_Form B\_Prices

**[Quotation includes the following information:](#)**

Fournier Industries is located in Thetford Mines, QC, Canada and has been doing business since 1960. Offering high quality equipment, we are recognized for our commitment and proficiency. Fournier Industries has over 20 years of extensive experience. The Fournier Original Rotary Press equipment has been developed, designed, and manufactured by

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Fournier Industries since 1989 and this is reflected in the years of experience of our project personnel.

When focusing on the real-world application experience of our personnel, no other Rotary Press manufacturer can claim to have the expertise that comes with having delivered over 500 units worldwide, please refer to Appendix B for References and additional information.

We are proposing a Rotary Press dewatering system, currently the most advanced dewatering technology. Its sustainability features include low energy and polymer usage and high cake solids. Operation is automated for low attendance. Wear parts and maintenance are both simple and minimal. The Fournier Rotary Press is built for heavy industrial service and designed to handle residual sludge with a variable sludge quality or consistency.

The following are certain features of the Fournier Original Rotary Press that have been developed throughout numerous years that distinguish us from our competitors:

- A steel fabricated, adjustable sludge mixer (flocculator) is utilized instead of a PVC static mixer, providing optimal polymer feed, reducing operating expenses.
- The filtering elements are made in 316 stainless steel and have a non-clogging design.
- Multiple stainless-steel scrapers are installed in each dewatering channel to help keep the filtering elements continuously clean.
- The wash cycle uses less than 300 gallons per day, per channel. There is no need for continuous or semi-continuous wash water during the dewatering cycle.
- A moisture sensor is provided in the cake trough.
- The control system allows the Original Rotary Press to operate fully automatically, allowing to increase daily runtime and sludge processing.
- Modular channels and expandable design for redundancy and ease of maintenance.
- The Fournier Rotary Press is entirely manufactured at our facilities in Thetford Mines, QC, located in North America. An inventory of all our Rotary Press wear parts is kept and can be on-site within 24 hours using next day air service.
- The Rotary Press maintenance does not require a highly qualified operator and can be performed with the channel installed on the main gearbox shaft. The spare parts are also very inexpensive.
- Electrical power requirements of Rotary Press dewatering systems are extremely low. The Rotary Press units proposed are each equipped with a 7.5 HP electrical motor which are operated using a variable speed control, reducing the energy usage.



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Fournier Industries guarantee all the training requirements outlined in tender Format\_Specification. Fournier's Industries technicians are highly trained and qualified to form the City of Winnipeg crew.

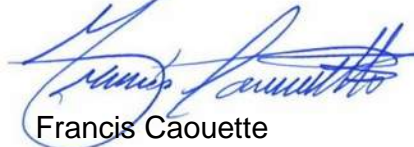
Fournier has experienced technicians that perform several start-ups every year, and we guarantee that the technicians who will be on-site will have over two (2) years of experience with Fournier Press servicing.

Fournier Industries has considered section B13-Qualification in Tender.

Should you need any specific arrangement or more detailed drawings, we will be pleased to provide them upon request.

Please do not hesitate to contact us for any additional information you may require. Hoping that everything is to your entire satisfaction, please accept our best regards.

**FOURNIER INDUSTRIES INC.**



Francis Caouette  
Dewatering Equipment Sales Director

FC/

c.c.:

Mr. Francis Caouette, Dewatering equip. Sales Director, Fournier Industries Inc., Phone (418) 423-4241 X 3358

Mr. Mathieu Ouellette, P. Eng., Dewatering equip., Fournier Industries Inc., Phone (418) 423-4241 X 3457

Mr. Dominic Janssen, Waste'n WaterTech Ltd, Cell. (204) 998-3349



**THE CITY OF WINNIPEG  
Tender No.1003-2022  
Supply of Rotary Press and Appurtenances**

**Form A: Bid/Proposal  
(All required entries)**

**FORM A: BID/PROPOSAL**  
(See "Bid/Proposal" clause in Tender/RFP)

1. Contract Title SUPPLY OF ROTARY PRESS AND APPURTENANCES

2. Bidder/Proponent Fournier Industries Inc.

Legal Name of Bidder/Proponent

Fournier Industries Inc.

Usual Business Name of Bidder/ Proponent as it appears on Invoice (if different from above)

3787, Blvd. Frontenac W.

Street

Thetford Mines Quebec G6H 2B5

City Province Postal Code

f.caouette@fournierindustries.com

Email Address of Bidder/Proponent

(418)-423-7366

Facsimile Number

(Mailing address if different)

Same as above

Street or P.O. Box

Same as above Same as above Same as above

City Province Postal Code

741709521RT0001

GST Registration Number (if applicable)

(Choose one)

The Bidder/Proponent is:

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person The Bidder/Proponent hereby authorizes the following contact person to represent the Bidder/Proponent for purposes of the Bid/Proposal.

Francis Caouette Sale and Development Main Director

Contact Person Title

418-333-0132 (418) 423-7366

Telephone Number Facsimile Number

4. Definitions All capitalized terms used in the Contract Documents shall have the meanings ascribed to them in the General Conditions and Tender/RFP documents.

- 5. Offer  
 The Bidder/Proponent hereby offers to perform the Work in accordance with the Contract for the price bid, in Canadian funds, set out in the Bid/Proposal.
  
- 6. Bid Security  
 Where Bid Security is required, the Bidder/Proponent provides bid security in the form of a bid bond (Form G1: Bid Bond and Agreement to Bond) in accordance with the Bid Security clause in the Tender document and agrees that it shall be held by the City in accordance with the Contract.
  
- 7. Execution of Contract Documents  
 If required pursuant to C4, the Bidder/Proponent agrees to execute and return the Contract Documents no later than seven (7) Calendar Days after receipt of the Contract Documents, in the manner specified in C4.
  
- 8. Commencement of the Work  
 The Bidder/Proponent agrees that no Work shall commence until he/she is in receipt of a notice of award from the Award Authority authorizing the commencement of the Work.
  
- 9. Contract  
 By submitting a Bid/Proposal in response to this Tender/RFP, the Bidder/Proponent certifies that it has read, understands, and agrees to the terms and conditions of this Tender/RFP and that the Tender/RFP, in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany the Tender/Proposal.
  
- 10. Addenda  
 The Bidder/Proponent certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:

No.	Add	Dated
	<u>Add 1</u>	<u>21-Feb-23</u>
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____

- 11. Time  
 This offer shall be open for acceptance, binding and irrevocable for a period of sixty ( 60 ) Calendar Days following the Submission Deadline.
  
- 12. Indigenous Self-Declaration  
 The City is requesting that Bidders/Proponents identify if their business is at least 51% owned by one or more Indigenous persons of Canada.  
 YES, 51% or more Indigenous ownership  
 NO, it is not

This information is being gathered for statistical purposes only and will not be used for purposes of evaluation.

13. Signatures

The Bidder/Proponent or the Bidder's/Proponent's authorized official or officials have signed this

24 day of February, 2023.

Signature of Bidder/ Proponent or  
Bidder's/Proponent's Authorized Official or Officials



Francis Caouette, Sale and Development Main Director

(Print here name and official capacity of individual whose signature appears above)

(Print here name and official capacity of individual whose signature appears above)



Theftord Mines (Quebec) Canada  
February 24, 2023

**The City of Winnipeg**

North End Water Pollution Control Centre  
2230 Main St, Winnipeg, MB R2V 4TB

**Attention: Mr. Matt Kowalski**  
**Water Process Engineer**  
Telephone: +1 204-928-9258  
Email: matt.kowalski@aecom.com

**Subject: The City of Winnipeg, Supply of Rotary Press and Appurtenances**  
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**Item No.3 – Storage - Section 01 61 00**

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Dear Mr. Kowalski,

In reference to Tender No.1003-2022 for the supply of dewatering equipment for City of Winnipeg, we are pleased to submit our scope of supply for an integrated sludge dewatering system.

Sludge Type & Qty	
Sludge Type	Scum From Primary Clarifiers
Total Solids (TS)	1 – 20 % TSS
Sludge Quantity	6.7 m <sup>3</sup> /h @ 5% = 335 dry Kg/h
Anticipated Performance (*)	
Throughput	111 dry-kg/h-channel
Polymer consumption	1.5-3.0 kg/ton
Cake Dryness (TS)	≥50%
Capture rate	≥95%

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To execute the above performance, the following equipment and service are suggested:

**Two (2) Rotary Presses Model 3(4)-900/4000CVP-SS304, Three-channel unit expandable to Four-channel for your future dewatering needs. Stainless Steel Construction Type 304. One duty on, One stand by Rotary Press.**

### Equipment and service

- Two (2) Rotary Presses model 3(4)-900/4000CVP-SS304
- Two (2) Flocculators
- Two (2) Lot of piping between flocculator and rotary press, c/w sludge sampler
- Two (2) Sludge flowmeters, Endress & Hauser
- Two (2) Polymer flowmeters, Endress & Hauser
- Two (2) Pressure transmitter, Endress & Hauser
- Two (2) Filtrate collector pipes
- Six (6) Cake Chutes
- Six (6) Wash water solenoids for automatic wash sequence
- Four (4) 2-way air-actuated valves for automatic sludge recirculation and dewatering
  
- One (1) Control panel including:
  - One (1) Enclosure 60”X36”X12” Panel Nema 12
  - One (1) PLC, Schneider Electric, M580
  - One (1) UPS, to maintain the PLC supply 120 min.
  - One (1) Door mount programming port
  - One (1) Laptop shelf, Hoffman
  
- One (1) Power panel including:
  - One (1) Enclosure 36”X36”X12” Panel Nema 12
  - Two (2) VFD, Schneider Electric, Altivar 930, for rotary presses motors
  - Two (2) VFD, Schneider Electric, Altivar 930, for flocculators motors
  - Four (4) VFD Keypad, Schneider Electric, c/w door mounting kit
  - Four (4) Local control, push button/pilot light, potentiometer, selector: allowing manual operation



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- One (1) Local control junction box including:
  - One (1) Enclosure 18”X16”X08” Panel Nema 4X, FRP
  - One (1) HMI, Schneider Electric, 10.4”
  - One (1) Fault Light indicator
  - One (1) Maintenance Light indicator
  - One (1) MCR push button.
  - One (1) Emergency Stop, push button.
  
- Two (2) Rotary Press, junction box including:
  - One (1) Enclosure 18”X16”X08” Panel Nema 4X, FRP
  - One (1) I/P convertor, 4-20mA to 0-6 bars, Festo
  - One (1) Valves controller, Festo
  - One (1) Air regulator, Festo
  - Three (3) Bridge / load cell convertor
  - One (1) Emergency stop, push button, deported in front of the rotary press.

### **Service**

- On site start-ups, commissioning and training assistance for a total of 80 man-hours, including 2 trips to the job site, additional services and trips may apply as per the tender.
- One lot of Submittal and O&M
- List of spare parts five (5) years:



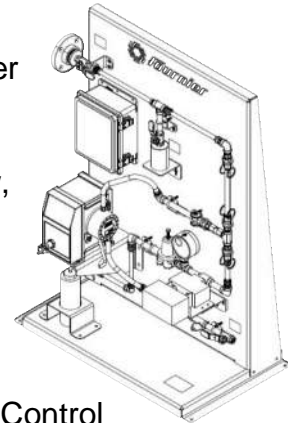
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Recommended spare parts list per channel					
Part No.	Description	Qty	Unit price	Total Price	Notes
<b>Wear parts for one (1) CVP channel</b>					
IFI-02142 (L & R)	Seal (UHMW) (2 per channel)	2	345.00 \$	690.00 \$	Required for 2nd maintenance (± 10000 hrs)
IFI-01376	Right Scraper Blade (Qty per channel)	1	37.50 \$	37.50 \$	Required for 1st maintenance (± 3500 to 6000 hrs)
IFI-01377	Left Scraper Blade (Qty per channel)	1	37.50 \$	37.50 \$	
IFI-02152	Deflector liner (Nylatron) (1 per channel)	1	580.00 \$	580.00 \$	Required for 1st maintenance (± 3500 to 6000 hrs)
<b>TOTAL:</b>				<b>1 345.00 \$</b>	<b>Can \$</b>
<b>Spare parts for one (1) flocculator</b>					
IFI-00690	Shaft seal, type LUP Manville # 8989 LUP (2 per flocculator)	2	40.75 \$	81.50 \$	Might be required for 1 <sup>st</sup> maintenance (4000 hours and up)
IFI-00691	Shaft seal, type LDS Manville # 15025 LDS (1 per flocculator)	1	38.60 \$	38.60 \$	Might be required for 1 <sup>st</sup> maintenance (4000 hours and up)
<b>TOTAL:</b>				<b>120.10 \$</b>	<b>Can \$</b>
<b>Special maintenance tools per order</b>					
SPA-026-003	Eye Bolts M12 x 1,75 x 20,5 mm (Lifting wheel device)	2	N/C	N/C	
SPA-026-002	Eye Bolts M10 x 1,5 x 17 mm (Lifting housing device)	3	N/C	N/C	
IFI-02063	Long Hex bit socket 3/8 Dr 8mm	1	N/C	N/C	
IFI-02064	Micrometer torque wrench	1	N/C	N/C	
IFI-1975	Cover supports for changing seals c/w (2) Hex. bolts M10 x 1,5 – 45 mm inox. 316	1	N/C	N/C	
IFI-1999	Shaft extension device (Seal change end shaft) Stainless tubing	1	N/C	N/C	
<b>* Prices are in Can\$</b>					

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### Inline emulsion polymer system

- One (1) Inline emulsion polymer system with the following specification :
  - Compact construction on a SS304 skid frame
  - One (1) Water pressure regulator, Need continuous water supply of 4.1 bar (60 psi)
  - One (1) Proportional Valve, 24Vdc (4-20mA)
  - Two (2) Dosing pumps, peristaltic type, Watson Marlow, 120V or 24Vdc (4-20mA)
  - One (1) Static Mixing chamber
  - One (1) Strainer
  - One (1) Junction Box
  - Programming integrated in PLC & HMI of Rotary Press
  - Additional control items located in the Rotary Press Control Panel
  - List of spare parts of five (5) years for polymer system, spare pump heads assembly including tubing and connector.
  
- On site start-ups, commissioning and training assistance during the Rotary Press start-up.
- One (1) lot of Submittal and O&M



\* System final selection and pricing to be in accordance with the final system location layout and customer request.

The above suggested equipment is illustrated on the following drawings:

- General arrangement .....: B-C-24112 Rev13
- Layout arrangement.....: D-53011 Rev 0
- Process diagram.....: D-53013 Rev 0
- Lifting illustration.....: 42261 Rev 0
- Single line diagram .....: D-51467 Rev01

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## GENERAL NOTES:

1. Our price does not include the following items:
  - a. Unloading and installation of the equipment on site
  - b. Sludge pump and its VFD (By Others)
  - c. Air compressor (By Others)

\* We could supply a proposal for the equipment described above.
2. Price is valid for a period of (60) days.
3. Price is valid for an equipment delivery within three hundred and fifty (350) Calendar days of the award of contract.
4. Price is DDP, Winnipeg, MB, Canada.
5. Standard Terms of Payment:
  - Ten percent (10%) of the contract Amount shall be paid upon approval of shop drawings.
  - Sixty-five percent (65%) of the Contract Amount shall be paid upon issuance of the Certificate of Equipment Delivery (Form 100) and the Certificate of Readiness to Install (Form 101)
  - Five percent (5%) of the Contract Amount will be paid upon insurance of the Certificate of Satisfactory Installation (Form 102)
  - Ten percent (10%) of the Contract Amount will be paid upon the insurance of Certificate of Satisfactory Training (Form T1 and T2) and delivery of the Operation and Maintenance Manual.
  - Ten percent (10%) of the contractor Amount will be paid upon the insurance o the certificate of Satisfactory System Performance (Form 103 and Form 104).
6. Equipment delivery:
  - Shop drawings: (6) to (8) weeks after Purchase Order acceptance.
  - Equipment: (45) to (55) weeks after drawing approval.
7. Technical specifications  
Any additional design requirements, technical specifications, end user standards and/or requested changes other than listed in the present proposal and acknowledged by Fournier Industries Inc. shall be technically examined and is subject to price revision.
8. Proposal version  
A more recent version of this proposal renders this present proposal invalid.
9. Cake discharge chutes will be supplied as per the Fournier Industries standard. The horizontal conveyor has to be designed to fit the standard chutes. Attachment detail will be supplied with the shop drawings submittals.

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10. Storage Costs

10 weeks prior to the equipment delivery on site, the buyer shall send a written request to Fournier Industries, who will endeavour to deliver the equipment as per the requested date. However, if the buyer does not accept, for any reason, the equipment delivery as per the requested date, the buyer will be charged a weekly storage. Fournier Industries shall provide the buyer with 14 days written notice before the storing commencement.

11. Taxes

Note that all prices mentioned above do not include any state sales and use taxes that may be imposed on the goods and/or services provided under the present agreement.

