

Method for Coating and Bonding of Substrates

Abstract

This invention relates to a method for coating of a first substrate (1) with a first diffusion bond layer (5) by deposition of a first material which forms the first diffusion bond layer (5) on a first surface (1o) of the first substrate (1) such that the first diffusion bond layer (5) forms a grain surface with an average grain diameter H parallel to the first surface (1o) smaller than $1\text{ }\mu\text{m}$.

Furthermore this invention relates to a method for bonding of a first substrate (1) which has been coated in this way to a second substrate (3) which has a second diffusion bond layer (4) with the following steps, especially the following sequence:

- contact-making of the first diffusion bond layer (5) of the first substrate (1) to the second diffusion bond layer of the second substrate (3),
- pressing the substrates (1, 3) together for forming a permanent metal diffusion bond between the first and second substrate (1, 3).

Figure 1