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# Harmonic transfer path analysis of a wine refrigerator

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*Abstract*: Transfer path analysis (TPA) is increasingly being applied in the industry when it comes to a new product generation of lightweight and therefore highly flexible structures. TPA helps identifying critical locations and components of the overall structure that contribute to specific vibration observations. Typically TPA needs to be balanced between needed accuracy and time efficiency/cost. Several TPA methodologies exist and need to be adapted to the specific system under consideration. We develop a robust algorithm for the estimation of the frequency response functions of a complex, flexible structure like a commercial wine refrigerator. These lead to an improved TPA of the overall system and help optimizing future designs by defining desirable characteristics of critical locations.

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