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COMUNICACIÓN A LOS AGENTES INVOLUCRADOS EN EL CICLO DE
VIDA

COMMUNICATION TO THE AGENTS INVOLVED IN THE LIFE CYCLE

**Millenium Extension switch
(2CLA620139N1101)**

DOC 42-03-04

REVISIÓN Nº 2
OCTUBRE 2020

LCA

Communication to the agents

Millenium Extension switch

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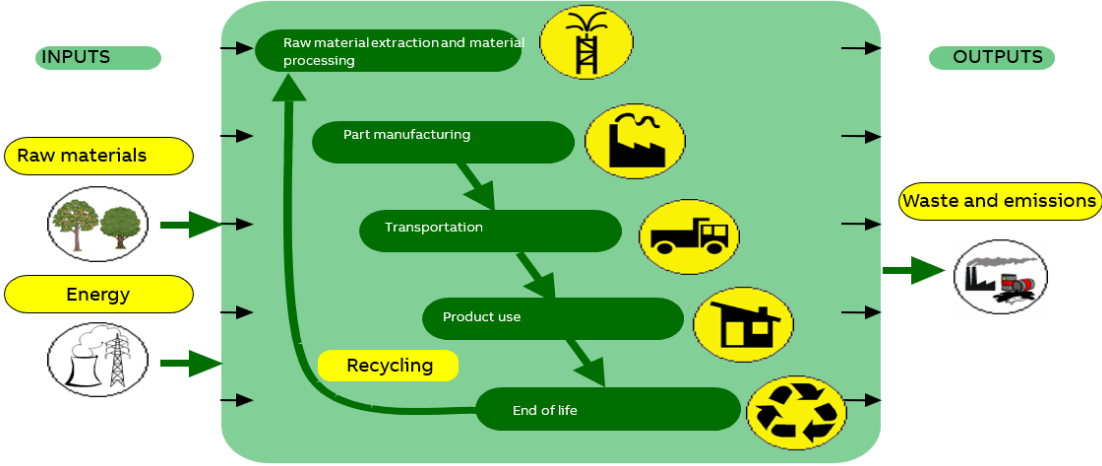
1. Introduction

1.1. Quality and environmental management

Our policy of continuous improvement also requires a demanding and responsible work, which has led to the implementation of the UNE-EN-ISO 14006: Environmental management systems Guidelines for incorporating eco-design in our Quality Management System and Environment.

Eco-design is understood as a process integrated within the design and development that aims to reduce environmental impacts and continually to improve the environmental performance of the products, throughout their life cycle from raw material extraction to end of life.

In order to be of benefit to our organization and to ensure that we achieve our environmental objectives, we carry out eco-design as an integral part of the business operations of our organization.



So in 2007 Asea Brown Boveri, S.A. NIESSEN factory, certify the Environmental Management Design and Development process according to UNE 150301. To subsequently adapt the system to the international standard UNE EN ISO 14006.



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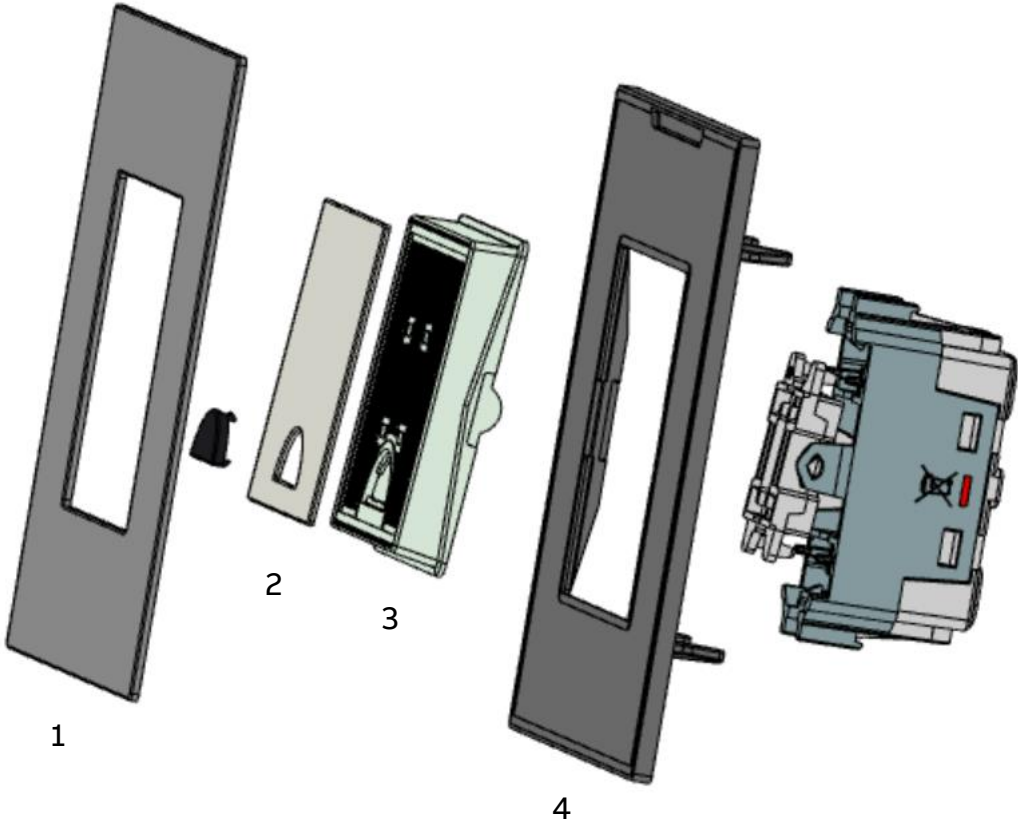
1.2. Purpose of the study