The buyer shall be solely responsible for any payment of state sales and use taxes which are imposed on the goods and/or services provided under this agreement to Fournier Industries Inc. or to the competent authorities, as the case may be, if the buyer fails to provide a valid "exemption/resale" certificate to Fournier Industries Inc.

Moreover, the Buyer shall inform Fournier Industries Inc. or any representative thereof if the buyer believes that any "sales and use" taxes might apply to the supply of equipment and services provided for under this agreement. If the Buyer does not inform the corporation and responsibility occurs, then the parties agree that the buyer will be entirely responsible for the payment of those "sales and use" taxes to Fournier Industries Inc. or to the competent authorities, as the case may be.

12. Interest and Nonpayment

The buyer will make their payments to "Fournier Industries Inc." for the items specified herein in accordance with the terms of this agreement. In the event that the buyer fails to make the payments as required, the unpaid balance shall bear interest at the rate of one-and-one-half percent (1.5%) per month until fully paid.

13. P.O. acceptance

The Purchase Order will not be accepted unless an account opening form has been properly completed and credit has been approved by the Fournier Industries financing department.

The Purchase Order will not be accepted prior to receiving, from the contractor, a copy of the contractor labour and payment bonds, established between the contractor and the owner.

The Purchase Order will not be accepted unless the firm equipment delivery date is specified on the Purchase Order.

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#### 14. Limitation of liability

Fournier Industries Inc. shall not, in any event, be liable for:

- a. damages claimed by third parties; nor,
- b. indirect, special incidental, punitive or exemplary damages, or for any economic consequential damages, including loss of profits or revenue, or the inability to realize expected savings or interruption of operations; nor,
- c. damages related to losses (i) for the use of property (ii) of financing opportunities (iii) related to business opportunities (iv) for damage to reputation, and/or (v) resulting from a decrease of productivity; nor,
- d. damages resulting from a modification to a product provided by Fournier Industries Inc. or resulting from improper use or lack of maintenance; nor,
- e. damages for an amount exceeding the lesser of (i) the amount paid to Fournier Industries Inc. for the supply of goods and/or services rendered pursuant to the agreement (the "Agreement") resulting from this bid; and (ii) 10% of the total contract price;

This limitation of liability clause applies regardless of the grounds of claims, including amongst others, breach of contract, tort or civil tort.

#### 15. Applicable Laws

This agreement is governed by the laws of the Province of Quebec, to the exclusion of any other law or regulation, also excluding the application of any conflict of law rules and of any provisions of the "United Nations Convention on Contracts for the International Sale of Goods (Vienna, 1980) (CISG)". In addition, the parties voluntarily and intentionally agree to waive any right to a jury trial for a dispute arising from this agreement or its implementations, its negotiation, verbal or written statements or from any action or behaviour of a party.

#### 16. Terms and Conditions of the order

Any current or future term or condition which would be contradictory or different from the ones provided for in this agreement will be deemed unwritten and without legal effect, which also includes any term or condition being in your Purchase Order.

#### 17. Warranty

Fournier Industries Inc. offers a warranty that every product:

- conforms to its specifications; and
- is free from defects in material and workmanship.

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The warranty period is fixed and precise, as it is for the shortest of the following described periods:

- (i) 12 months from the installation date or
- (ii) 18 months from the delivery date.

This warranty only applies if the product is used as prescribed. This warranty will be of no legal effect, nor will it be binding if the products and services are subject to improper use or are damaged as a result of an accident, modified, operated in a context that is other than the prescribed context of use, improperly maintained or is damaged by a product for which Fournier Industries Inc. assumes no liability.

This warranty is for all components of the rotary press system, whether manufactured by the rotary press manufacturer or purchased from another manufacturer to be provided as a part of the rotary press system.

This warranty replaces and excludes all other warranties and conditions, explicit and implicit, legal and contractual, including implied warranties or conditions.

This scope of supply includes Addendum 1.

Should you need any specific arrangement or more detailed drawings, we will be pleased to provide them upon request.

Please do not hesitate to contact us for any additional information you may require. Hoping that everything is to your entire satisfaction, please accept our best regards.

**FOURNIER INDUSTRIES INC.**



Francis Caouette  
Dewatering Equipment Sales Director

FC/

c.c.:

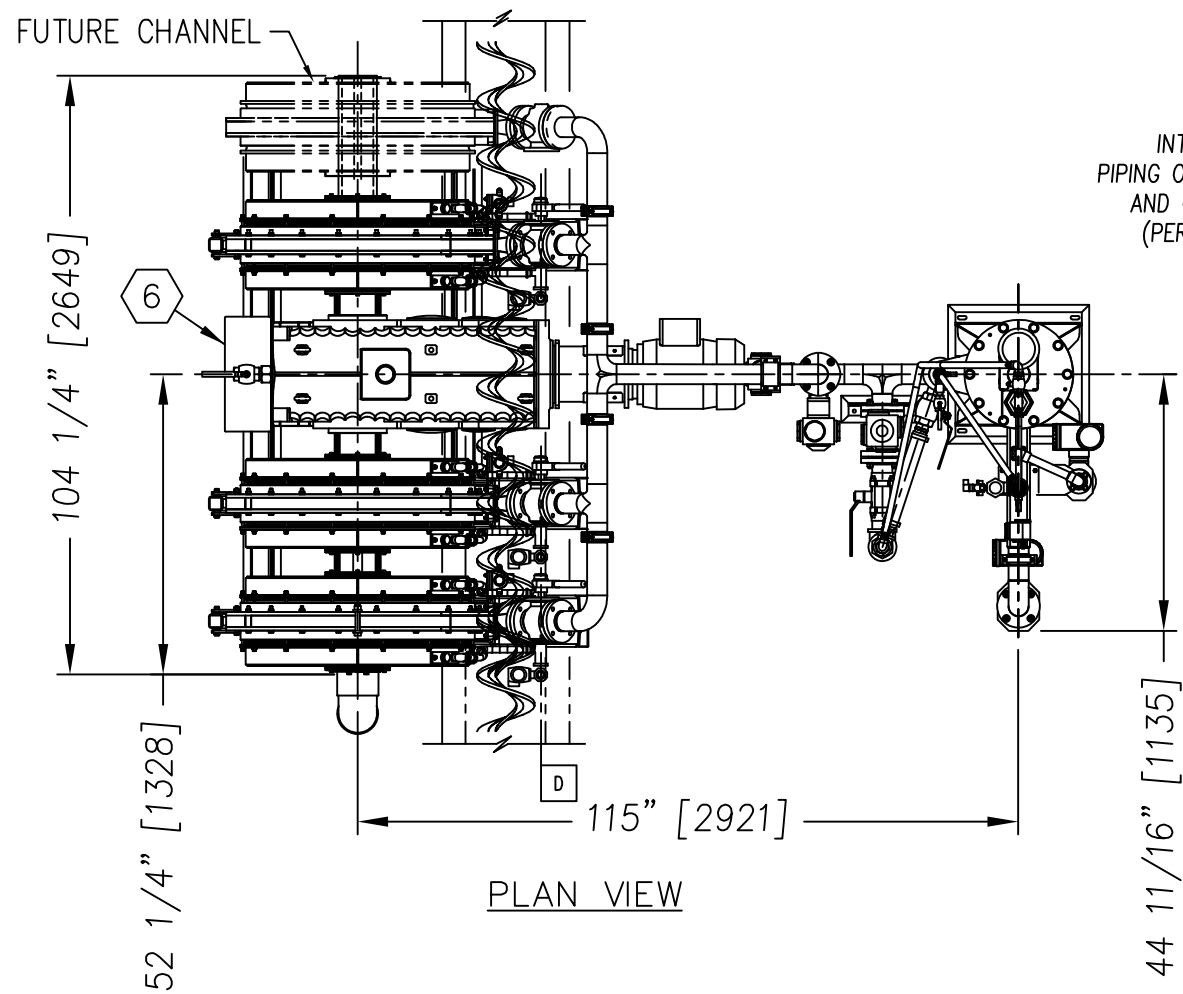
Mr. Francis Caouette, Dewatering equip. Sales Director, Fournier Industries Inc., Phone (418) 423-4241 X 3358  
Mr. Mathieu Ouellette, P. Eng., Dewatering equip., Fournier Industries Inc., Phone (418) 423-4241 X 3457  
Mr. Dominic Janssen, Waste'n WaterTech Ltd, Cell. (204) 998-3349



## APPENDIX A

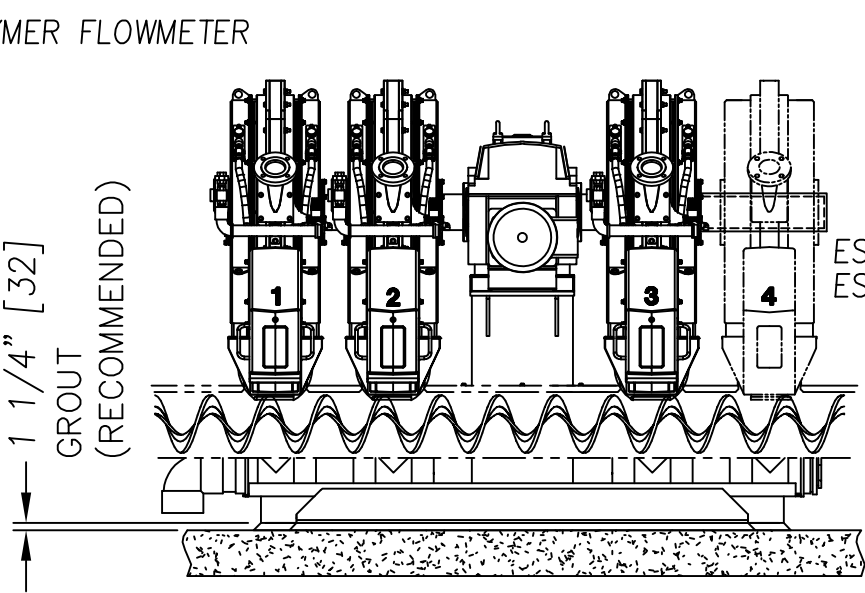
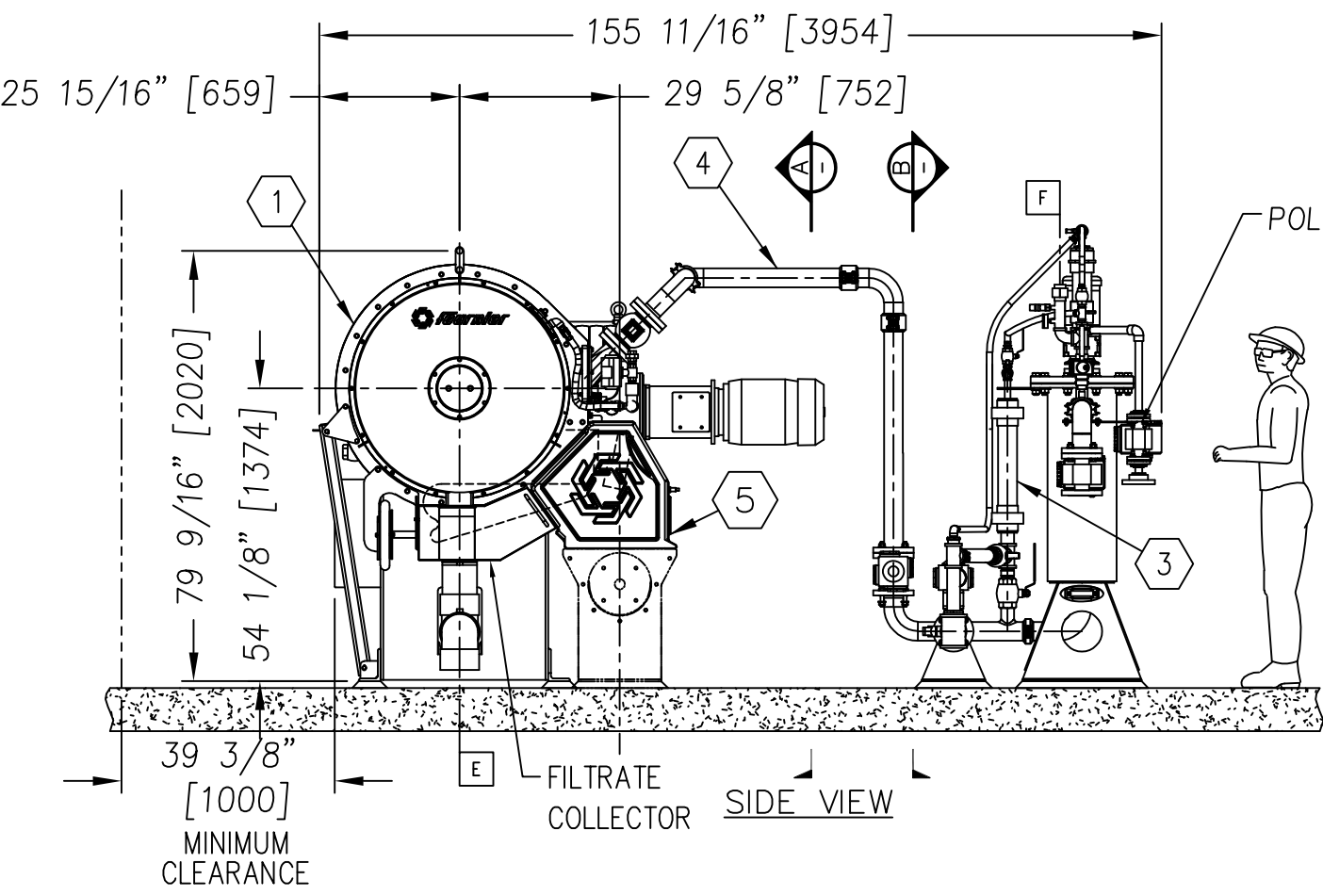
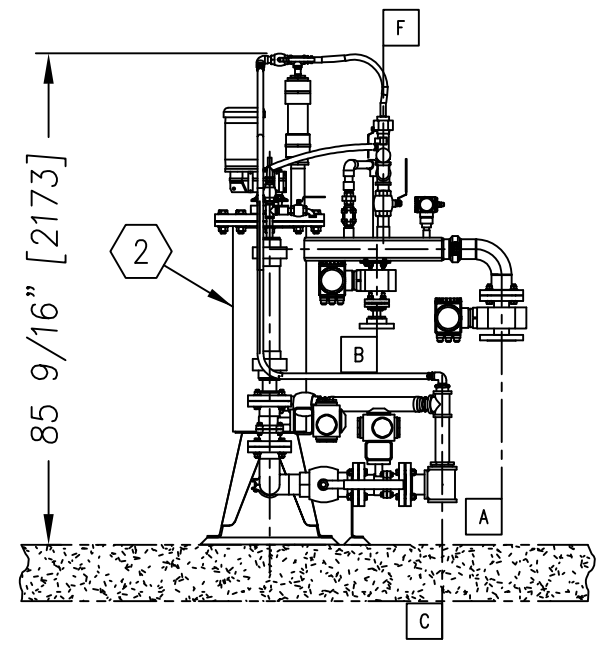
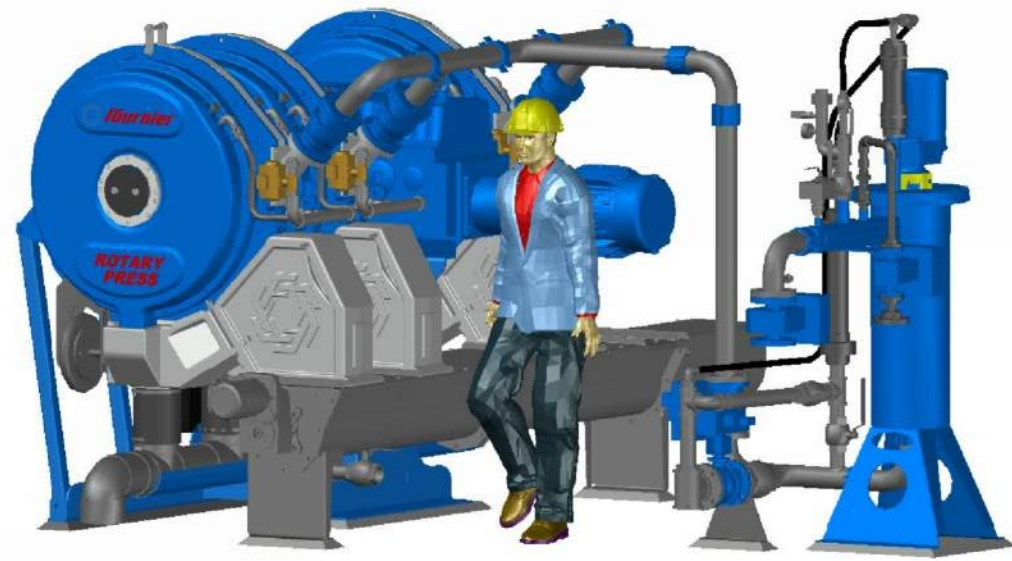
# Drawings





- INTERFACE BETWEEN PIPING OF ROTARY PRESS AND CUSTOMER PIPING (PER ROTARY PRESS)
- A SLUDGE INLET  $\varnothing 3"$  (FLANGE)
  - B POLYMER INLET  $\varnothing 2"$  (FLANGE)
  - C SLUDGE RECIRCULATION OUTLET  $\varnothing 3"$ -NPT
  - D WASH WATER INLET  $\varnothing 1"$ -NPT (3 PLACES) (ROTARY PRESS)
  - E FILTRATE OUTLET  $\varnothing 6"$  PIPE
  - F WASH WATER INLET  $\varnothing 1 1/2"$ -NPT (FLOCCULATOR)

ITEM	REF.	QTY.	DESIGNATION	MAT.	DIM.	NOTES
1		1	ROTARY PRESS MODEL 3(4)-900/4000CV			ESTIMATED WEIGHT: 4663 Kg/10258 LBS (4 CHANNELS INCLUDED)
2		1	FLOCCULATOR			ESTIMATED WEIGHT: 377 Kg/830 LBS
3		1	FLOCCULATED SLUDGE SAMPLER			
4		1	MANIFOLD			ESTIMATED WEIGHT: 152 Kg/335 LBS
5		3	CAKE CHUTE			ESTIMATED WEIGHT: 5 Kg/Un. / 10 LBS/Un.
6		1	JUNCTION BOX			



THOSE DIMENSIONS ARE GIVEN FOR INFORMATION ONLY. FINAL DIMENSIONS AND LAYOUT TO BE CONFIRMED BY CERTIFIED DRAWINGS.

