عنوان فارسی مقاله:

جذب صدا در ساختارهای (نساجی) بافته شده برای کاهش نویز داخلی در خودروها

عنوان انگلیسی مقاله:

Sound absorption in knitted structures for interior noise reduction in automobiles

توجه!

این فایل تنها قسمتی از ترجمه میباشد. برای تهیه مقاله ترجمه شده کامل با فرمت ورد (قابل ویرایش) همراه با نسخه انگلیسی مقاله، اینجا کلیک نمایید.
7. Conclusion

It was found that knitted structures with smaller pore sizes and a reduced porosity have good noise absorption and that knitted structures with smaller pore sizes and with increased thickness would be suitable materials to absorb sound in the passenger space within an automobile, i.e. a thicker and denser knitted fabric does have better sound absorbent properties.

The analytical model is in reasonable agreement with the experimental data. The NAC values of the experimental data correlate more with the predicted values when the fabric thickness is increased. The differences could be because

(1) the analytical model considers the pores in the fabric to be a uniform array of cylinders, but in practice they are not uniform and are not true cylinders;

(2) the accuracy of the measurements in the impedance tube at this low NAC level is poor.

However it is evident from the predicted data and the experimental data that the structure when placed against an impervious solid backing becomes an effective sound absorber only when the frequencies are above 1000 Hz. Thus this methodology would be suitable for reducing the higher frequency noise levels in the vehicle, such as from wind noise and road noise.