MERUS POWER

Active Harmonic Filter

Current harmonics mitigation in a packing house with numerous VFDs in Israel

Challenge

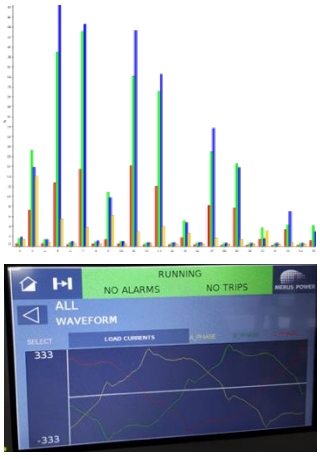
A large automatic packing house was suffering from overheating of the electric boards, failures of electronic devices, PFC systems and unnecessary downtime of production. Power Quality measurements were conducted by Merus Power's local partner, POS's service team. A two-week measurement was performed in two locations simultaneously, at the main packing house and the stacker machine room.

Several problems were detected by the analyser: High harmonic current distortion and a low power factor at the main board and in the stacker machine room.

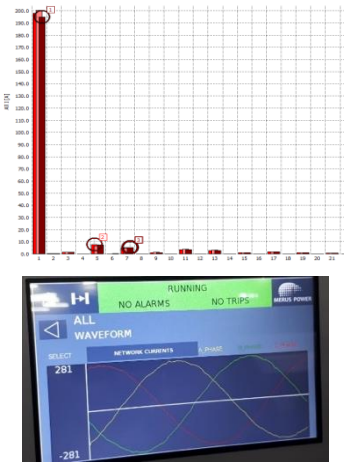
Solution

The chosen solution was a Merus™ A2, 100A, Active Harmonic Filter that was integrated into the electrical system. In the pictures below, the measured harmonic currents are presented with and without the Merus™ A2. As can be seen, the harmonic currents are minimized effectively. The distortion of currents is also minimized and can be seen in the lower pictures.

without Merus™ A2



with Merus™ A2



Result

By installing the Merus™ A2, 100A, Active Harmonic Filter, the high harmonic distortion was resolved, power factor was increased remarkably, about 45% while losses and unnecessary heating was reduced. Overall power quality at the packing house was improved and there is less downtime of production. A continuous efficient work is going on and increases results and profitability.

Application:
Packing house with several VFD motors

Location:
Israel

Power quality issues:
- High harmonic current distortion
- Low power factor

Merus™ Solution:
- Merus™ 100A, A2- Active Harmonic Filter

Customer Benefits:

- Increased profitability
- Less downtime
- Continuous efficiency
- Improved overall power quality
- Mitigated harmonic distortion
- Improved power factor

Merus Power Plc

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