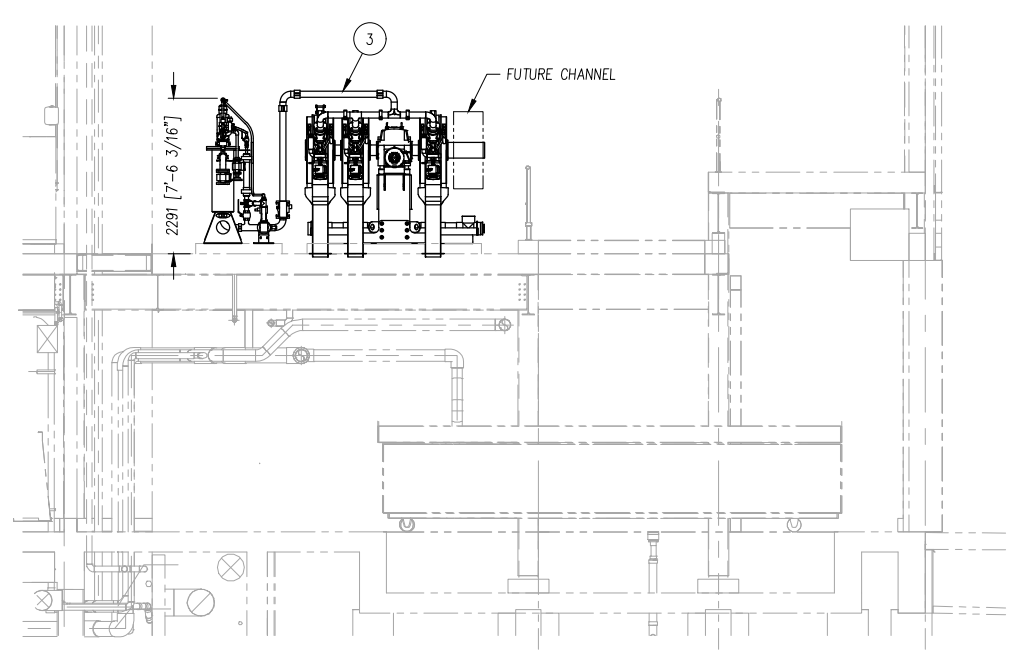
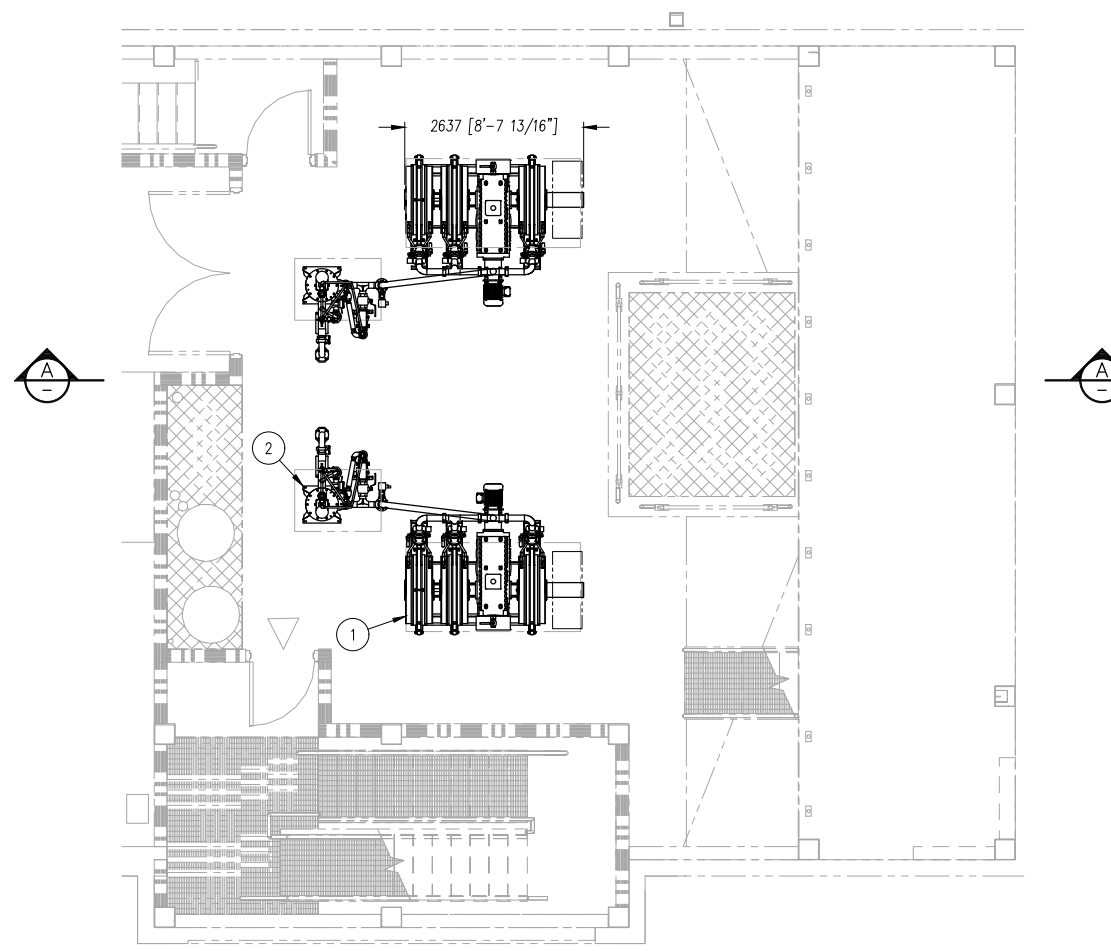
ESTIMATED TOTAL WEIGHT (EQUIPMENT): 5207 Kg/11453 LBS  
 ESTIMATED SLUDGE WEIGHT: 200 Kg/440 LBS



DEWATERING SYSTEM  
 ROTARY PRESS 3(4)-900/4000CV  
 GENERAL ARRANGEMENT

Echelle/Scale 1: 35	Des./By: E.GAMACHE	Dossier/File	Pièce no/Part no.	REV.
Date 25/04/2005	Ver.:		B-C-24112	13
	App.:			





VIEW A

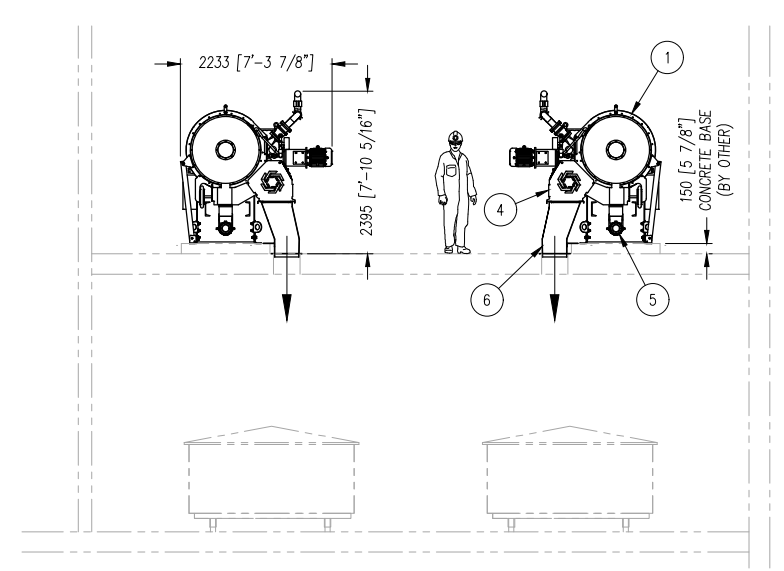
ARTICLE ITEM	REPÈRE REF.	NOMBRE QTY(1)	DÉSIGNATION / DESIGNATION	MATÉRIEL MATERIAL	POIDS(kg) WEIGHT UNIT.(1)	REMARQUES / NOTES - #IFI
1		2	ROTARY PRESS MODEL 3(4)-900/6000CVH	S.S.304L	4140	
2		2	FLOCCULATOR	S.S.304L	377	
3		2	SLUDGE MANIFOLD AND PIPING	S.S.316L	20	
4		6	CAKE CHUTE	LLDPE	5	
5		2	FILTRATE COLLECTOR	PVC	32	
6		6	CHUTE EXTENSION	S.S.304L	23	
7		2	LIQUID POLYMER SYSTEM	S.S.	60	

NOTE : LIQUID POLYMER SYSTEM NOT SHOWN ON THIS DRAWING.

Grand / Size	Dessin No / Drawing No.	Page/Sheet	Revision
	D 53011	1 of 1	0
No Production / Job No.		23-0023	
LÉGENDE/LEGEND			
1 @ 299 = ASSEMBLAGES FABRIQUÉS / FABRICATED ASSEMBLY			
300 @ 499 = COMPOSANTES MÉCANIQUES / MECHANICAL COMPONENTS			
500 @ 699 = BOULONNERIE / BOLTS			
NOTES GÉNÉRALES/GENERAL NOTES			

**NOT TO BE USE FOR CONSTRUCTION PURPOSE**

THOSE DIMENSIONS ARE GIVEN FOR INFORMATION ONLY. FINAL DIMENSIONS AND LAYOUT TO BE CONFIRMED BY CERTIFIED DRAWINGS.



PEINTURE(m2) PAINT SURFACE(2)	0	CAOUTCHOUC(m2) RUBBER SURFACE(2)	0	PL.USURE(kg) WEIGHT OF LINERS(2)	0	POIDS TOT.(kg) TOT. WEIGHT(2)	9426	REQUIS TOTAL TOTAL REQ'D	1
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NO.	REVISIONS	DATE (DD/MM/YY)	BY/PAR

THIRD ANGLE PROJECTION	TROISIEME ANGLE
------------------------	-----------------

SURFACE FINISH		Tolérances sauf indications contraires/Tolerances unless otherwise stated	
SYSTEME IMPERIAL / IMPERIAL SYSTEM		SYSTEME METRIQUE / METRIC SYSTEM	
1/2"	FRACTION	0.38"	3/8"
2 PLACES XX	± 0.10"	± 1/8"	ENTIER / INTEGER
3 PLACES XXX	± 0.05"	± 0.005"	2 PLACES XX
		± 1 mm	± 2mm
		± 0.5 mm	± 1.25 mm

Weld inspection according CSA W59 section 11 except otherwise noted  
 WT: 100% PTC: As per symbol  
 LT: 100% LF: 100% Soudures #tranches: 100% LT (essai d'étanchéité)  
 Anneau de brasure: 100% WT, 100%VT

REVISIONS	DATE	BY/PAR

ETAPES	1	2	3	4	5	6	7	8	9

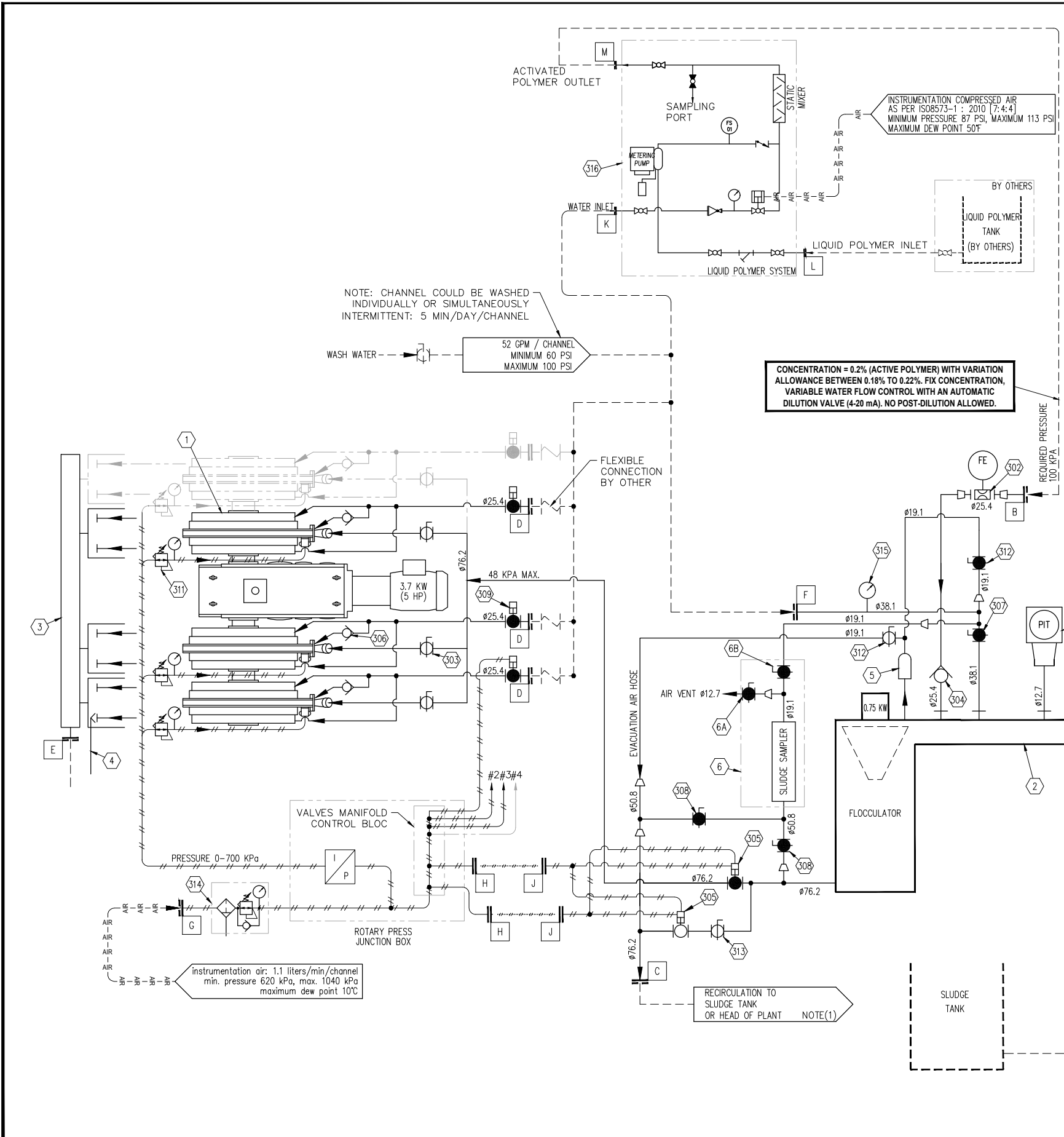
**23-0023**

**Fournier** FOURNIER INDUSTRIES INC. LES INDUSTRIES FOURNIER INC.  
 3787 BOUL. FRONTENAC, THETFORD-MINES QUEBEC, CANADA, G6H-2B5

WINNIPEG - MB DEWATERING SYSTEM 2 ROTARY PRESSES 36" LAYOUT MODEL 3(4)-900/4000CVH

Dessiné / Drawn	Vérifié / Checked	Approuvé / Approved	No IFI / FI No.
EGAMACHE		D.CLICHE	
Date	Echelle / Scale	No Equipment du Client / Customer Equipment No.	
09-02-2023	1:50		

