## POLI TECH) **CZESTOCHOWA UNIVERSITY** NIKA **OF TECHNOLOGY**

## Czestochowa University **STIFFENING INSERT, PREFERABLY** of Technology **OF THIN - WALLED C-TYPE SECTIONS**

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The invention relates to a stiffening insert, especially thin-walled C-profiles used in the construction industry in light steel constructions, applicable in particular for fixing wall ties and wherever there is a need to stiffen profiles. The insert has a width and height to match the closed inner space of the thin-walled profile. The insert is characterized by the fact that it is composed ofthree elements. In practice, many methods are known for stiffening thin-walled profiles with lacings, diaphragms or lattices. These methods can be problematic when it comes to their implementation in existing facilities, as it is in the case assumed by the authors. Therefore, an alternative solution has been created for this type of stiffener enabling efficient installation in the field. The proposed method of stiffening allows for an increase to

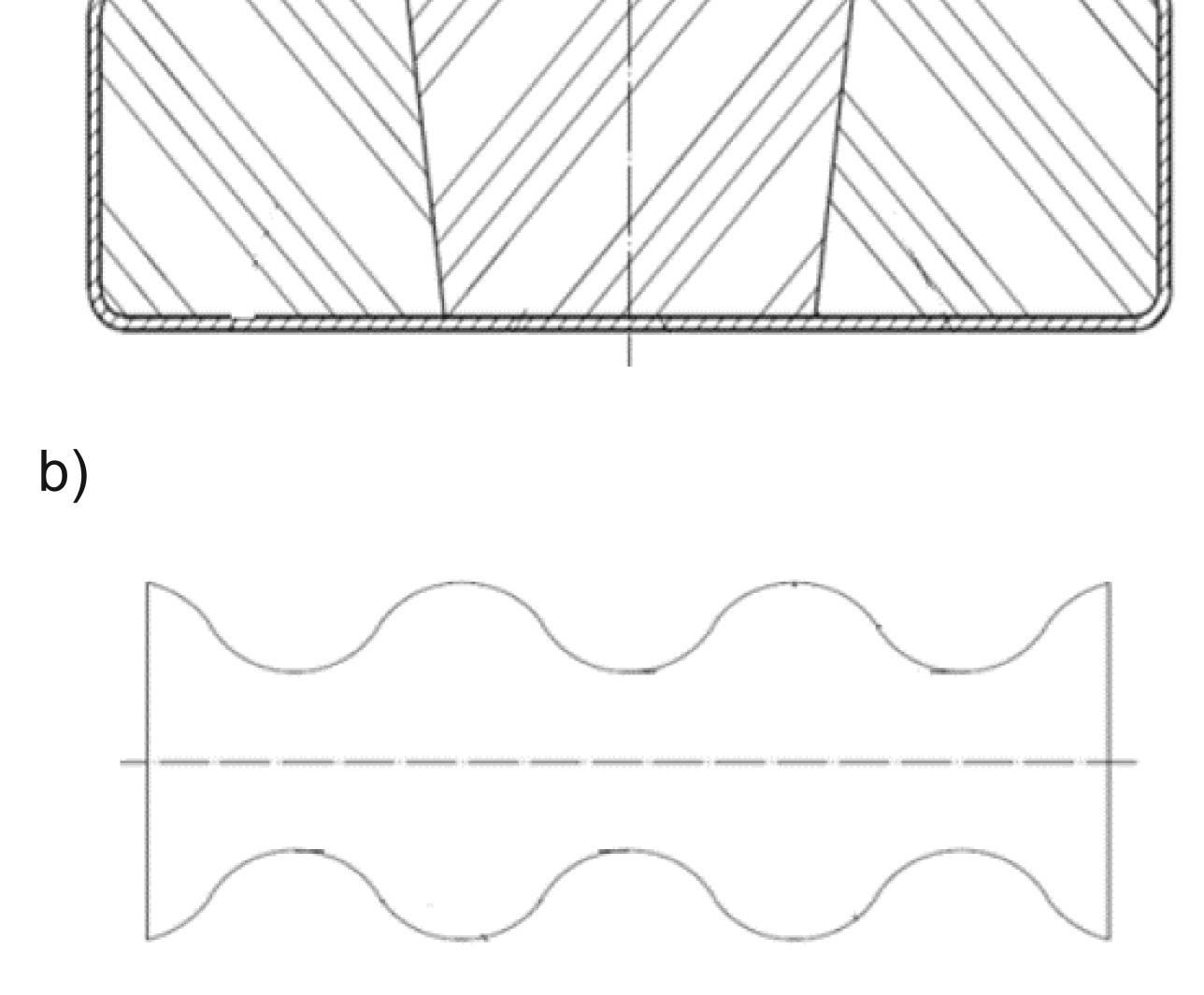
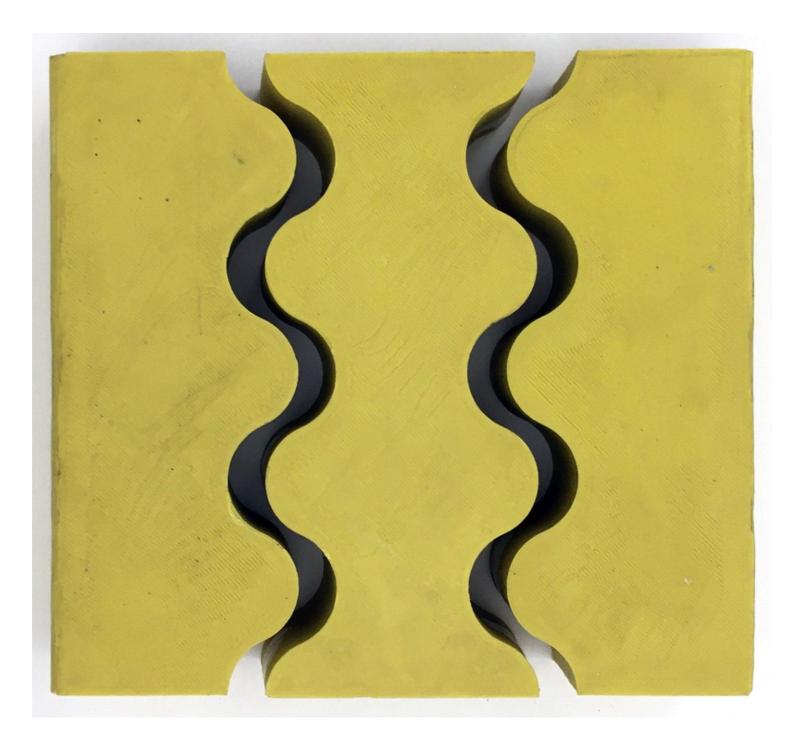