In this study the switch of the millennium extension range has been environmentally analyzed to seek for an improvement, comparing it with the eco-designed version, which uses less

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amount of raw material. In the case of the switch, it has been added the 32A switch to the study, which is also a older reference.

1.3. Eco-designed product



Part	Name	Material
1	Plate of the frame	Stainless steel
2	Plate of the button	Stainless steel
3	Support of the button	CHROMED ABS
4	Support of the frame	BLEND

1.4. Raw materials used

This product uses BLEND, a mix of polycarbonate and ABS, for the support of the frame, chromed ABS for the support of the button and stainless steel for the plate of both.

2. Considerations of the eco designed products

2.1. Usage considerations

- Make strong electrical connections; this will prevent heat loss in connections, and unnecessary energy consumption.

2.2. Recyclability considerations

-The cardboard packaging is recycled
-The plastics are recyclable, and they include a marking inside (indicating the material they are made of) so they can be disassembled.

2.3. Environmental improvements

-Elimination of use of halogenated flame retardants, by using halogen-free materials.
-Minimum cardboard for recyclable packaging
-Minimum number of components, thereby savings in energy and raw materials in manufacturing processes.
-Use of water-based paints, avoiding the use of solvents harmful to the environment.
-The change of components in the electronic circuit achieves a reduction in energy consumption of 3% in the use stage.
-The change of components in the electronic circuit achieves a reduction in energy consumption of 100% in the standby stage.
-The impact of the raw material has been reduced a 28,93%.