Grand / Size	Dessin No / Drawing No.	Page/Sheet	Revision
D	53011	1 of 1	0



ARTICLE ITEM	REPÈRE REF.	NOMBRE QTY(1)	DÉSIGNATION / DESIGNATION	MATÉRIEL MATERIAL	POIDS(kg) WEIGHT UNIT.(1)	REMARQUES / NOTES - #IFI
1		1	ROTARY PRESS #3(4)-900/4000CVH			
2		1	WITH VARIABLE SPEED MOTOR 3.7 kW (5HP)			
3		1	FLOCCULATOR MODEL #05-300-900			
4		1	WITH VARIABLE SPEED MOTOR 0.75 kW (1HP)			
5		1	FILTRATE MANIFOLD	PVC		
6		1	FILTRATE SAMPLER			IFI-01903
6A		1	AIR BLEEDER Ø51mm (Ø2")	PVC		IFI-01719
6B		1	SLUDGE SAMPLER			IFI-01522
6A		1	Ø13mm (Ø1/2") NPT BALL VALVE FULL PORT	S.S.		C.F.F. MODEL 1/2" SS-2
6B		1	Ø19mm (Ø3/4") NPT BALL VALVE FULL PORT	S.S.		C.F.F. MODEL 3/4" SS-2
301		1	PRESSURE TRANSMITTER, 4-20 MA			E&H CERABAR S PMC71B
302		1	Ø25mm (Ø1") POLYMER FLOWMETER, 24 VOLTS			E&H MODEL #5WBB25
303		3	BALL VALVE FULL PORT, 76mm (Ø3") FLANGE	S.S.		AMERICAN VALVE 4000
304		1	CHECK VALVE Ø25mm (Ø1") NPT, CLASS 150#			IFC #1"SC6000TSSSM
305		2	BALL VALVE FULL PORT, Ø76mm (Ø3") FLANGE	S.S.		AMERICAN VALVE 4000
			C/W PNEUMATIC ACTUATOR			FESTO 13117330, 13117331
306		3	CHECK VALVE Ø19mm (Ø3/4") NPT, CLASS 150#			IFC #3/4"SC6000TSSSM
307		1	Ø38mm (Ø1 1/2") NPT BALL VALVE FULL PORT	S.S.		C.F.F. MODEL 1 1/2" SS-2
308		2	Ø51mm (Ø2") NPT BALL VALVE FULL PORT	S.S.		C.F.F. MODEL 2" SS-2
309		3	Ø25mm (Ø1") PNEUMATIC VALVE	S.S.		FESTO #13117333
310		1	Ø76mm (Ø3") SLUDGE FLOWMETER, 24 VOLTS			E&H MODEL #10P80
311		3	PRESSURE REGULATOR			FESTO VPPE
312		2	Ø19mm (Ø3/4") NPT BALL VALVE FULL PORT	S.S.		C.F.F. MODEL 3/4" SS-2
313		1	Ø76mm (Ø3") NPT BALL VALVE FULL PORT	S.S.		C.F.F. MODEL 3" SS-2
314		1	AIR FILTER REGULATOR			FESTO 527694
315		1	PRESSURE GAUGE	S.S.		ROYAL #SSG-2502-160
317		1	LIQUID POLYMER SYSTEM			POLYSYS

Grand/Size: D 53013  
 Page/Sheet: 1 of 1 0

No Production / Job No.: 23-0023

**LÉGENDE/LEGEND**

1 @ 299 = ASSEMBLAGES FABRIQUÉS / FABRICATED ASSEMBLY  
 300 @ 499 = COMPOSANTES MÉCANIQUES / MECHANICAL COMPONENTS  
 500 @ 699 = BOULONNERIE / BOLTS

**NOTES GÉNÉRALES/GENERAL NOTES**

NOTE (1): THIS LINE SHALL BE DRAINED BY GRAVITY TO ALLOW THE DRAINAGE OF THE SLUDGE SAMPLER.

--- SCHEDULE 80 PVC FOR POLYMER PIPING  
 --- SCHEDULE 10 SS FOR SLUDGE PIPING

----- : PIPING SUPPLY BY OTHERS.  
 --- / --- : AIR TUBE SUPPLY AND INSTALLED BY FOURNIER.  
 - - - - - : AIR TUBE SUPPLY & INSTALLED BY OTHER.  
 ..... : AIR TUBE SUPPLY BY FOURNIER INSTALLED BY OTHER.

**LEGEND**

FE: FLOWMETER  
 PIT: PRESSURE INDICATOR TRANSMITTER  
 PS: PRESSURE SWITCH

- INTERFACE BETWEEN PIPING OF ROTARY PRESS AND CUSTOMER PIPING
- A SLUDGE INLET Ø76.2mm(Ø3") FLANGE
  - B POLYMER INLET Ø50.8mm(Ø2") FLANGE
  - C SLUDGE RECIRCULATION OUTLET Ø76.2mm(Ø3")-NPT
  - D WASH WATER INLET Ø25.4mm(Ø1")-NPT (3 PLACES) (ROTARY PRESS)
  - E FILTRATE OUTLET Ø152.4mm(Ø6") PIPE
  - F WASH WATER INLET Ø38.1mm(Ø1 1/2")-NPT (FLOCCULATOR)
  - G JUNCTION BOX AIR INLET Ø6mm(Ø1/4")-NPT
  - H JUNCTION BOX AIR OUTLET Ø6mm(Ø1/4")-(PLASTIC TUBING)
  - J AIR INLET FOR VALVE WITH ACTUATOR Ø6mm(Ø1/4")-(PLASTIC TUBING)
  - K WATER INLET POLYMER SYSTEM Ø3/4"- NPT/F
  - L NEAT POLYMER INLET Ø1/2"-NPT/F
  - M MIXED POLYMER OUTLET Ø2" FLANGE, CLASS 150#

NO.	REVISIONS	DATE	BY/PAR

THIRD ANGLE PROJECTION / PROJECTION TROISIEME ANGLE

**SURFACE FINISH**  
 Tolérances sauf indications contraires/Tolerances unless otherwise stated  
 SYSTÈME IMPÉRIAL / IMPERIAL SYSTEM SYSTÈME MÉTRIQUE / METRIC SYSTEM

**FINITION SURFACE**  
 Ébavurer les arêtes vives (S.I.C./Deburring sharp edges (U.O.S))

Weld inspection according to CSA W59 section 11 except otherwise noted / Inspection des soudures selon CSA W59 section 11 sauf indication contraire

VT: 100% P: As per symbol / VT: 100% P: Selon symbole  
 UT: As per symbol MT: As per symbol / UT: Selon symbole MT: Selon symbole

Sealed welds: 100% LT (leak test) / Soudures étanches: 100% LT (essai d'étanchéité)  
 Lifting lugs: 100% MT, 100%VT / Anneaux de levage: 100% MT, 100%VT

Line conjointement avec PRIE approuvé / Read in conjunction with the approved ITP

ÉTAPES	1	2	3	4	5	6	7	8	9

**23-0023**

**FOURNIER** FOURNIER INDUSTRIES INC.  
 3787 BOUL. FRONTENAC, THÉT福德-MINES  
 QUÉBEC, CANADA, G6H-2B5

**WINNIPEG - MB DEWATRING SYSTEM ROTARY PRESSES 36" PROCESS DIAGRAM MODEL 3(4)-900/4000CVH**

Drawn / Dessiné: E. GAMACHE  
 Vérifié / Checked: D. CLICHE  
 Date: 09-02-2023  
 Echelle / Scale: -----  
 No Equipment de Client / Customer Equipment No.:

(1) LA QUANTITÉ EST DONNÉE POUR UN ASSEMBLAGE / QUANTITY GIVEN IS FOR ONE ASSEMBLY.  
 (2) LA QUANTITÉ EST DONNÉE POUR UN ASSEMBLAGE EXCLUANT LES ARTICLES MARQUÉS D'UN ASTÉRISQUE / QUANTITY GIVEN FOR ONE ASSEMBLY EXCLUDING ITEMS MARKED WITH AN ASTERISK.

PEINTURE(m2) PAINT SURFACE(2)	0	CAOUTCHOUC(m2) RUBBER SURFACE(2)	0	PL.USURE(kg) WEIGHT OF LINERS(2)	0	POIDS TOT.(kg) TOT. WEIGHT(2)	0	REQUIS TOTAL TOTAL REQ'D	1
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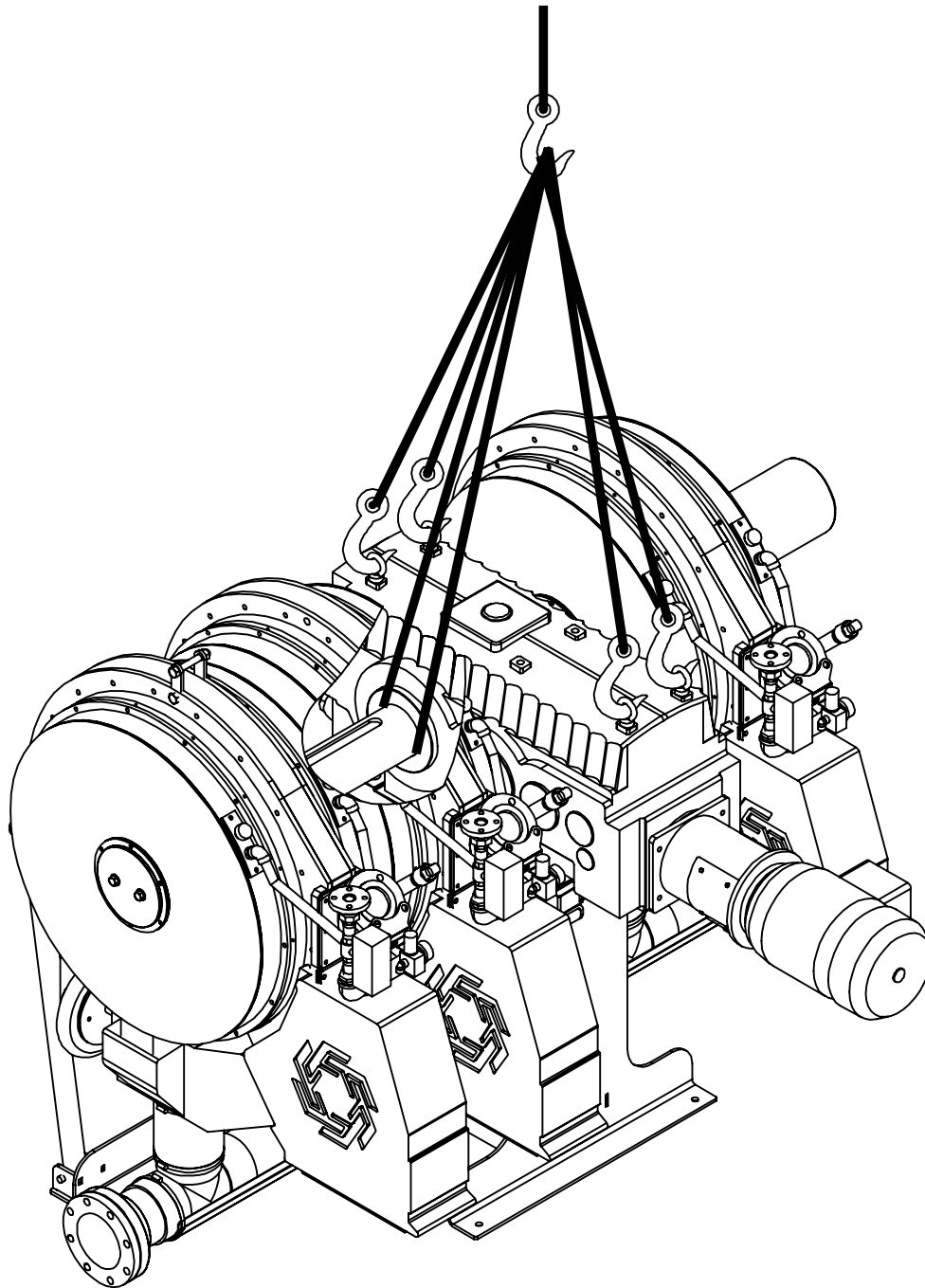
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 Page/Sheet: 1 of 1 0

**ROTARY PRESS  
LIFTING INSTRUCTIONS**

*USE HOOKS AND NYLON SLINGS.*

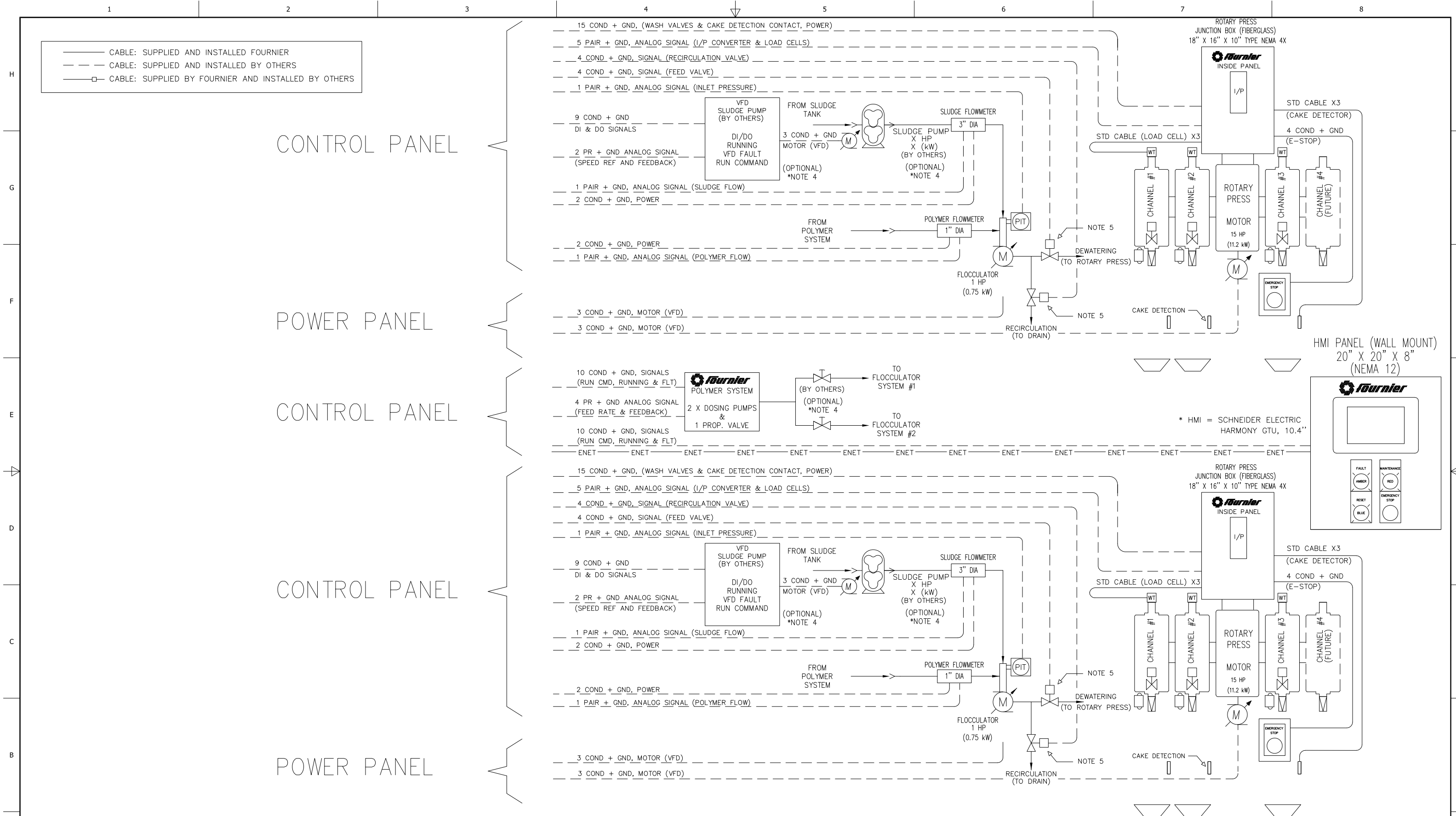
**PRESSOIR ROTATIF  
INSTRUCTIONS DE LEVAGE**

*UTILISER DES CROCHETS ET DES SANGLES DE NYLON.*



**WEIGHT / POIDS**

**SEE EQUIPMENT NAME PLATE  
VOIR PLAQUE D'IDENTIFICATION**



Notes générales / General notes

NOTE 1: SLUDGE PUMP SPEED NEEDS TO BE VFD CONTROLLED TO KEEP A CONSTANT INLET PRESSURE.

NOTE 2: LOCAL MOTORS DISCONNECT SWITCHES TO BE PROVIDED BY OTHERS.

NOTE 3: POLYMER PUMP SPEED NEEDS TO BE VFD CONTROLLED TO KEEP A CONSTANT POLYMER / SLUDGE RATIO.

NOTE 4: COULD BE SUPPLIED ON REQUEST.

NOTE 5: PNEUMATICALLY ACTIVATED.

NOTE 6: THE CONTROLLER MUST BE INSTALLED AT LEAST 1M FROM ANY OPENING TO THE HAZARDOUS ZONE.

