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— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

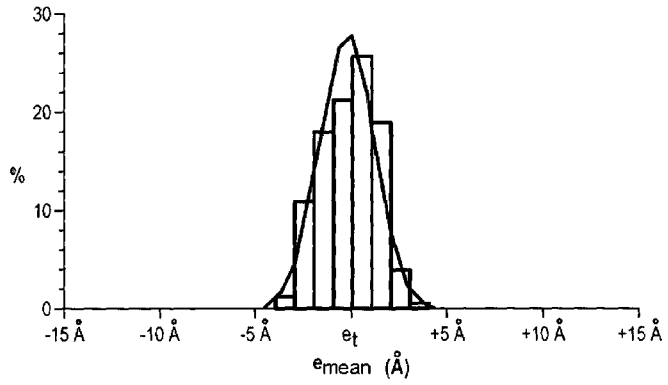
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(54) **Title**: PROCESS FOR TREATING A SEMICONDUCTOR-ON-INSULATOR STRUCTURE FOR IMPROVING THICKNESS UNIFORMITY OF THE SEMICONDUCTOR LAYER

FIG. 5



(57) **Abstract**: The invention relates to a process for treating a structure of semiconductor-on-insulator type successively comprising a support substrate (1), a dielectric layer (2) and a semiconductor layer (3) having a thickness of less than or equal to 100 nm, said semiconductor layer (3) being covered with a sacrificial oxide layer (4), comprising: measuring, at a plurality of points distributed over the surface of the, structure, the thickness of the sacrificial oxide layer (4) and of the semiconductor layer (3), so as to produce a mapping of the thickness of the semiconductor layer (3) and to determine, from said measurements, the average thickness of the semiconductor layer (3), selective etching of the sacrificial oxide layer (4) so as to expose the semiconductor layer (3), and carrying out a chemical etching of the semiconductor layer (3), the application, temperature and/or duration conditions of which are adjusted as a function of said mapping and/or of the mean thickness of the semiconductor layer (3), so as to thin, at least locally, said semiconductor layer (3) by a thickness identified as being an overthickness at the end of the measurement step.

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