Fig. 1. The insert stiffening the thin-walled C-profile: a) cross section in the vertical plane, b) top view of the middle element of the insert.

a)

a)



the bending – torsional stiffness of the profile in the place of ties mounting.

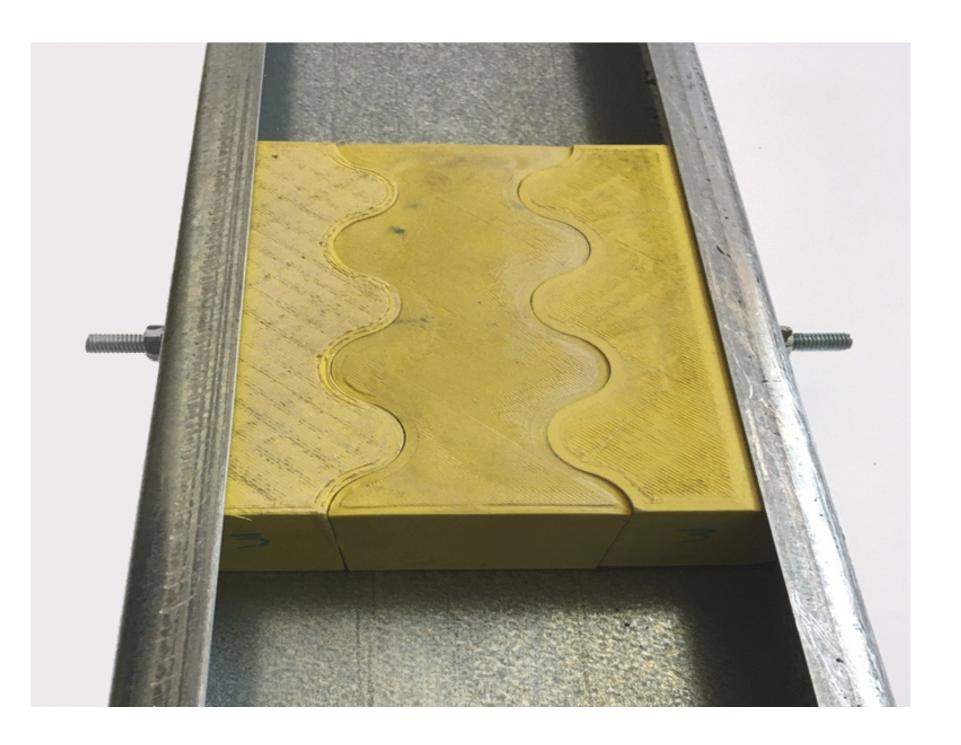
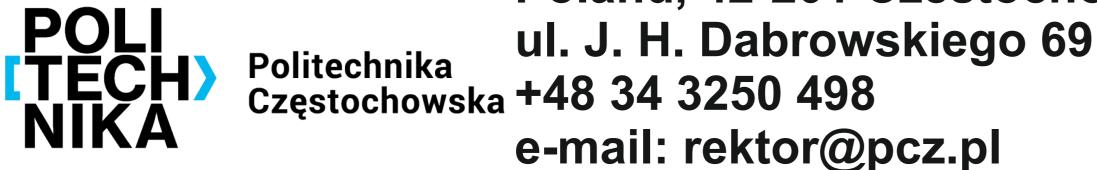


Fig.2. Stiffening insert, preferably of thin-walled C-type sections: a) view of the three elements forming the stiffener, b) view of the stiffener in the thin-walled profile.

b)



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