NOTE 7: AIR COMPRESSOR SHALL BE INSTALLED IN NON-HAZARDOUS LOCATION, AND IN AMBIANT TEMPERATURE, ABOVE 32 F

Rev.	Description	Date	Dessiné / Drawn
1	GENERAL UPDATE	02/03/2023	V. GILBERT
0	INITIAL CONCEPT	03/31/2022	V. GILBERT

**Fournier** LES INDUSTRIES FOURNIER INC. Fournier Industries Inc. 3787 BOUL. FRONTENAC OUEST THETFORD MINES, QUÉBEC, CANADA, G6H 2B5

CE DESSIN ET TOUTES LES INFORMATIONS QU'IL CONTIENT SONT LA PROPRIÉTÉ EXCLUSIVE DE LES INDUSTRIES FOURNIER INC. IL EST STRICTEMENT INTERDIT DE COMMUNIQUER OU UTILISER SON CONTENU À D'AUTRES FINS QUE CELLES PERMISES ORIGINALEMMENT OU FOUJANT ÊTRE PRÉJUDICABLES AUX INTÉRÊTS DE LES INDUSTRIES FOURNIER INC. TOUTE REPRODUCTION DE CE DESSIN EST INTERDITE ET IL DOIT ÊTRE RETOURNÉ SUR DEMANDE.

THIS DRAWING AND ALL THE INFORMATION IT CONTAINS ARE THE EXCLUSIVE PROPERTY OF FOURNIER INDUSTRIES INC. IT IS STRICTLY FORBIDDEN TO COMMUNICATE OR USE THE INFORMATION FOR PURPOSES OTHER THAN THE ORIGINAL INTENDED ONES OR IF THE USE COULD BE HARMFUL TO THE INTERESTS OF FOURNIER INDUSTRIES INC. THIS DRAWING IN WHOLE OR IN PART MAY NOT BE REPRODUCED IN ANY FASHION AND HAS TO BE RETURNED TO FOURNIER INDUSTRIES INC. UPON REQUEST.

Sceau / Stamp

Créer par / Created by V. GILBERT
Vérifié / Checked V. GILBERT
Approuvé / Approved
Date de création / Creation date 03/31/2022
Echelle / Scale N/A

**WINNIPEG NORTH END**  
ROTARY PRESS 3(4)-900/4000CVH

SINGLE LINE DIAGRAM

No Projet / Project No.	No Dessin / Drawing No. <b>D- 51467 - 1/2</b>	Revislon <b>1</b>
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# CONTROL PANEL

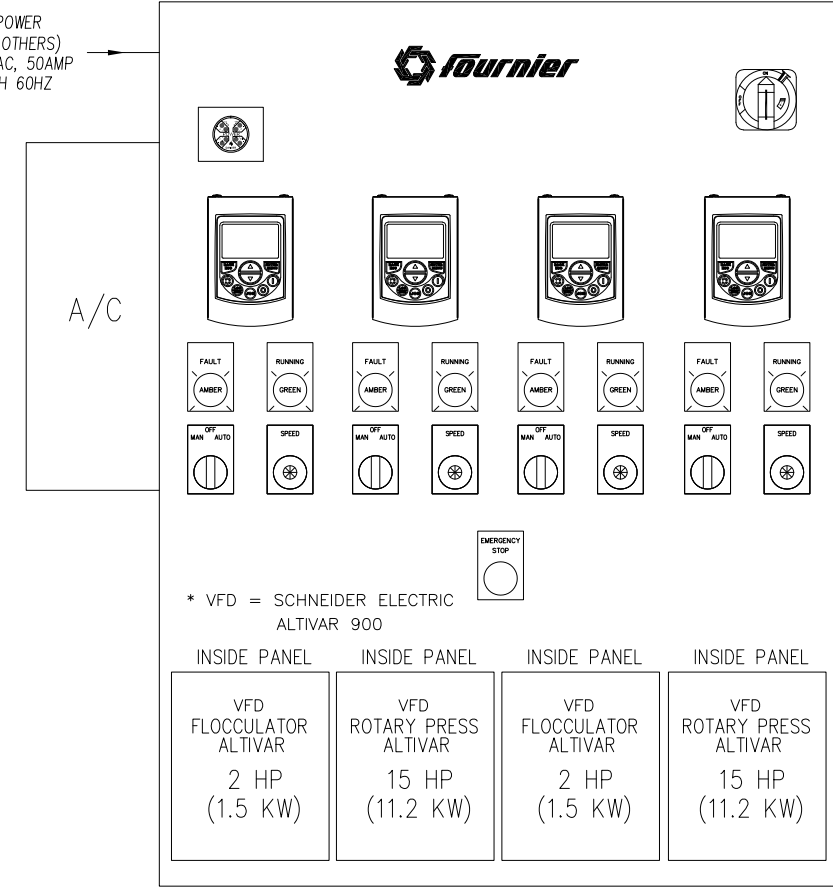
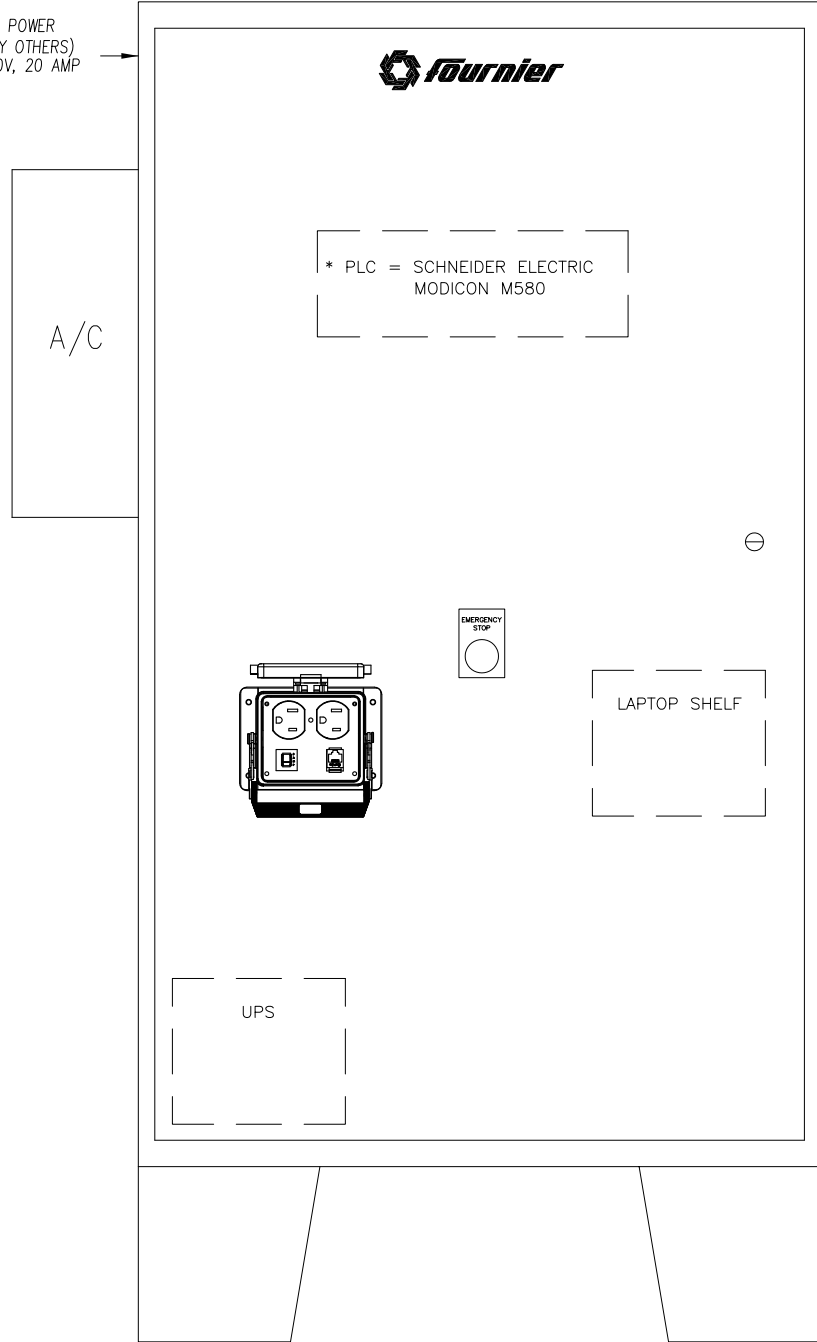
# POWER PANEL

POWER PANEL (FLOOR MOUNT)  
60" X 36" X 12"  
STEEL GREY PAINT - TYPE NEMA 12

36" X 36" X 12"  
STEEL GREY PAINT - TYPE NEMA 12

POWER  
(BY OTHERS)  
120V, 20 AMP

POWER  
(BY OTHERS)  
600 VAC, 50AMP  
3PH 60HZ



Notes générales / General notes

- NOTE 1: SLUDGE PUMP SPEED NEEDS TO BE VFD CONTROLLED TO KEEP A CONSTANT INLET PRESSURE.
- NOTE 2: LOCAL MOTORS DISCONNECT SWITCHES TO BE PROVIDED BY OTHERS.
- NOTE 3: POLYMER PUMP SPEED NEEDS TO BE VFD CONTROLLED TO KEEP A CONSTANT POLYMER / SLUDGE RATIO.
- NOTE 4: COULD BE SUPPLIED ON REQUEST.
- NOTE 5: PNEUMATICALLY ACTIVATED.
- NOTE 6: THE CONTROLLER MUST BE INSTALLED AT LEAST 1M FROM ANY OPENING TO THE HAZARDOUS ZONE.
- NOTE 7: AIR COMPRESSOR SHALL BE INSTALLED IN NON-HAZARDOUS LOCATION, AND IN AMBIANT TEMPERATURE, ABOVE 32 F

Rev.	Description	Date	Dessiné / Drawn
1	GENERAL UPDATE	02/03/2023	V. GILBERT
0	INITIAL CONCEPT	03/31/2022	V. GILBERT



LES INDUSTRIES FOURNIER INC.  
FOURNIER INDUSTRIES INC.  
3787 BOUL. FRONTENAC OUEST  
THETFORD MINES, QUÉBEC, CANADA, G6H 2B5

CE DESSIN ET TOUTES LES INFORMATIONS QU'IL CONTIENT SONT LA PROPRIÉTÉ EXCLUSIVE DE LES INDUSTRIES FOURNIER INC. IL EST STRICTEMENT INTERDIT DE COMMUNIQUER OU UTILISER SON CONTENU À D'AUTRES FINS QUE CELLES PERMISES ORIGINALEMANT OU FOUJANT ÊTRE PRÉJUDICABLES AUX INTÉRÊTS DE LES INDUSTRIES FOURNIER INC. TOUTE REPRODUCTION DE CE DESSIN EST INTERDITE ET IL DOIT ÊTRE RETOURNÉ SUR DEMANDE.

THIS DRAWING AND ALL THE INFORMATION IT CONTAINS ARE THE EXCLUSIVE PROPERTY OF FOURNIER INDUSTRIES INC. IT IS STRICTLY FORBIDDEN TO COMMUNICATE OR USE THE INFORMATION FOR PURPOSES OTHER THAN THE ORIGINAL INTENDED ONES OR IF THE USE COULD BE HARMFUL TO THE INTERESTS OF FOURNIER INDUSTRIES INC. THIS DRAWING IN WHOLE OR IN PART MAY NOT BE REPRODUCED IN ANY FASHION AND HAS TO BE RETURNED TO FOURNIER INDUSTRIES INC. UPON REQUEST.

Sceau / Stamp

Créer par / Created by V. GILBERT
Vérifié / Checked V. GILBERT
Approuvé / Approved
Date de création / Creation date 03/31/2022
Échelle / Scale N/A

**WINNIPEG NORTH END**  
ROTARY PRESS 3(4)-900/4000CVH

SINGLE LINE DIAGRAM

No Projet / Project No.	No Dessin / Drawing No.	Revislon
	D- 51467 - 1/2	1



## APPENDIX B

# References





***Fournier***



**ROTARY PRESS**







# CITY OF SACO WWTP, ME

- Process: Mixed sludge
- Rotary Press: 1 unit  
Model 4(6) 900/6000CV  
Commissioned: 2009
- Performances:
  - Throughput 8.8 dry t/d (8hrs)
  - Cake dryness 25 % (TS)Feed concentration: 3 % (TS)



# CITY OF LAVAL, LAPINIÈRE WWTP, QC, CANADA

- **Process:**  
Enhanced primary 70-90%,  
alum sludge 10-25% and  
septage 0-5%)
- **Plant capacity:** 250 000 m<sup>3</sup>/d or 66,1 MGD
- Rotary Press: 3 units  
Model 4-1200/6000A  
Commissioned 1998
- **Performances:**
  - Feed concentration 3-6 % (TS)
  - Throughput: 26.4 t/d/press (24 hrs)
  - Capture rate: 97 % (SS)
  - Cake dryness: 35 % (TS)
- **Special feature:** Cake converted in  
pelletized fertiliser.





# CITY OF LAVAL, FABREVILLE WWTP, QC

- Process: Enhanced primary
- Plant capacity: 40 000 people, flow 34 720 m<sup>3</sup>/d or 9,2 MGD
- Rotary Press: 2 units  
Models 4-1200/6000A  
4(6)-900/6000CV  
Commissioned phase 1 in 1999,  
phase 2 in 2014
- Performances:  
Feed concentration: 5.5 % (TS)
  - Throughput: 9.6 dry t/d (8 hrs)
  - Capture rate: 98 % (SS)
  - Cake dryness: 39 % (TS)



# BATTERY POINT CBRM, SIDNEY, NS, CANADA

- **Process:** Primary sludge
- **Rotary Press:** 1 Unit  
Model: 2-1200/3000A  
Commissioned: 2005
- **Performances:**
  - Feed concentration: 6 % (TS)
  - Throughput: 120 dry kg/hr/channel  
265 dry lb/hr/channel
  - Cake dryness: 46 % (TS)
  - Capture rate: 98 % (TSS)





# CITY OF BEAUPRÉ WWTP, CANADA

- **Process:** Primary SLUDGE
- **Rotary Press:** 1 unit  
Model 2-1200/3000A Commissioned 1997
- **Performances:**
  - Feed concentration: 2.8 % (TS)
  - Throughput: 180 dry/kg/hr/channel  
395 dry lb/hr/channel
  - Cake dryness: 40 % (TS)
  - Capture rate: 98 % (TSS)



# CRD SAANICH PENINSULA WWTP, VICTORIA, CANADA

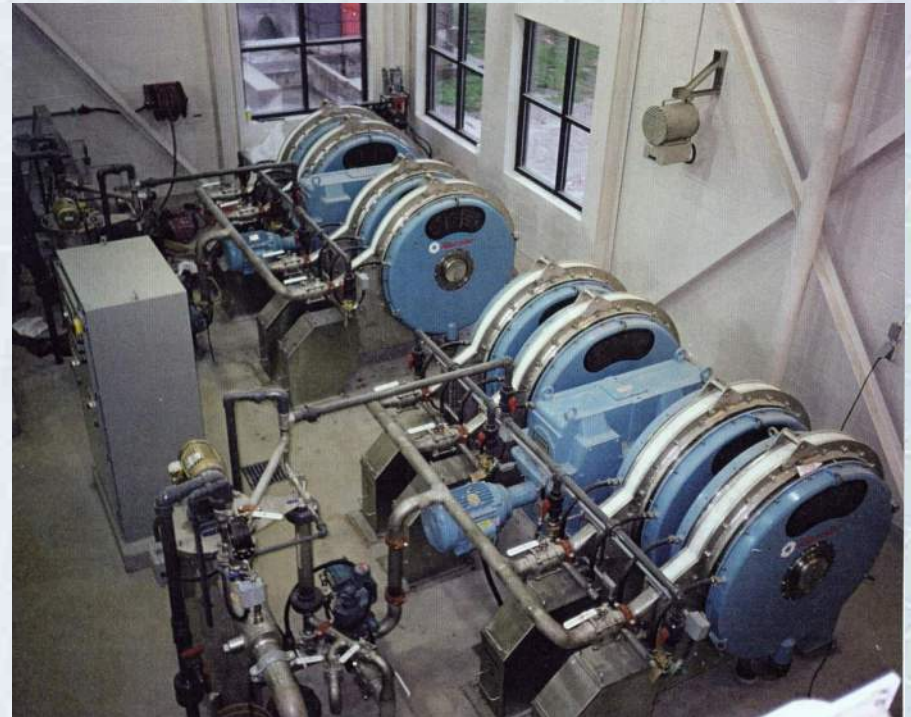
- **Process:** Conventional mixed sludge (50% primary/50% WAS)
- **Plant capacity:** 40 000 people  
Flow 1800 m<sup>3</sup>/d or 0,48 MGD
- **Rotary Press:** 1 unit  
Model 4-1200/6000A  
Commissioned 1997
- **Performances:**
  - Feed concentration 4-7% (TS)
  - Throughput: 8 t/d (dry) (8 hrs)
  - Capture rate: 96% (SS)
  - Cake dryness: 25% (TS)
- **Special feature:** Rotary press feeding a sludge pasteurization process.





