

CHALLENGE DESCRIPTION

The Maize Mill & Biscuit Bakery is run on a system in which any power outage or voltage drop creates a disturbance.

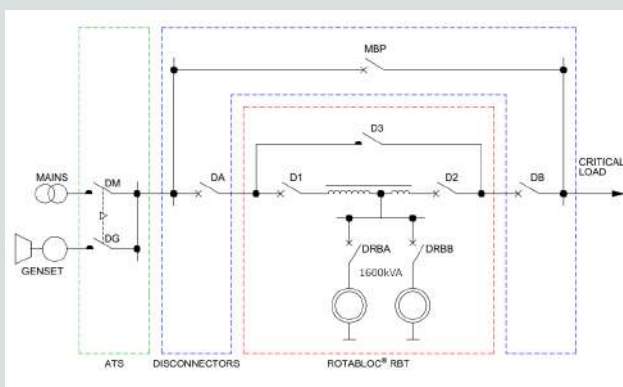
Pasteurization takes 5 seconds at 120°C which means that a power outage of 1 second represents 20% of the process duration.

The following are the negative effects:

- Process controls drop out of tolerances, which imposes the risk of bacterial infection.
- Products must be disposed of per regulation requirement - creates losses in finished goods.
- The sterilization process takes 5 hours, resulting in 5 hours of downtime.



Maize Mill & Biscuit Bakery's 4 production lines.



ROTABLOC SOLUTION

All power quality disturbances, such as short and micro cuts, as well as voltage dips and surges, are managed by the IEM Rotabloc RBT. It also covers longer cuts when used in conjunction with a genset. The genset, which is electrically coupled to the Rotablocs, starts only in the event of a long outage, which occurs far less frequently than traditional mechanically coupled “DRUPS” systems.

KEY FIGURES

Here are some of the RBT's accomplishments in the first three months following its commissioning:

- 109 mains failures avoided over \pm 92 days (> 1 per day)
- 56 of these mains failures absorbed internally, without genset start (51%)
- Hundreds of short voltage dips and micro cuts successfully filtered without isolation from the grid.



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