kWh (5.91%) less than N27. N6, which had a mismatching rate difference of 4.26 W, produced 9.18 kWh (7.72%) less than N1. N10, which had a mismatching rate difference of 9.71 W, produced 9.04 kWh (7.50%) less than N8. However, there was no relationship between the values of MPF and the number of hot spots detected. As it is shown in N6, where has been obtained an MPF of 25.46W and any hot spot was detected.

4. Conclusion

The main objective of the paper has been to perform a quality inspection of a PV plant composed of different PV modules classes. The procedure established has been based on three inspections; visual, IR thermography and electrical monitorization. Furthermore, a database has been analyzed to properly address the electrical mismatch issue.

Apart from the lack of cleaning and the front-side defects found in the visual inspection, it helped to develop a useful new PV module codification to address it easily.

IR thermographic inspection results have shown that less than 1% (0.76%) of the whole PV plant has been affected by thermal anomalies, of which 88% was categorized as hot spots.

The electrical monitoring results shown a homogeneous injection of electrical energy between inverters compared, but with a certain difference, since, inverters with higher values of MPF injected less energy.

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