# CITY OF FREDERICTON POLLUTION CONTROL DIVISION, CANADA

- Process: Mixed sludge,  
50% primary et 50% secondary.
- Plant capacity: 40 000 people  
Flow 18 000 m<sup>3</sup>/d or 4,8 MGD
- Rotary Press: 2 units  
Model 4-1200/6000A  
Commissioned 1996.
- Performances:
  - Feed concentration 3.0 % (TS)
  - Throughput (8 hrs)
    - 7.9 t/d/press @ 30% TS
    - 10.1 t/d/press @ 27% TS
  - Capture rate 95 % (SS)



# CITY OF UNALASKA WWTP, AK

- Process:  
Municipal primary sludge
- Rotary Press: 1 Unit  
Model: 2(3)-900/3000CV  
Commissioned: 2012
- Performances:
  - Feed concentration: 4 % (TS)
  - Throughput: 2.2 dry t/d (8hrs)
  - Cake dryness: 30 % (TS)
  - Capture rate: 95 % (TSS)





# CITY OF REPENTIGNY WWTP, QC, CANADA

- Process: Primary anaerobically digested sludge (25-30 days).
- Plant capacity: 59 000 people  
Flow 25 ml/day or 6,7 MGD
- Rotary Press: 2 units  
Model **4-900/4000CV**  
Commissioned 1995-2015
- Performances:
  - Feed concentration 2-4 % (TS)
  - Throughput 6.7 t/d/press (24 hrs)
  - Capture rate 96% (SS)
  - Cake dryness 32.5% (TS)
  - Power usage: 6.6 kW-hr/ton
- Special feature: Night operation completely automated (without operator).





# CITY OF SHERBROOKE WWTP, QC, CANADA

- Process: Biofilter sludge
- Rotary Press: 2 Units  
Model 6-900/6000CV  
Commissioned: December 2008
- Estimated Performances:
  - Feed concentration: 6.1 % (TS)
  - Throughput: 23 dry tons/day (8 hrs)
  - Cake dryness: 40 % (TS)
  - Capture rate: 98 % (TSS)



# CITY OF SAINT JOHN EASTERN PLANT, NB

- Process: Mixed sludge, blend of activated sludge & primary
- Rotary Press: 2 units  
Model: 6-900/6000CV  
Commissioned: October 2011
- Performances:
  - Feed concentration: 4% (TS)
  - Throughput: 5 dry t/d (8hrs) per press
  - Cake dryness: 35 % (TS)
  - Capture rate: 98% (TSS)





# TOWN OF BILLERICA WWTP, MA

- Process: Mixed (Primary and Secondary)
- Rotary Press: 2 units  
Model 6-900/6000CV  
Commissioned: 2006 and 2015
- Performances:
  - Feed concentration: 4 % (TS)
  - Throughput: 4.8 dry t/d (8hrs)
  - Cake dryness: 25 % (TS)
  - Capture rate: 99 % (TSS)



[Return to USA installations](#)



***Fournier***

**FOURNIER INDUSTRIES INC.**

3787, West Frontenac Blvd.

Thetford Mines (Quebec) Canada, G6H 2B5

Phone (418) 423-4241; Fax (418) 423-7366

[www.rotary-press.com](http://www.rotary-press.com)

Email: [general@fournierindustries.com](mailto:general@fournierindustries.com)



**THANK YOU!**



## APPENDIX C

# LAB & PILOT REPORT





# FOURNIER INDUSTRIES ROTARY-PRESS

## LABORATORY ANALYSIS

Presented to

# AECOM

Winnipeg, Manitoba, Canada

Project: NEWPCC Primary clarification



MUNICIPAL AND INDUSTRIAL  
DEWATERING APPLICATIONS

FOURNIER INDUSTRIES INC.

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Lic. RBQ 1187-5754-87

AECOM  
 99 Commerce Dr.  
 Winnipeg, Manitoba, Canada  
 R3P 0Y7

February 18<sup>th</sup> 2022

Contact: Matt Kowalski

Email: matt.kowalski@aecom.com

Phone: 204-928-9258

## LABORATORY ANALYSIS RESULTS

Sludge type: Scum from primary clarifiers

Shipping date: February 15<sup>th</sup> -2022

Receiving date: February 17<sup>th</sup> -2022

Analyzing date: February 17<sup>th</sup> 2022

Analysed by: M. Hebert-T.

<i>Characteristics</i>	<i>Results:</i>
<i>Total Solids initial</i>	<i>*19.07 %</i>
<i>Total Suspended Solids</i>	<i>*18.83 %</i>
<i>Solids in Solution</i>	<i>0.24 %</i>
<i>Volatile Solids / Total Solids</i>	<i>93.94 %</i>
<i>Polymer type</i>	<i>Very high charge/weight cationic: Emulsion BASF Zetag 7878fs40</i>
<i>Total Fiber + 100 mesh</i>	<i>35.61 %</i>
<i>Cloth wring test</i>	<i>62.63 %</i>
<i>Limit Dryness</i>	<i>66.97 % after 60 minutes</i>
<i>PH</i>	<i>5.5 @ 14° C</i>

<i>Notes</i>	
	<ul style="list-style-type: none"> <li>- <i>Excellent flocculation, generating a fast drainage,</i></li> <li>- <i>High fiber content, but poor friction degree, due to grease presence,</i></li> <li>- <i>*A heavy presence of grease may have altered some dryness results,</i></li> <li>- <i>Very low polymer consumption,</i></li> </ul>
<i>The sample as received represent an excellent potential for the Fournier rotary press,</i>	



## LABORATORY PHOTOS



*Raw sludge, cake & filtrate obtained during lab test*



*Flocculated sludge*



*\*High grease presence may have altered some dryness results*

**EXPECTED PERFORMANCE**

**PROJECT: NEWPCC Primary clarification  
for**

**AECOM**

Sludge type: *Scum from primary clarifiers*

<i>Parameters</i>	<i>Anticipated Results</i>
<i>Cake dryness</i>	<i>*65 %</i>
<i>Mass flow</i>	<i>150 dry Kg/hr/Channel*</i>
<i>Flow rate</i>	<i>0.8 M<sup>3</sup>/hr /Channel</i>
<i>Polymer consumption</i>	<i>1.5 active Kg / dry ton of solid</i>
<i>Polymer type recommended</i>	<i>Fully structured high molecular weight emulsion with high cationic charge, similar to BASF Zetag 8846fs</i>
<i>Type of channel</i>	<i>(900/1000CVP) 36 Optimum</i>

<b>Notes</b>	
	<p><i>The production, cake dryness or flow rate could vary depending upon (%TS) contained in the feed sludge. Provided sludge represents an excellent potential, but the listed data are based on laboratory results obtained during trials, and must not be interpreted as a contractual guarantee.</i></p> <p><i>*A high presence of grease may have altered some dryness results</i></p>

# SLUDGE DATA SHEET

Please complete this sheet and return it with your sludge sample.  
 The fields with asterisk (\*) must be absolutely completed.

Date: \_\_\_\_\_

## 1. General Information

Company's Name: * AECOM Address: * 99 Street: * Commerce Dr City: * Winnipeg Postal Code - Zip: * R3P 0Y7 E-Mail: *	Project Name: * NEWPCC Primary Clarification Contact: * Matt Kowalski Title: * Water/Wastewater process Engineer Phone: * +1 204 928-9258 Fax: * E-Mail: * matt.kowalski@aecom.com
--	---

## 2. Characteristics

\* a) Type of treatment: (Mark all which apply and include sketch of process block diagram of flowsheet).

<input checked="" type="checkbox"/> Primary Clarifier	<input type="checkbox"/> Rotating Biological Contactor	<input type="checkbox"/> Aeration tank
<input type="checkbox"/> Secondary Clarifier	<input type="checkbox"/> Sequential Batch Reactor	<input type="checkbox"/> Trickling filter
<input type="checkbox"/> Thickened	<input type="checkbox"/> Mixed (Primary & Secondary)	Ratio (Prim. & Sec.) _____ / _____
<input type="checkbox"/> Aeration without primary clarification	<input type="checkbox"/> Aerobic digestion	Volatile solids reduction: _____ %
<input type="checkbox"/> Septic tanks	<input type="checkbox"/> Anaerobic digestion	Volatile solids reduction: _____ %
	<input type="checkbox"/> Sludge retention time: _____ days	

Other (Description): Scum from primary clarifiers

b) Sludge dewatering:

\* > TS: Average: 5 %

> TSS: Average: \_\_\_\_\_ %

> pH: \_\_\_\_\_

\* > Amount of sludge to be dewatered: 826 m<sup>3</sup>/week

> Dry tons per week: Current Av.: \_\_\_\_\_ Peak: \_\_\_\_\_

\* > Number of days of operation/week: 7 days      \* Number of hours of operation/day: 8 hours

> Minimum capture rate desired: \_\_\_\_\_ %      Cake dryness desired: \_\_\_\_\_ %

> Cake disposal:       Landfill       Incineration       Alkaline Stabilize

- Beneficial reuse (Type): \_\_\_\_\_
- Other (Description): \_\_\_\_\_

## 3. Is this?

> A new installation? <input checked="" type="checkbox"/>	> Competition? _____
> A replacement of existing equipment? <input type="checkbox"/>	> Current equipment? _____
> Capture rate: _____ % TS or _____ % TSS	> Current dryness? _____
> Reason of inquiry? testing effectiveness of fourrier screw press technology in dewatering primary scum	> When do you expect to complete design/purchase? _____

## 4. Is the addition of polymer and/or filtering aid necessary?      Yes      No

> Type of polymer: _____	> Dosage (kg/dry ton solids): _____
> Concentration (%): _____	> Polymer sample included: <input type="checkbox"/> Yes <input type="checkbox"/> No

## 5. Health and Safety:

> Are these solids/liquids considered dangerous?	<input type="checkbox"/> Yes <input type="checkbox"/> No
> Has a material safety data sheet been included?	<input type="checkbox"/> Yes <input type="checkbox"/> No



FOURNIER ROTARY PRESS  
Pilot Test Report  
FOR WASTEWATER SLUDGE DEWATERING

***North End Winnipeg Pollution Control Centre  
WINNIPEG, MANITOBA, CANADA***



**FOURNIER INDUSTRIES INC.**  
3787 West Frontenac Blvd  
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Fax (418) 423-7366  
E-mail : [general@fournierindustries.com](mailto:general@fournierindustries.com)  
<http://www.rotary-press.com/>





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  - Graph 1: Production versus Cake Dryness
  - Graph 2: Flow Rate versus Cake Dryness
  
- VI. Conclusion

## I. Introduction

---

The purpose of this report is to present the results from the Fournier Rotary Press pilot trials performed at NEWPCC in Manitoba on May 17<sup>th</sup> to May 18<sup>th</sup> 2022. A Fournier Rotary Press pilot test is the most efficient way to determine and evaluate the equipment capabilities and aptitudes to perform on the actual sludge condition. Ranges of operation during the trial allow us to determine the peak performance for the following values:

- Cake Dryness
- Minimal Polymer Consumption
- Maximum Capture Rate
- Maximum Flow Throughput and Production per Channel

The Dewatering trials were performed on scum slurry from the wastewater treatment plant using high charge cationic emulsion polymer.

In the conclusion of this report design parameters for a future Rotary Press installation are established and presented in section V.

## II. Pilot Equipment and Description

---

For this pilot, the channel CVH was selected to test the capability with this type of sludge. The dewatering unit arrives inside a 48 foot trailer, hauled by truck directly to the site. Sludge from the plant was pumped to the pilot unit's holding tank, and then pumped to the flocculation tank for conditioning.

The following is a list of the components:

- Model 1-900/1000CVH Rotary Press
- Model 1-900/1000CVP Rotary Press
- Flocculator Assembly
- Progressive Cavity Feed Pump
- Sludge Holding Tank and Mixer
- Progressive Cavity Polymer Feed Pump
- Two Polymer Preparation Tanks and Mixers
- Cake Conveyor
- Control Panel

### III. Jar Testing and Prestart-up

---

One of the first steps during the pilot, that allows us to determine the best polymer for the dewatering of that particular sludge, is a Jar Test. One type of polymer was selected to produce the best flocculation for the sludge. The cationic polymer chosen was the emulsion Solenis: zetag **7878fs40**.

A check list of the following components was performed before start-up to insure correct operation.

- Polymer Pump
- Polymer Flowmeter
- Sludge Pump
- Sludge Flowmeter
- Inlet Pressure Gauge
- Flocculator Tank and Mixer
- Pneumatic Recirculation Valve
- Pneumatic Dewatering Valve
- Rotary Press Channels and Motor





## IV. Pilot Testing

---

The goal of the pilot testing is to achieve and demonstrate in a full scale manner the performance potential of the Fournier Rotary Press using actual plant sludge. Operating parameters were adjusted in order to present variation of the following results:

- Cake Production
- Cake Dryness
- Capture Rate
- Energy Consumption
- Polymer Consumption (active Kg.)
- Sludge Flow Rate
- Pilot test schedule is presented in the following table:

Date	Test Runs	Polymer
Tuesday, May 17 <sup>th</sup>	Set up begins Scum Slurry test: 1A-1B (CVH)	Solenis: zetag 7878fs40
Wednesday, May 18 <sup>th</sup>	Scum Slurry test: 2A-2C (CVH)	Solenis: zetag 7878fs40
Thursday May 19 <sup>th</sup>	Trailer Clean up	
Friday, May 20 <sup>th</sup>	Trailer Pick up	











## V. Results and Discussion

---

Presented in Table 1A are the results of piloting trial on the SCUM slurry from there process. The table displays operating parameters such as:

- Polymer Type, Concentration and Dosage
- Flocculator Speed
- Rotary Press Speed
- Rotary Press Inlet Pressure and Outlet Pressure
- Sludge Flow and Total Solids

The following are the results of the testing that are also presented in the table:

- Filtrate Total Suspended Solids
- Cake Total Solids
- Production Rate per Channel
- Capture Rate

One type of polymer was selected to perform the trials; the cationic emulsion polymer from Basf 7878fs40 formed a good flocculation with the provided sludge. The polymer solution was prepared to a dilution of 0.1% active. Sludge and polymer were mixed together inside the flocculation tank, before being fed to the Rotary Press.

The polymer dosage using Basf 7878fs40 averaged 2.4 active kg per dry ton.

Through pilot trial duration, the rotary press technology demonstrated excellent cake dryness, production rate, along with excellent capture rate.

## Summary table of obtained results with the scum slurry:

Polymer	Average Feed Solids (%)	Polymer (Kg /Dry Ton)	Average Dryness (%)	Max. Obtained Dryness (%)	Average Production (Dry Kg/hr/Channel)	Max. Production (Dry Kg/hr/Channel)	Av. Capture Rate (%)
Basf 7878fs40	1.1 %	2.4 Kg	67.2 %	69.3 %	95 Kg	132 Kg	98.9 %

**Table 1A: Pilot Results Process Sludge**

**Day 1-2 May 2022**

# FOURNIER INDUSTRIES INC.

ENVIRONMENTAL DIVISION

Location: NEWPCC Winnipeg  
 ROTARY PRESS 900-1000CVH  
 (Channel OPTIMUM)  
 Sludge type: Scum

