## **Custom Manufacture of a Solar Cooker – a Case Study**

J. Jeswiet<sup>1,a</sup>, J. R. Duflou<sup>2,a</sup>, A. Szekeres<sup>2,c</sup> and P. Lefebvre<sup>2,d</sup>

<sup>1</sup>Mechanical Engineering. 130 Stuart St, Queen's University, Kingston, ON Canada K7L3N6

<sup>2</sup>CIB, KU Leuven, Celestijnenlaan 300 A, 3001 Heverlee-Leuven, Belgium

<sup>a</sup>Jeswiet@me.queensu.ca, <sup>b</sup>Joost.Duflou@mech.kuleuven.ac.be,

<sup>c</sup>Alexander.Szekeres@mech.kuleuven.ac.be, <sup>d</sup>pierre.lefebvre@mech.kuleuven.ac.be

**Keywords:** sheet metal

**Abstract.** Single Point Incremental Forming is a new process, which has been developed to make both Rapid Prototyped products and low volume product batches from Sheet Metal.

This paper presents a case study of the manufacture of a solar cooker cavity for developing country applications. In the first instance the request was for a rapid prototype, which quickly evolved into a request for low volume production of solar cookers for the developing country market.

The paper describes the manufacture of the solar cooker cavity, and shows how the possibility of manufacturing part of the solar cooker, by Single Point Incremental Forming, gives rise to the possibility of manufacturing other parts for the solar cooker less expensively.