



Coral Bay Nickel Corporation Success Story – HPAL Nickel Plant

Turning to Waste into Asset Protection: How TTI Breather Achieving 8× more moisture retention than the old standard in High Humidity in Mining. Superior Filtration - Upgraded filtration from 3 µm to 1 Micron Absolute via the proprietary technology - DuoGlass Media to blocking future contaminants.

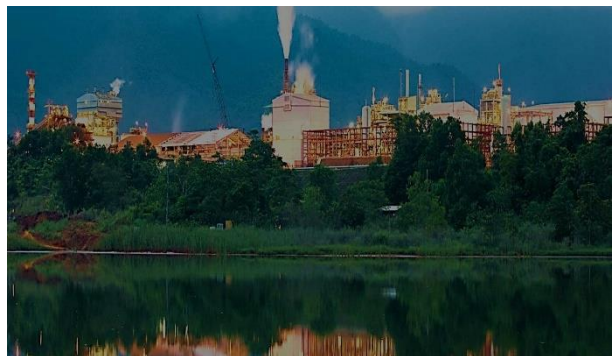
Company Profile

Coral Bay Nickel Corporation (CBNC) is a world leader in nickel and cobalt production, operating a Hydrometallurgical Processing Plant (HPP) in Palawan, Philippines. The plant utilizes the High-Pressure Acid Leach (HPAL) process to convert low-grade nickel lateritic ores into valuable Nickel and Cobalt Mixed Sulfide.

Executive Summary

The Problem: Frequent replacement of OEM old breathers due to quick saturation resulted in high consumable costs and increased maintenance time, challenging the technical teams due to extreme humidity and water ingress which accelerate oil degradation which causes carbonic acid.

The Solution: Implementation of a total contamination control solution by Jonathan P. Beldad – the lubrication specialist of 2Complitz Lubrication Solutions – TTI Exclusive Distributor, featuring the TTI Titan Power Breather.



- **Micron Ratings:** Dual Phase microglass 1-micron absolute media. Delivers Beta 1000 efficiencies at 1µm, 3µm, 6µm, 10µm, 25µm, and 40µm.
- **Moisture Control/Breathing:** This component prevents external airborne contaminants (like abrasive dust) and moisture (which forms carbonic acid) from entering the system's reservoir as the fluid level fluctuates.
- **Oil Mist Elimination:** Deployed the **SmartFlow™ Adapter** on high-misting assets (crushers) to protect the desiccant media and drastically extend breather life.
- **The Result:** Operational Uptime of robust protection ensures greater asset reliability, supporting CBNC's high production goals and maximizing operational uptime in critical zones.



The Core Conclusion: A Shift to Proactive Contamination Control

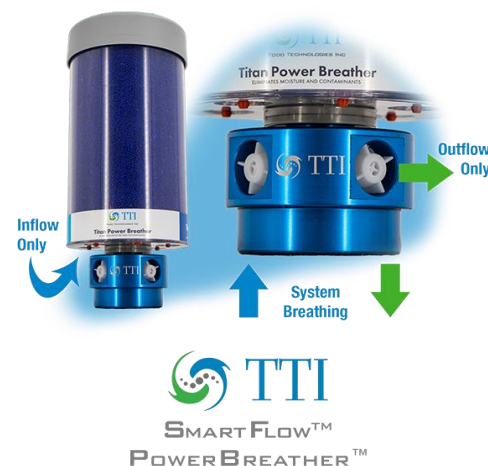
CBNC operates in one of the harshest industrial environments in the Philippines — extreme humidity, fine dust, and constant oil mist exposure. These conditions overwhelmed their OEM breathers, leading to contamination, lubricant degradation, and increased maintenance workload.

In late 2024, CBNC partnered with 2Complitz Lubrication Solutions - Exclusive distributor of TTI to deploy the Titan PowerBreather™ Check Valve models. The results were immediate, measurable, and validated by predictive maintenance data.

The 2Complitz/TTI solution, championed by Jonathan P Beldad, provided a comprehensive and highly effective correction by deploying the TTI Titan PowerBreather system.

High-Capacity Titan-2100: Replaced previous breathers with the Titan-2100 CV model, instantly

1. achieving 8× more moisture retention than the old OEM standard breather.
2. Superior Filtration: Upgraded filtration from 3 µm to 1 Micron Absolute via the proprietary DuoGlass Media, blocking fine contaminants like abrasive dust.
3. Oil Mist Elimination: Deployed the SmartFlow™ Adapter on high-misting assets (crushers) to protect the desiccant media and drastically extend breather life.



Leveraging the Success

It successfully executed a strategic shift from reactive maintenance to proactive contamination control. By eliminating the root cause of contamination via superior filtration and moisture control, the Titan safeguarded assets, validated data, and realized substantial cost savings.

Thank you Engr. Ronimel Lutaog and Engr. Rogelio Cadajas Jr. (Senior Mechanical Supervisor), also Meraly Serrato Ang (Procurement Buyer), for their commitment to continuous improvement:

1. **Quantifiable ROI:** The project established a new benchmark by validating 1 Micron Absolute filtration and 8× service life in a tropical country.
2. **Validated Data:** The results confirm that TTI's specifications (e.g., Dual Phase Microglass, Power Gel) effectively counteract the most destructive contaminants in the mining environment (abrasive dust and carbonic acid).
3. **Cross-Discipline Buy-in:** The collaboration between Financial Approval/Lubrication and Predictive Maintenance is the foundation of a world-class reliability program.

Date Established: December 12, 2025