
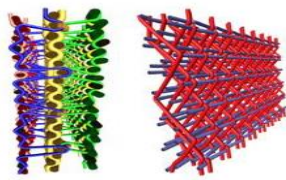
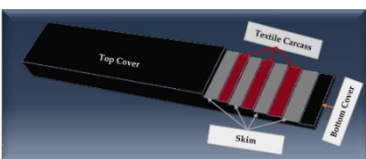




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STER
PROGRAMME

name of the unit: FACULTY OF MATERIAL TECHNOLOGIES AND TEXTILE DESIGN, Institute of Architecture of Textiles, Lodz University of Technology		symbol: I-41 http://www.iat.p.lodz.pl
head of the unit: dr hab. inż. Zbigniew Stempień, prof. uczelni	potential promoters: dr hab. inż. Marcin Barburski, prof. uczelni	contact person: dr hab. inż. Marcin Barburski, prof. uczelni tel: 42 631-33-99 marcin.barburski@p.lodz.pl
scope of activities: <ul style="list-style-type: none">- Production of technical embroidery,- Production of composites containing technical embroidery as reinforcement,- Experimental investigation of the effect of vulcanization process parameters on the physio-mechanical properties of textile carcass of conveyor belt,- Designing textile weave structure for the reinforcement heavy-duty conveyor belt,- Virtual modelling textile reinforced conveyor belt with,- Analyses of sound absorption properties of various structures of woven fabrics which is formed from different yarn types,- Testing the physicomachanical and acoustic properties of woven structure,- Modelling and shaping of new acoustic textiles barrier structures.		graphic material   
present activities: <ul style="list-style-type: none">- Research on composites containing technical embroidery made of flax fibres as reinforcements,- Experimental investigation and analysis of woven fabrics and yarns used in conveyor belts,- Experimental investigation of physicomachanical and acoustic properties on the textiles samples that were selected.		
Future activities: <ul style="list-style-type: none">- Conducting tests of subsequent variants of technical embroidery (change of arrangement, change of the type of stitch, change of the fastening thread),- Designing a novel woven fabric structure, and modeling heavy-duty conveyor belt reinforced with a newly designed fabric with the primary focus of enhancing tensile property of the belt and adhesion of textile and rubber materials,-Modelling and formation of new acoustic barrier based on woven fabric.		
Publications/patents, awards, projects: <ul style="list-style-type: none">- Poniecka A., Barburski M., Urbaniak M., Mechanical Properties of Composites Reinforced with Technical Embroidery Made of Flax Fibers, Autex Research Journal, DOI 10.2478/aut-2021-0025- Lemmi, T. Sh., Barburski, M., Kabziński, A., & Frukacz, K. (2021). Effect of Vulcanization Process Parameters on the Tensile Strength of Carcass of Textile-Rubber Reinforced Conveyor Belts. Materials, 14(7552), 1-15.- Lemmi, T. Sh., Barburski, M., Kabziński, A., & Frukacz, K. (2021). Effect of Thermal Aging on the Mechanical Properties of High Tenacity Polyester Yarn. Materials, 14(1666)- Samuel, B.T., Barburski, M., Blaszczyk, J.R., Witczak, E., & Abramczyk, K. (2021). The Influence of Yarn and Weave Structures on Acoustic Materials and the Effect of Different Acoustic Signal Incidence Angles on Woven Fabric Absorption Possibilities. Materials, 14(11), p.2814.- Samuel, B.T., Barburski, M., Witczak, E., & Jasińska, I. (2021). The Influence of Physical Properties and Increasing Woven Fabric Layers on the Noise Absorption Capacity. Materials, 14(20), p.6220.		



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Keywords:

Technical embroidery, composite, flax fibres, carcass, conveyor belt, woven fabric, acoustic barrier, porous material, sound environment, weave structure

List of internship proposal in this research team:

Co-operation one of a selected research topic