ABSTRACT

PROCESS FOR FABRICATING A MULTILAYER STRUCTURE WITH TRIMMING USING THERMO-MECHANICAL EFFECTS

The invention relates to a process for fabricating a multilayer structure (130) comprising:

- bonding (S1) a first wafer (110) onto a second wafer (120), at least the first wafer having a chamfered edge (117a, 117b), the bonding interface having an adhesion energy of less than or equal to 1 J/m^2; and
- thinning (S3, S4) the first wafer (110) so as to form a transferred layer (115).

Before the thinning of the first wafer (110), a step of trimming the edge of the first wafer (110) is carried out using a grinding wheel (150), the working surface (151) of which comprises grit particles having an average size of greater than or equal to 800 mesh or less than or equal to 18 microns, said trimming step being carried out by lowering the grinding wheel at a rate of descent of greater than or equal to 5 microns per second, the descent of the grinding wheel into the first wafer being furthermore stopped at a height (h_{110}) from the bonding interface of less than or equal to 30 μm.

Figs. 1B-1E