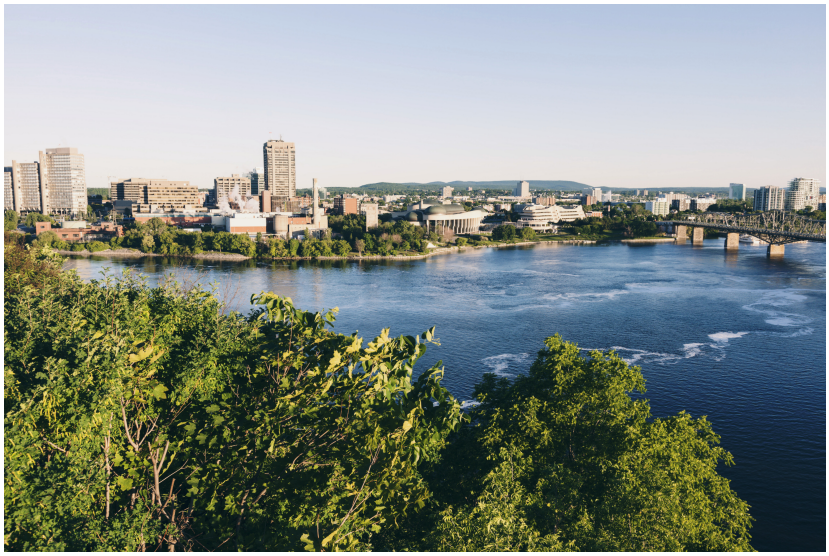
ABB MEASUREMENT & ANALYTICS | SUCCESS STORY

City of Gatineau



The City of Gatineau won the prestigious Regional Honors Award on Health & safety in 2016

Measurement made easy

Gatineau

Introduction

The Champlain station receives 70% of the wastewater from the city of Gatineau, which is then routed to the regional wastewater treatment plant. The waste water treatment process of the Champlain station is mainly a coarse screening / primary treatment that removes the maximum amount of waste / rubbish in the wastewater.

Challenge

The city of Gatineau had to find a solution to an on-going problem with the bar screen. When the bar screen stopped during its travel, either caused by a mechanical problem, or motor overload, they had no idea of the bar screen rake position at the time of the failure.

Failure of the bar screen had huge consequences, which involves several disciplinary teams (mechanical, electrical, operational), in a confined space with insoluble humid environmental conditions. One can have H2S, explosive gases, foul odors and bacteriological risk. In such cases, scaffolds had to be installed in order to check all the equipment before repairing.

ABB Solution

All of these interventions forced the city to look very closely at the problem on how to reduce the frequency of the intervention, as well as the time spent on the intervention itself when they occur.

After evaluating different level measuring technologies, the ABB Laser was selected as the most reliable means of measuring the distance travelled by the bar screen rake.

Every 0.25 seconds the Laser sends its position to the PLC over a distance of 21 meters, and as soon as the speed varies, thus after an elapse time of 0.5 seconds, the bar screen is shut down, thus limiting the damage.

This way, they can target the exact position of the bar screen rake, instead of having to inspect the entire length of the conveyor, rack, and all associated moving parts.

This typically represents a 4 hour intervention compared to close to 2 week's intervention before the installation of the ABB Laser, thus reducing considerably the down time.

This innovation can be used in any other municipality that have the same type of equipment in order to improve the safety of its workers.

01

01 Bar screen rake

02

01 LM80 laser transmitter

Conclusion

Because of the ABB laser narrow focused beam, and the fact that the Laser is unaffected by false echo's compared to an open air radar, this measurement was made possible!

Since the installation of the ABB laser in May 2015 for the monitoring of the bar screen rake position, the city as had no major failures!

This innovation can be used in any other municipality that has the same type of equipment in order to improve the safety of its workers.

Combine this with the excellent sales support of our local channel partner Everest Automation and you have a winner!

ABB, Inc.
Measurement & Analytics
3400, rue Pierre-Ardouin
Québec (Québec) G1P 0B2
Canada
Tel: +1 418-877-2944
1 800 858-3847 (North America)
Email: lasers@ca.abb.com

abb.com/laserlevel

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