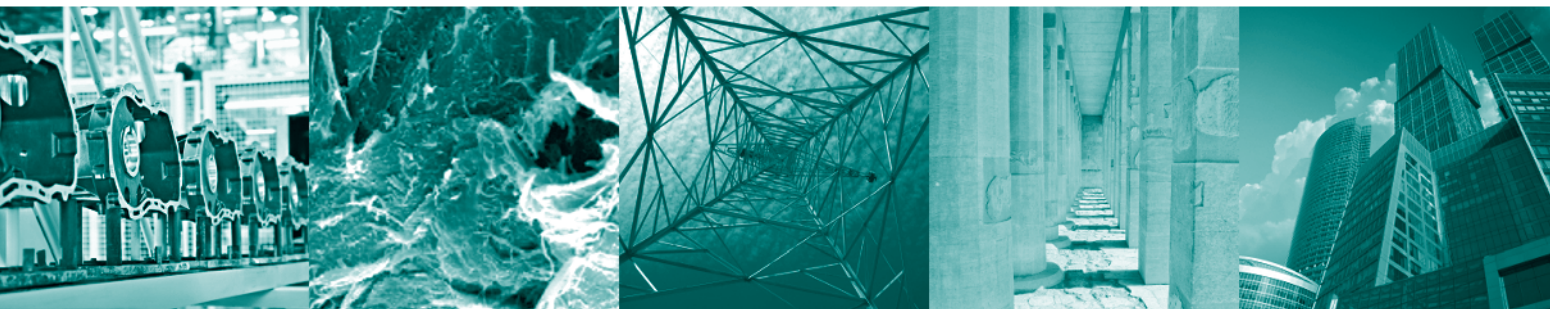




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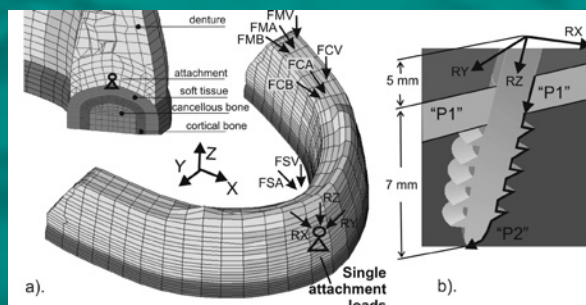
Professor

Leszek A. Dobrzanski M Dr hc
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Dear Readers

The next issue of Archives of Materials Science and Engineering is handed over to PT Readers. As usual, we have tried to collect engaging scientific papers. We hope that they will be interesting for you. I do recommend the paper from the area of Dental Engineering, which is very intensively developed personally by me with a group of my closest staff at my mother Institute of Engineering Materials and Biomaterials of the Silesian University of Technology, in which there is a specialized complex of laboratories, well-equipped with research equipment in the framework of fully modernized Laboratory of Engineering Materials and Biomaterials Researches supported from the EU within the framework of Projects: MERMFLEG and BIO-FARM. I wish nice reading and as always encourage PT Authors to publish their papers in next issues of our journal.



The paper entitled "Silicone attachment for avoidance of bone tissue overloading in single implant-retained denture" by J. Żmudzki, G. Chladek and J. Kasperski on a page 107 presents a possibility to achieve a much more reliable SID by means of used silicone attachment. The application of single implant-retained dentures (SIDs) is still rare. It seems that the reason of that is the fear of the overloading of a bone tissue around the implant that alone bears the occlusal loads. In this paper, stress level in the bone tissue around the single mini-implant that alone retained the lower denture was investigated. This stress level depends on the denture joint (the attachment) to the implant. Both types of standard attachments, rotationally and axially mobile, born remarkable values of oblique mastication force. This load results in a high stress in the bone tissue around a single mini-implant, in the area convergent with clinically observed "funnel-shaped" marginal bone loss around the implant neck. The silicone attachment reduced the loading to a level, which did not create any stress that would be dangerous for the bone tissue. The use of single mini-implants requires the highest quality of the alloy and surface finishing due to the risk of fatigue cracks in case of a quickly progressing "funnel-shaped" bone loss. The silicone attachment provided better utilization of the mucous membrane support that significantly improves safety of implant and diminishes the requirements of bone foundation conditions for an implantological treatment.