

# Improving power quality and operational continuity.

Stability under extreme conditions with the Clean Power VFD.

Finkl Steel Sorel Case Study



Low-harmonic for optimal performance



Operational reliability

## Challenges

- Harmonic distortion generated by motors that are continuously operating at the lower end of their speed range.
- Reliability of VFDs operating in a dusty and hot environment.
- Maintaining 24/7 production.
- Lack of experienced workforce

## Benefits

- The Clean Power VFD ensures continuous 24/7 operation without generating harmonics on the power grid and control distribution network.
- Its sinusoidal wave outputs protect both motor bearings and the motor itself.
- A VFD designed to support multiple voltages (480v and 600v).

## Feedback & Results

- Easy replacement of current VFD with simple installation and minimal downtime.
- Connect to existing control systems through easy input/output configuration using the mobile app.
- Reduced harmonics and improved power quality with the active front-end (AFE) of the Clean Power VFD.
- Enhanced motor reliability and lifespan with smooth start/stop functions and the Clean Power VFD's sinewave output signals.
- Lower operational and maintenance costs by using a single product instead of a VFD solution with external filters.
- Excellent customer service in French, and easy to reach someone by phone.

## Objectives

The company aims to improve the lifespan of motors, especially those of critical operations. The environment is dusty and hot while keeping a 24/7 production schedule.

For variable frequency drives (VFDs), unplanned power outages (such as failures from Hydro-Québec) often cause VFD failures in installed systems.

## Solutions

### Replacement of an existing variable frequency drive (VFD)

#### Improved Power Quality and Harmonic Reduction:

The active front-end (AFE) minimizes harmonic distortion, ensuring smooth motor operation. The Clean Power VFD not only handles harmonics from motors in extreme conditions but also eliminates them, resulting in higher power quality.

#### 24/7 Continuous Operation:

The Clean Power VFD secures reliable performance for motors running non-stop. Its ability to operate in extreme conditions, coupled with smooth recovery after power outages, keeps the production on track around the clock.

#### Easy Installation and Integration:

With simple installation and quick connectivity to existing control systems, the Clean Power VFD minimizes downtime. Its intuitive setup, accessible via mobile app, reduces the need for experienced technicians, streamlining deployment and operation.

#### Lower Costs and Simplified Maintenance:

By eliminating the need for external filters, the Clean Power VFD reduces both upfront costs and ongoing maintenance. It provides an all-in-one solution that ensures efficiency without added complexity.

**"The mobile app made setup incredibly simple, it allowed us to quickly get the system running with minimal downtime. Even during power disturbances, the drive runs smoothly and keeps our operations steady— we intend to deploy more SmartD Clean Power VFDs in the near future."**

- Finkl Steel, 2024