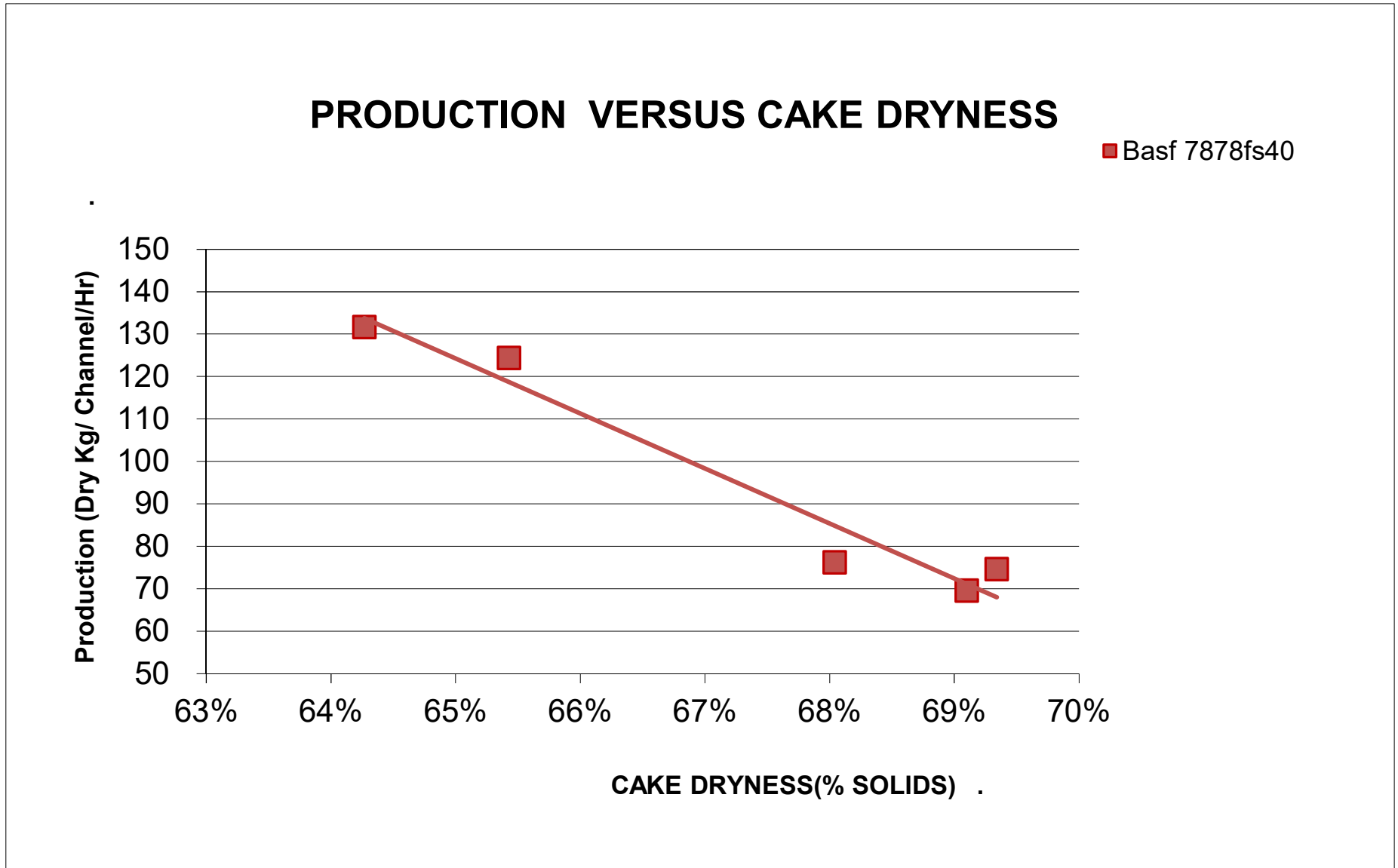
Technicians :F. Caouette

Duration of project : 17th to 18th May 2022

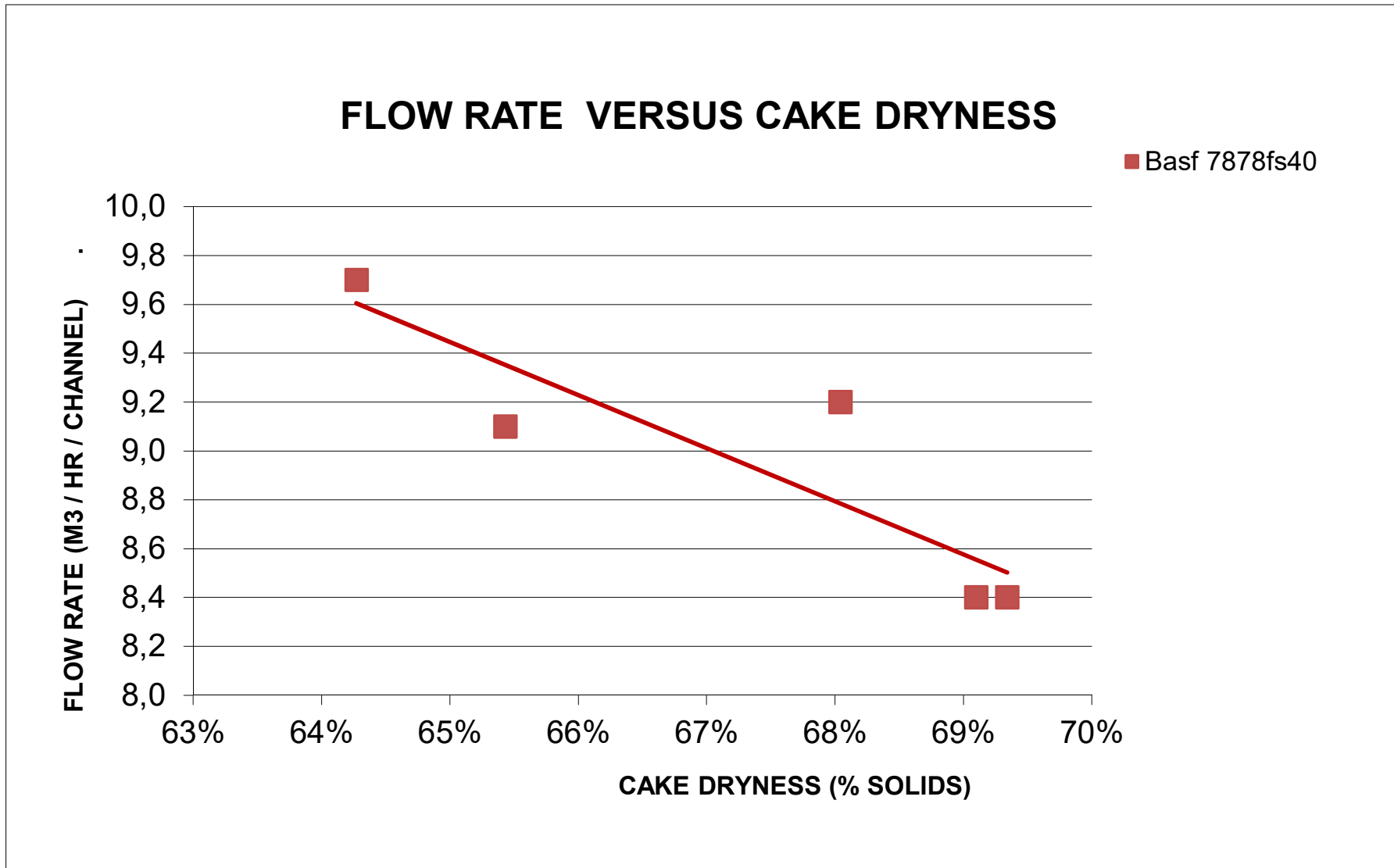
DATE	time of Sampling	GENERAL				OPERATING PARAMETERS										RESULTS				
		RUN #	POLYMER		DOSAGE (Kg/dry ton) active	FLOCCULATOR		PRESS					Flow Per Channel (m3/hr)	SLUDGE TS (%)	FILTRATE TSS (%)	CAKE TS (%)	PRODUCTION (dry Kg/hr) Per channel	CAPT. RATE TSS (%)		
			TYPE	POLYMER CONCEN. (% active)		RPM	SPEED (RPM)	Kw (Press)	Operating channel		Energy usage Kw-hr/ 2000 dry lbs	Energy usage Kw-hr/ 1000 dry kg							PRESSURE	
									CVH	CVP									Kw-hr/ 2000 dry lbs	Kw-hr/ 1000 dry kg
May, 17, 2022	14:00	1A	Basf 7878fs40	0,10%	3,6	120	0,35	0,35	1		2,36	2,6	24	207	9,2	0,8%	0,01	68,0%	76	98,8
May, 17, 2022	14:25	1B	Basf 7878fs40	0,10%	3,6	120	0,35	0,35	1		2,67	2,9	24	207	8,4	0,8%	0,01	69,1%	70	98,8
May, 18, 2022	9:15	2A	Basf 7878fs40	0,10%	2,2	120	0,25	0,28	1		1,30	1,4	21	207	9,1	1,4%	0,01	65,4%	124	99,3
May, 18, 2022	9:35	2B	Basf 7878fs40	0,10%	1,1	120	0,25	0,28	1		1,21	1,3	21	207	9,7	1,4%	0,02	64,3%	132	98,6
May, 18, 2022	11:13	2C	Basf 7878fs40	0,10%	1,7	120	0,25	0,28	1		2,16	2,4	17	207	8,4	0,9%	0,01	69,3%	75	98,9
<i>AVERAGE</i>				<i>0,10%</i>	<i>2,4</i>	<i>120</i>	<i>0,29</i>	<i>0,31</i>			<i>1,94</i>	<i>2,1</i>	<i>21</i>	<i>207</i>	<i>9,0</i>	<i>1,1%</i>	<i>0,01</i>	<i>67,2%</i>	<i>95</i>	<i>98,9</i>



Graph 1: Production verses Cake Dryness



Graph 2: Flow Rate versus Cake Dryness



The production, cake dryness or flow rate could vary depending upon (TS %) contained in the feed sludge.

## VI. Conclusion

---

The pilot test has proven the capability of the Fournier Rotary Press technology to efficiently dewater the scum sludge from North End Winnipeg Pollution Control Centre in Manitoba.

After quick optimization of the press, it has demonstrated excellent performance with the cationic emulsion from Basf 7878fs30 with the scum sludge.

The CVH channel (2" gap) demonstrated excellent performance with the BASF 7878fs40, providing a production rate between 70 to 132 dry kg/hr/channel, while maintaining a flow rate from 8.4 to 9.7 m<sup>3</sup>/hr/channel where achieved while maintaining cake solids between 64.3% and 69.1% and a capture rate of 98.9% through the whole duration of the trials.

The Rotary Press is the most advanced dewatering technology. The start-up and shutdown procedures consist of a simple push-button operation; it is designed for unmanned operation, and presents a consistent reliable operation under automatic mode making it ideal for this application. The pilot trials performed have demonstrated its reliability and consistency to produce a good cake dryness using very little power and is designed to operate with minimal operator assistance.

The equipment is capable of shutting down and washing itself without operator assistance. The device can be commanded to shut itself down at a specific time or based on low sludge level sensing.

The Rotary Press is an expandable technology, allowing other channels, to be added to the unit, in order to accommodate future increases in the flow. Up to eight (8) channels CVH can be mounted on the same Press.

Fournier Industries Inc. would like to thank and express its gratitude to all the members involved at NEWPCC plant staff for helping make the pilot trials possible and for expressing their interests in the Fournier Rotary Press.







## APPENDIX D

# Brochure

## System Description and Features

The Rotary Press sludge dewatering equipment is an innovative technology manufactured by "Fournier Industries Inc.". The technology was introduced into the municipal market in Canada in the late 1980's and has been actively implemented in the municipal waste water treatment market in the United States since 1999.

The Rotary Press technology features several distinct advantages over conventional dewatering technologies:

- High cake dryness and solids capture rate.
- Simple, fully automated operation suitable for continuous and remote operation.
- Totally enclosed which controls odours and minimizes potential for operator exposure to pathogens.
- Slow rotating (3 RPM max.) and high energy efficiency.
- Low footprint reduces capital building costs - Minimal wash water requirements.

The Rotary Press technology involves the use of modules called "dewatering channels", composed of two (2) parallel screens, separated by spacers. Sludge is fed into the rectangular channel and rotated between the two (2) revolving stainless steel chrome plated screens.



The filtrate passes through the screens as the flocculated sludge advances within the channel. The sludge continues to dewater as it travels around the channel, eventually forming a cake near the outlet side of the press. The frictional force of the slow moving screens, coupled with the controlled outlet restriction, results in the extrusion of a very dry cake.

The Rotary Press technology presents multiple outstanding features compared to conventional dewatering devices, as outlined below:

### Environmental Friendliness

- Process is totally enclosed, dramatically reducing odours, Volatile organic compounds (VOCs) and pathogen dispersion.
- Operations are quiet.
- Wash water usage is limited to 250 gallons per day, per dewatering channel. No wash water pump usually needs to be dedicated to the Rotary Press.
- Power usage is low. On normal operation on municipal biosolids, power consumption is typically 4 to 10 kW-hr/dry ton of biosolids.
- Cake dryness is high, resulting in less transportation and disposal.

### Modularity

- Machine is composed of several modular units – the dewatering channels – that are independent and interchangeable.
- Different outlet pressures can be set on the different channels, providing in time data on resulting cake dryness and throughput.
- Each channel can be washed separately.
- It is the only continuous operation dewatering device that can be made expandable. An oversized unit can be fitted with supplementary dewatering channels in order to increase its capacity.



**Safety & Health**

- Noise is well under protection thresholds.
- No exposed rotating parts.
- No operator exposure to pathogenic micro-organisms or virus in aerosols from traditional technologies.
- Low-energy dewatering removes all of the free water without cycling the cell walls; re-growth and re-activation is minimal when compared with centrifugation.
- Cleanliness prevents slippery floors.

**Low Operation Cost**

- Dewatering operations are fully automated and operator assistance is limited to start-up, mainly in order to select the optimum polymer dosage.
- Polymer mixing is external to the machine and floc quality can be easily verified by the operator, resulting in optimized polymer usage.
- Power usage is low. On normal operation on municipal biosolids, power consumption is typically 4 to 10 kW-hr/dry ton of biosolids.

**Low Maintenance Cost**

- Robust construction.
- Limited number of mechanical parts.
- Slow rotation speed.
- Results in the lowest maintenance cost of any type of dewatering equipment.
- Reduced corrosive exposure to nearby equipment.
- Automated 5 minutes/day self-cleaning cycle.





**MUNICIPAL AND INDUSTRIAL  
DEWATERING APPLICATIONS**

# **ROTARY PRESS**

## **OPTIMUM-CV**





## Advantages of operation

- Continuous process
- Equipment totally enclosed, reduced airborne contaminants & odors
- Easy start-up and shut-down procedures
- Very simple to operate
- Minimal supervision required
- Completely automated and can be remotely controlled

## Maintenance

- Robust construction
- Small number of mechanical parts
- Slow rotation speed (0.2-2 rpm)
- Reduced corrosive exposure to nearby equipment
- Automated self-cleaning cycle
- Little maintenance

## Economy

- Savings on final disposal costs (high dryness)
- Minimal space requirements (small footprint)
- Low maintenance costs
- Reduced labor costs
- Low energy consumption
- Low water usage



## ACCESSORIES & MORE

We have developed a wide variety of **customized accessories** for virtually any layout.

Custom-engineered systems for **total plant automation**, catering to every customer's individual needs.

Our engineering team will tackle any project and provide **complete package solutions** for any biosolid handling.

With a host of features tailored to your requirements, Fournier allows you to optimize your business operations.

### ■ Containerized & skid mounted units

- Complete turnkey projects
- Containerized projects

### ■ Polymer feed systems

- Liquid or dry-feed polymer
- Manual or fully automated

### ■ Shaftless screw conveyors

- Screw sizes from 9" to 18"
- Lengths from 5ft to 200ft

### ■ Sludge pumps & other accessories

- Equipment of any size can be quickly assembled and shipped to your site.





Fournier Industries Inc. has specialized in mechanical equipment manufacturing since 1960. The company's technical abilities and expertise involve product design, lab and pilot testing, commissioning and training.

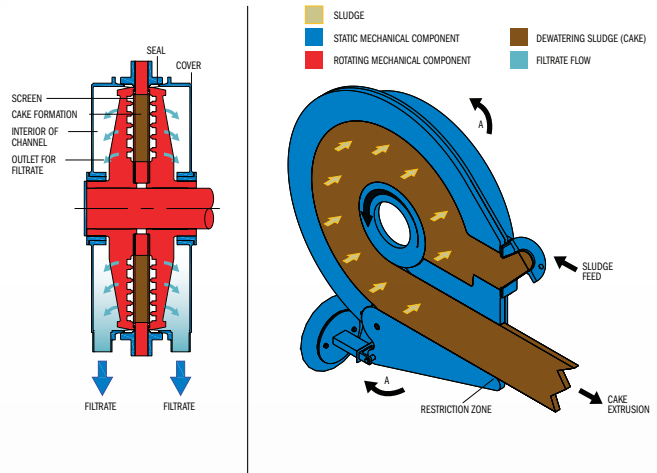
## ROTARY PRESS TECHNOLOGY

Fournier Industries Rotary Press technology is at the forefront of municipal and industrial sludge dewatering, the result of continuous improvement and R&D.

Due to its reliability and simplicity, the Fournier Rotary Press requires minimal supervision. It is the only dewatering technology that is safe for stand-alone automatic operation and can be monitored and operated by remote control.

The benefits derived from using the Rotary Press have been well documented and result in lower operating costs for the customer through its high performance, easy operation, reduced polymer usage, low power consumption and low maintenance.

## Principle of operation



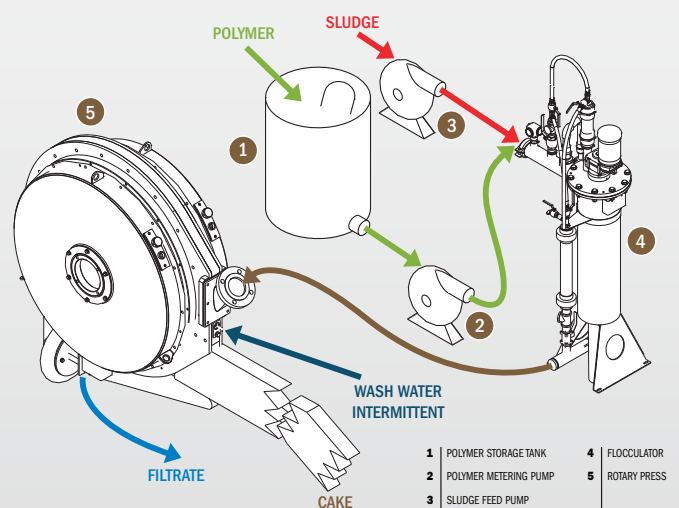
## HOW IT WORKS...

