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Total
April 2021

Independent assurance report on the award of the “Total Ecosolutions” label to the “MRX Battery” product

EY & Associés



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Further to your request, we have performed a review in order to obtain reasonable assurance the « MRX battery » product, a description of which can be found on the web site www.total.com¹ and in the external datasheet dated March 10, 2021, has obtained the “Total Ecosolutions” label in accordance with the version 7 of the “Total Ecosolutions Guidelines” dated January 11, 2021 (hereafter referred to as the “Guidelines”); the Guidelines, which can be downloaded from the web site www.total.com¹, have been established on the basis of the ISO 14020 and ISO 14021 standards and were the subject of a preliminary external review which gave rise to the issue of an independent report on their design, this report also being accessible on www.total.com¹.

We conducted our review in accordance with international standard ISAE 3000 (International Standard on Assurance Engagements) defined by IFAC (International Federation of Accountants). It is the responsibility of Total to regularly update the Guidelines, to ensure that they are made available to internal users and third parties, and to apply the Guidelines. It is our responsibility to express, on the basis of our review, a conclusion on the award of the “Total Ecosolutions” label to the « MRX battery » product.

Nature and scope of our review

To express our conclusion, we performed the following review:

- We have assessed the reliability, accuracy, understandability, neutrality, completeness and relevance of the Guidelines and the constituents of the “Total Ecosolutions” label request file for products and services.
- We have conducted interviews with the persons in charge of preparing the label request file, and analyzed the documentation available (aiming at justifying the methods of evaluation of the product’s overall environmental impact and of the comparative performance evaluation with the reference product). We have also reviewed the meeting minutes and documents used during the validation process by the “Total Ecosolutions” Labelling Committee and the Total Ecosolutions Management Committee, in order to identify any risks of deviation in relation to the label award process defined in the Guidelines. However, the scope of our work did not include the verification of data used as sources for the calculation.

¹ Exact address: www.ecosolutions.total.com

To conduct the aforementioned procedures, we called on members of our teams specialized in environment and sustainable development.

Information or explanations

- The Guidelines aim to define the rules for the award of the "Total Ecosolutions" label, the organisation and responsibilities, the methods for assessing the level of environmental performance and verifying the compliance with the Guidelines, the internal and external communication procedures as well as the rules for document management, in accordance with the requirements of the ISO 14020 and ISO 14021 standards.
- « MRX battery » product is a 230 Ah Nickel-Cadmium battery, sintered/propylene-based elastomer (PBE) type, with 54 cells, tension of 1.2V, for railways High Speed Train application. Its lifespan is 15 years. It is used to provide back-up electrical power for vital onboard services (lighting, data and communication systems...) in case the train catenary breaks or the grid fails.
- The environmental and sanitary performance of the « MRX battery » product is evaluated by comparison, based on an equivalent outcome for the customer, with a reference product, a 210 Ah lead-acid battery of flat pasted type with 36 cells, tension of 2V, used for railways application and whose lifespan is 4 years, which is representative of the market.
- The comparative assessment of the global environmental impact of the product « MRX battery » is based on a life cycle assessment (LCA) to evaluate the reduction of primary energy consumption and greenhouse gas emissions.
- The functional unit considered is "provide back-up electrical power over a period of 15 years , with a scenario of one discharge per month, thanks to railway batteries of 210 Ah to 230 Ah (that have similar performance) that can provide 9,5 kWh".
- The benefit considered significant and validated by the "Total Ecosolutions" Management Committee is a primary energy saving of 11% and a reduction of 46% of greenhouse gas emissions obtained through the use of labelled product.

Conclusion

In our opinion, the « MRX battery » product has been awarded the “Total Ecosolutions” label, in all its significant aspects, in accordance with the Guidelines.

Paris-La Défense, April 07th, 2021

EY & Associés



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