

# 442 and SpiralTrac Performing “Far Beyond We Could Ever Imagine” part 1

Hydropower | River water | Mechanical Seal



## Application Info & Challenge

- **Industry:** Power, Hydropower
- **Location:** BC, Canada
- **Equipment:** Andritz Horizontal Francis Water Turbine, QTY 9
- **Product:** Raw river water, ambient temperature
- **Speed:** 700 rpm
- **Pressure:** 1.5 bar g

Turbines experiencing excessive leakage and premature failure. Many seals would leak profusely at startup and cause downtime.



## Solution & Result

- Chesterton 442 split seal 480 mm SC/SC/EP
- **SpiralTrac Version F Type S** made of carbon graphite PTFE (ESC) material, dwg #15-0506
- Adapter plate



Chesterton solution was installed in a Plan 13 suction recirculation setup without any start up leakage. Some of these solutions have been running for over 5 years without leakage, eliminating all downtime!

### Testimonial

*We were having constant seal failures at our new hydropower generating turbines at our facilities. Our crews had to dedicate the large majority of their time tending to and replacing the original sealing devices. Everything else we had to do was placed on hold.*

*The first year we replaced 46 – 425mm & 485mm split seals at a cost of **US\$1.8 million** and thousands of hours of lost generating hours accounting for **millions of dollars of lost revenue.***

*We met with the Chesterton group and we decided that we needed the superior seal design the 442 Split Seal appeared to be. We started changing our seals out to the 442 with the assistance of the Chesterton Service Group. The **results were fantastic** and we have now replaced all the previous designs with the 442.*

*The first Chesterton seals were installed over 2 years ago and we are delighted to say, all the 12 442 Split seals that have been installed are performing **far beyond we could ever imagine!** We now have our maintenance crew available to provide critical support to our facilities, rather than being in constant crisis mode.*

*My sincere thanks to Chesterton for resolving our seal crisis!*

- Plant Manager, 2017



9 Andritz Horizontal Francis Water Turbines



Chesterton solution installed



No leakage, downtime eliminated

For more information please send an email to us at [support@enviroseal.ca](mailto:support@enviroseal.ca). We hope to hear from you!



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