The principle of operation is simple. Sludge is fed at low pressure into the channel and rotates between two parallel revolving stainless steel chrome plated filtering elements.

As free water passes through the screens, the sludge continues to dewater as it travels around the channel. The flocculated sludge builds up solids until enough pressure is generated against the outlet restricted arm.

The frictional force of the slow-moving filtering elements, coupled with controlled outlet restriction, generates enough back pressure to dewater the remaining solids, resulting in the extrusion of a very dry cake.

## Process schematic





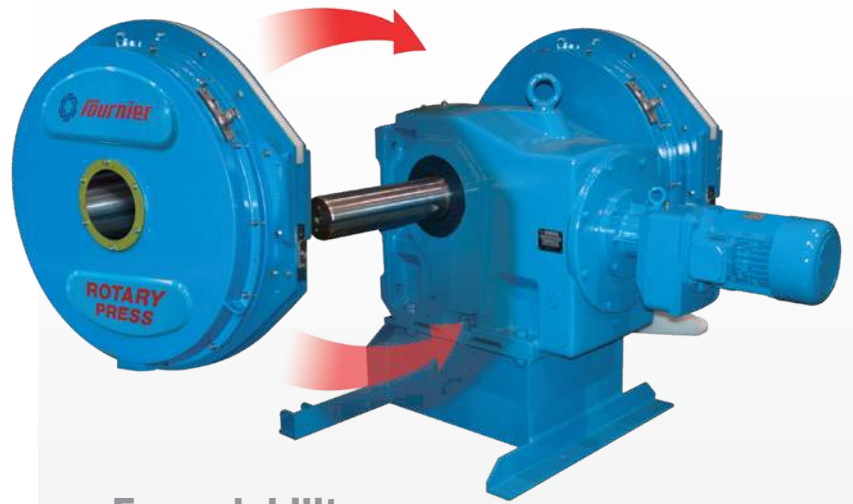
# THE ROTARY PRESS CV-OPTIMUM

The Fournier Rotary Press, CV-optimum is the latest development in dewatering technology.

Winner of the 2002 WEF Innovative Technology Award, this Canadian invention has undergone several upgrades over the years.

A single-width channel is able to dewater all varieties of sludge, allowing a single press to be used anywhere, without any physical modification.

To ensure that our customers always get the parts they need quickly & affordably, Fournier Industries maintains a large inventory of spare parts.



## Expandability

Another unique feature of the Rotary Press is the ability to order units that can be expanded at a future date. This allows customers to benefit from lower capital costs at time of purchase and expand according to need. Any combination of channels can be obtained, up to maximum of 8 channels per press.



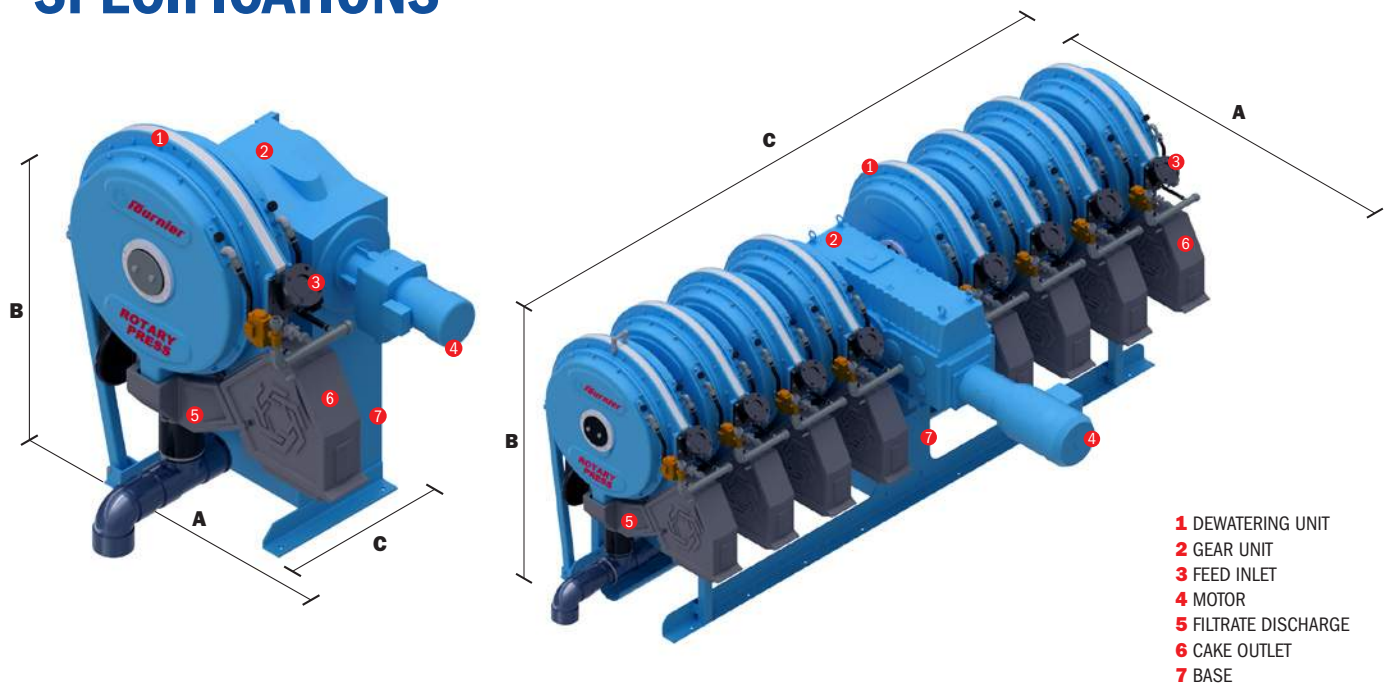
**TURNKEY SYSTEMS DELIVERED ON SKID, FOR SIMPLE,  
FAST AND ECONOMIC INSTALLATION**







## SPECIFICATIONS



- 1** DEWATERING UNIT
- 2** GEAR UNIT
- 3** FEED INLET
- 4** MOTOR
- 5** FILTRATE DISCHARGE
- 6** CAKE OUTLET
- 7** BASE

MODEL NO.	MODEL	DIMENSIONS In. (mm)			WEIGHT Lb (kg)	MOTOR HP (kW)
	CHANNEL	A	B	C		
1-900/1000CV	1	69 (1745)	72 (1830)	40 (1028)	3966 (1799)	1.5 (1.1)
2-900/2000CV	2	74 (1874)	72 (1830)	65 (1646)	6854 (3109)	3 (2.2)
3-900/3000CV	3	75 (1899)	72 (1830)	86 (2180)	8498 (3855)	5 (3.7)
4-900/4000CV	4	84 (2135)	75 (1915)	102 (2580)	10280 (4663)	5 (3.7)
5-900/5000CV	5	88 (2240)	75 (1915)	123 (3124)	12235 (5550)	7.5 (5.5)
6-900/6000CV	6	88 (2240)	75 (1915)	144 (3668)	13649 (6191)	7.5 (5.5)
7-900/7000CV	7	90 (2280)	79 (2007)	176 (4471)	17409 (7913)	10 (7.5)
8-900/8000CV	8	90 (2280)	79 (2007)	187 (4750)	18820 (8555)	10 (7.5)

\*VARIES AS PER INSTALLATION LAYOUT



## LABORATORY AND PILOT TESTING

In order to determine the size that meets your needs, we strongly recommend taking advantage of our **Free** laboratory tests.

These steps allow us to characterize sludge samples and to anticipate the performance of your Rotary Press, based on previous results in the same operation field.



FOURNIER INDUSTRIES INC.

3787 Frontenac Blvd West, Thetford Mines  
Quebec, Canada G6H 2B5

Phone: 418 423-4241  
Fax: 418 423-7366

general@fournierindustries.com  
www.fournierdewatering.com

## WHAT YOU SEE IS WHAT YOU GET!

Fournier Rotary Press performance testing can be demonstrated by means of our mobile units. Our use of a full-scale pilot unit defines the performance of the Rotary Press on your typical sludge. Using the information from the pilot gives us the exact performance data needed for any final installation design.



OVER 500 INSTALLATIONS WORLDWIDE



US Patent 7,166,229  
ISO-9001:2015



## APPENDIX E

# Certifications

## Rechercher une entreprise au registre

### État de renseignements d'une personne morale au registre des entreprises

Renseignements en date du 2023-02-22 09:07:53

#### État des informations

##### Identification de l'entreprise

Numéro d'entreprise du Québec (NEQ)	1176943463
Nom	LES INDUSTRIES FOURNIER INC.
Version du nom dans une autre langue	FOURNIER INDUSTRIES INC.

##### Adresse du domicile

Adresse	3787 boul. Frontenac O Thetford Mines (Québec) G6H2B5 Canada
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##### Adresse du domicile élu

Adresse	Aucune adresse
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##### Immatriculation

Date d'immatriculation	2021-09-22
Statut	Immatriculée
Date de mise à jour du statut	2021-09-22
Date de fin d'existence prévue	Aucune date de fin d'existence n'est déclarée au registre.

##### Forme juridique

Forme juridique	Société par actions ou compagnie
Date de la constitution	2021-10-01 Fusion
Régime constitutif	QUÉBEC : Loi sur les sociétés par actions (RLRQ, C. S-31.1)
Régime courant	QUÉBEC : Loi sur les sociétés par actions (RLRQ, C. S-31.1)

##### Dates des mises à jour



Date de mise à jour de l'état de renseignements	2022-11-30
Date de la dernière déclaration de mise à jour annuelle	2022-11-30 2022
Date de fin de la période de production de la déclaration de mise à jour annuelle de 2023	2024-04-01
Date de fin de la période de production de la déclaration de mise à jour annuelle de 2022	2022-11-15

**Faillite**

L'entreprise n'est pas en faillite.

**Fusion, scission et conversion**

La personne morale a fait l'objet de fusion(s).

Type	Loi applicable	Date	Nom et domicile de la personne morale	Composante	Résultante
Fusion ordinaire	QUÉBEC : Loi sur les sociétés par actions (RLRQ, C. S-31.1)	2021-10-01	ÉNERGIE FOURNIER INC. 3787, BOULEVARD FRONTENAC THETFORD MINES (QUÉBEC) G6H2B5	1166707209	1176943463
			COMPTE-FOURNIER INC. 3787, BOULEVARD FRONTENAC OUEST THETFORD MINES (QUÉBEC) G6H2B5	1166689118	
			LES INDUSTRIES FOURNIER INC. 3787 boul. Frontenac O Thetford Mines (Québec) G6H2B5 Canada	1172185168	

**Continuation et autre transformation**

Aucune continuation ou autre transformation n'a été déclarée.

**Liquidation ou dissolution**

Aucune intention de liquidation ou de dissolution n'a été déclarée.

**Activités économiques et nombre de salariés****1<sup>er</sup> secteur d'activité**

Code d'activité économique (CAE)	3081
Activité	Ateliers d'usinage
Précisions (facultatives)	ateliers d'usinage- autres industries de produits en métal-autres ind

**2<sup>e</sup> secteur d'activité**

Code d'activité économique (CAE)	3099
Activité	Autres industries de produits en métal
Précisions (facultatives)	autres industries de produits en métal- bâtiments industriels et miniers

**Nombre de salariés**

Nombre de salariés au Québec  
De 250 à 499

## Convention unanime, actionnaires, administrateurs, dirigeants et fondé de pouvoir

### Actionnaires

#### Premier actionnaire

Le premier actionnaire est majoritaire.

Nom	Groupe industries Fournier inc.
Adresse du domicile	3787 boul. Frontenac O Thetford Mines (Québec) G6H2B5 Canada

### Convention unanime des actionnaires

Il existe une convention unanime des actionnaires conclue en vertu d'une loi du Québec ou d'une autre autorité législative du Canada.

### Actionnaires ou tiers assumant les pouvoirs du conseil d'administration

Tous les pouvoirs ont été retirés au conseil d'administration par une convention unanime des actionnaires.

Nom de l'entreprise	Groupe industries Fournier inc.
Date du début de la charge	2021-10-01
Date de fin de la charge	
Adresse du domicile	3787 boul. Frontenac O Thetford Mines (Québec) G6H2B5 Canada

### Liste des administrateurs

Nom de famille	Roy
Prénom	Harold
Date du début de la charge	2021-10-01
Date de fin de la charge	
Fonctions actuelles	Président, Secrétaire
Adresse	3787 boul. Frontenac O Thetford Mines (Québec) G6H2B5 Canada

### Dirigeants non membres du conseil d'administration

Nom de famille	Rodrigue
Prénom	Sébastien
Fonctions actuelles	Secrétaire
Adresse du domicile	3749 ch. de la Source Thetford Mines (Québec) G6H3C6 Canada

### Fondé de pouvoir

Aucun fondé de pouvoir n'a été déclaré.

### Administrateurs du bien d'autrui

Aucun administrateur du bien d'autrui n'a été déclaré.

### Établissements

Numéro et nom de l'établissement	Adresse	Activités économiques (CAE)
<b>0001 - LES INDUSTRIES FOURNIER INC.</b> (Établissement principal)	3787 boul. Frontenac O Thetford Mines (Québec) G6H2B5 Canada	Autres industries de la machinerie et de l'équipement (3199) Autres industries de produits en métal (3099)
0002 - LES INDUSTRIES FOURNIER INC.	8605 BOUL. Parent Trois-Rivières Québec G9A5E1 Canada	Autres industries de produits en métal (3099)

### Documents en traitement

Aucun document n'est actuellement traité par le Registraire des entreprises.

### Index des documents

#### Documents conservés

Type de document	Date de dépôt au registre
DÉCLARATION DE MISE À JOUR ANNUELLE 2022	2022-11-30
Déclaration de mise à jour courante	2022-05-17
Déclaration de mise à jour courante	2022-02-25
Déclaration initiale	2021-10-05
Certificat de fusion	2021-09-22

### Index des noms

Date de mise à jour de l'index des noms 2021-10-01

#### Nom

Nom	Versions du nom dans une autre langue	Date de déclaration du nom	Date de déclaration du retrait du nom	Situation
LES INDUSTRIES FOURNIER INC.	FOURNIER INDUSTRIES INC.	2021-10-01		En vigueur

### Autres noms utilisés au Québec

Aucun autre nom utilisé au Québec n'a été déclaré.



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**CERTIFIED COPY OF A RESOLUTION  
OF THE BOARD OF DIRECTORS OF**

**FOURNIER INDUSTRIES INC.**

**(the "Corporation")**

**"RE: DELEGATION OF AUTHORITY AND SIGNATURE AUTHORIZATION**

The undersigned, being the sole director of the Corporation, adopts, as of September 21, 2021, the following resolution:

**IT IS HEREBY RESOLVED TO:**

**AUTHORIZE** the Corporation, itself represented by Mr. Harold Roy and/or Mr. Jean-François Deblois and/or Mr. Francis Caouette and/or Mr. Dominique Cyrenne to produce and sign, for and on behalf of the Corporation, all the required documents for calls for tenders having a total value inferior or equal to \$7,000,000 to which the Corporation wishes to answer, substantially in the form and manner required by the caller, with any modification that each and any one of them may judge appropriate to make, their signature evidencing the approval of filing of those documents by the Corporation, as well as to sign any other document and to perform, for and on behalf of the Corporation, any other useful or required act in order for the filing of such required documents answer to such calls for tenders."

**CERTIFICATE**

I, **Harold Roy**, president of the Corporation, certifies that the preceding text is a certified copy of a resolution adopted by the board of directors of the Corporation on September 21, 2021, that this resolution is still in effect and that it was not amended in any way.

**SIGNED** in Thetford Mines, this \_\_\_\_\_ .

  
\_\_\_\_\_  
**Harold Roy**





**THE CITY OF WINNIPEG  
Tender No.1003-2022  
Supply of Rotary Press and Appurtenances**

**Form B: Prices**

FORM B:PRICES  
(See "Prices" clause in tender document)

UNIT PRICES

Item	Description	Spec. Ref	Unit	Approximate Quantity	Unit Price	Amount
1	Rotary Dewatering Presses complete with all appurtenances.	Section 44 46 16	each	2	\$511 362,00	\$1 022 724,00
2	Polymer dosing skid complete with all appurtenances	Section 43 21 20 and 43 21 20A	each	1	\$27 222,00	\$ 27 222,00
3	Equipment Storage	Section 01 61 00	each	1	\$2 500,00	\$ 2 500,00

Standardized Goods.

Indicate base costs for material supply under the following standardization agreements.

Any material mark-up or installation costs, as applicable, shall be included in other line items above.

4	Standardized Control System and Motor Control Equipment – Base Cost	E5	each	1	\$18 566,33	\$ 18 566,33
5	Standardized Instrumentation – Base Cost	E6	each	1	\$8 805,00	\$ 8 805,00
6	MRST		Lump Sum	1	\$75 587,21	\$ 75 587,21

TOTAL BID PRICE (GST extra) (in numbers)

\$ 1 155 404,54

Fournier Industries Inc  
Name of Bidder