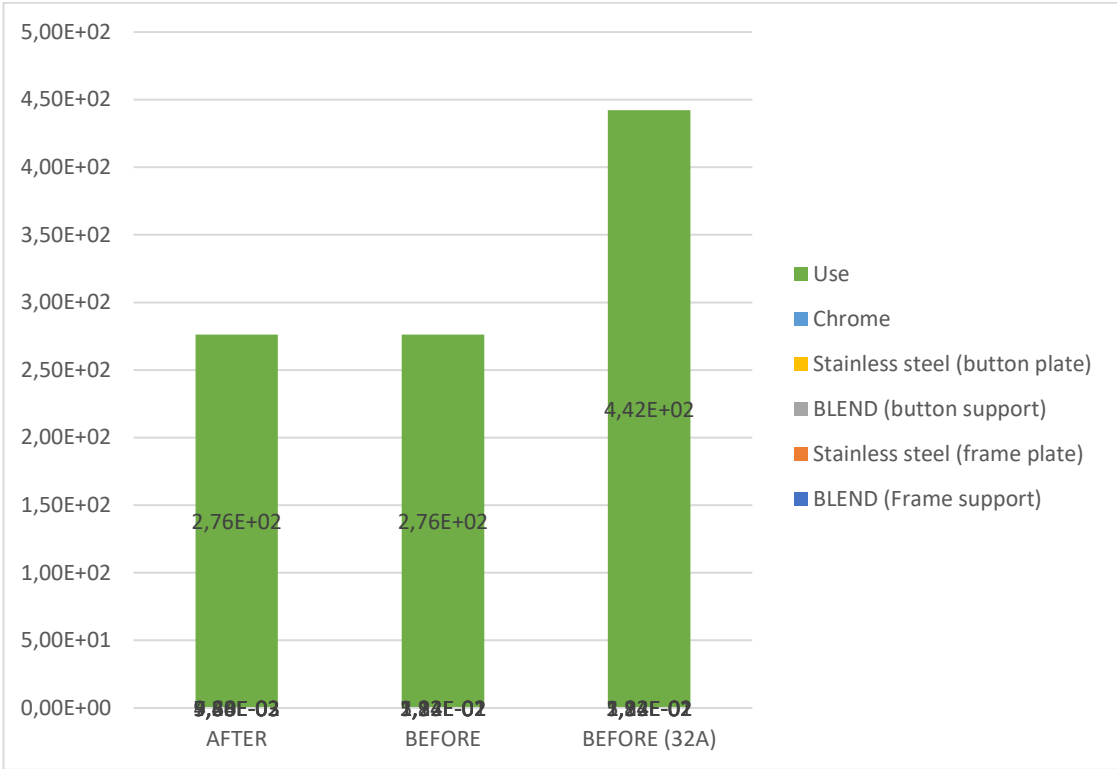
3. Impacts

3.1. Methodology and data

For this analysis, the software Simapro 9.1.0 has been used, with the database Ecoinvent 3. The calculations have been made with the methodology IPCC GWP 100a and CML-IA baseline. The lifecycle stages considered have been raw material and use. The data has been obtained from Creo Parametric, the software with which the 3D model was created.

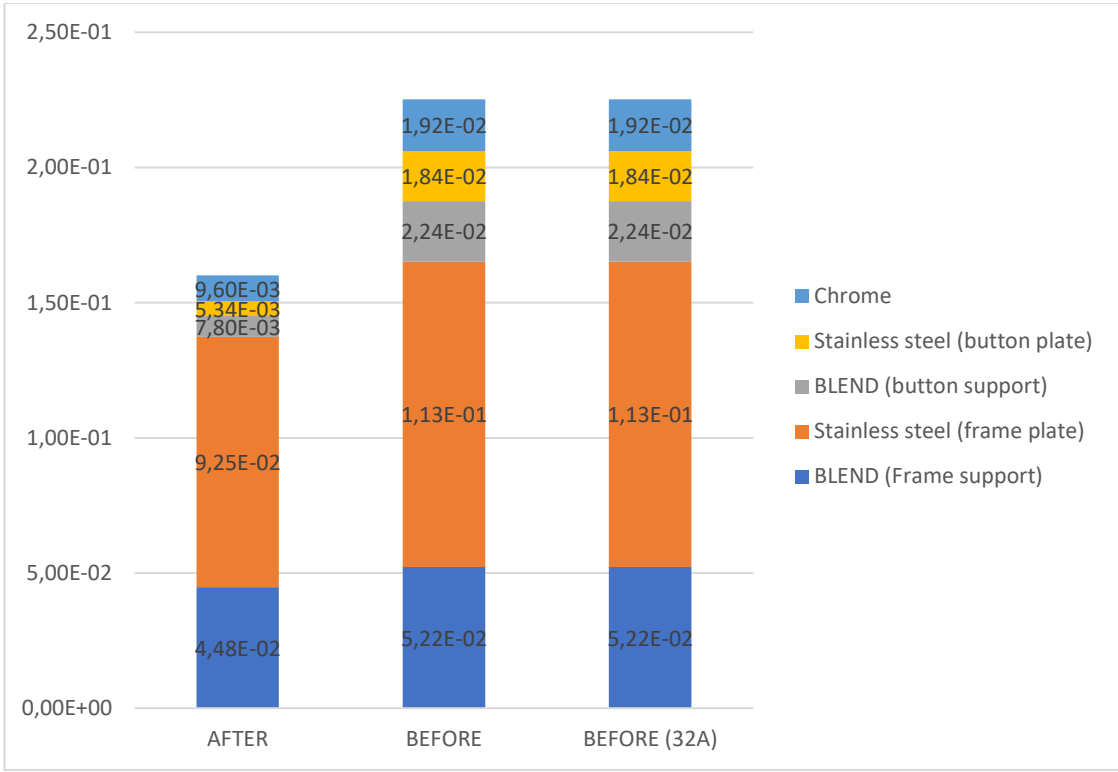
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3.2. Comparative



The graphic shows the changes made and the impact differences. The reduction on the impact of the raw material is because it uses less amount of it.

4. Conclusions



In the first graph is considered the manufacturing and use stage. As the use stage has the most impact, the rest of the stages are negligible. The product that impacts the most is the previous switch with 32A, as it is the one that consumes the most. To see the real difference made, in the second graph only the manufacturing stage is considered, which shows that there is a decrease in the impact due to a reduce in the raw material (28,93% reduce).

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03/03/2020