Printed Circuit Board Case study

Faldruk s.c.

LCA to go

(Poland)

Faldruk S.C. is a private, small sized company established in 1993. Since the beginning their core business activity has been the production of double-sided PCBs with plated holes. They also offer one-sided circuit boards and SMT templates.

Mr Tadeusz Piekarski and Jan Cygan from Faldruk Company had the opportunity to take part in the mentoring concerning Life Cycle Assessment of products for PCB sector realized by Janusz Sitek from ITR, during a site visit in the company in 2nd of July 2014. They checked also practical possibility of the basic and sophisticated version of the tool for PCB sector offering by the "LCA to go " project.

The basic version of the "LCA to go" tool was used for the assessment of the PCB marked PCC1 during case studies. Moreover the areas of application of the sophisticated version of PCB tool in PCB factory was discussed using available production data. It found the benefits for company budget planning from utilization of sophisticated version of PCB tool.

Mr Piekarski said: "The information concern water and energy consumption will be used to improve the environmental efficiency of our company. Other results will be disseminated dependence from customer requirements or law obligations. We will try to use also the information generated by the "LCA to go" tool for marketing purposes to inform customers about such possibilities".

The information from case study concerned energy consumption during PCB production very surprised Mr Piekarski. He decided to check this issue in more details because it influences significantly on production costs and profit of the company.

PRODUCT INFO

Mark of the PCB	PCC1
Type of PCB	Rigid
Number of layers	2
Type of finish coating	HASL

TOTAL RESULTS on KEPIs DETAILED RESULTS

Indicator	Units	For 1 PCB	For 10 PCBs
Water consumption	m^3	0.0129	0.13
Energy consumption Ec (Ec = Ecm+Ecp)	kWh	2.6839	26.84
Ecm - Energy consumed during materials production for PCB	kWh	0.8519	8.52
Ecp - Energy consumed during production processes of the PCB	kWh	1.8320	18.32
Total sludge and waste emitted	kg	0.0487	0.49
Carbon footprint - CF	kg CO2 eq	1.8362	18.36
CF of materials	kg CO2 eq	0.5804	5.80
CF of production processes	kg CO2 eq	1.2482	12.48
CF of gas emissions to air	kg CO2 eq	0.0070	0.07
CF of transport	kg CO2 eq	0.0007	0.01
Possible materials for recycling:			
Cu	g	2.5088	25.09
Au	g	0.0000	0.00
Ni	g	0.0000	0.00
Sn	g	0.1464	1.46
Ag	g	0.0000	0.00
Glass	g	15.7707	157.71
Resin	g	10.9593	109.59

ROHS compliance information	
The product marked PCC1 meets the EU-directive 2011/65/EU (RoHS) requirements.	
Comments	

CARBON FOOTPRINT (CF)

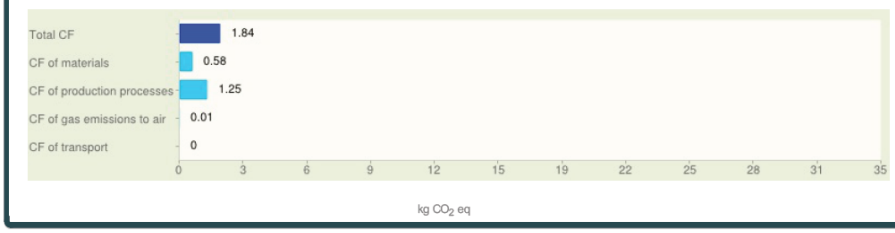

Fig.1. Examples of results from case study for the PCC1 PCB.