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«ASEDU-2020: Advances in Science, Engineering and Digital Education»

«Updating the practical classes on acoustic safety»

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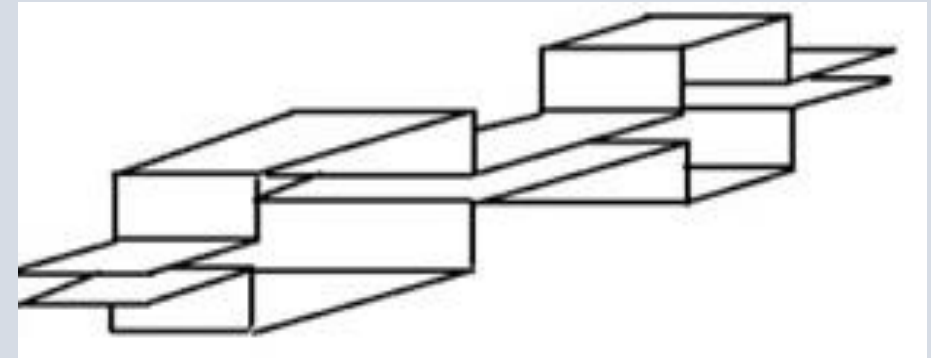
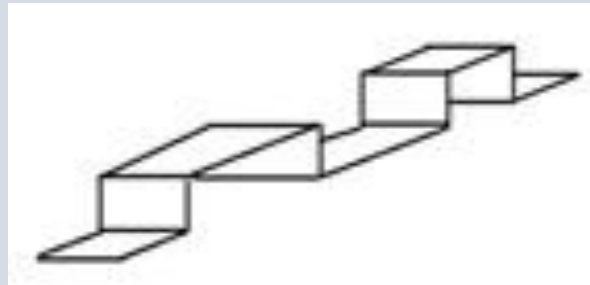
Problem statement

- Proposed algorithmic model of the silencer uses the principle of modularity provides the construction of various S-models
- adjusting the practical task on noise control of the ventilation system
- development the silencer algorithmic model that is invariant to dimensions and configuration
- designing the silencer in the control group of master's degree students



Solution methods

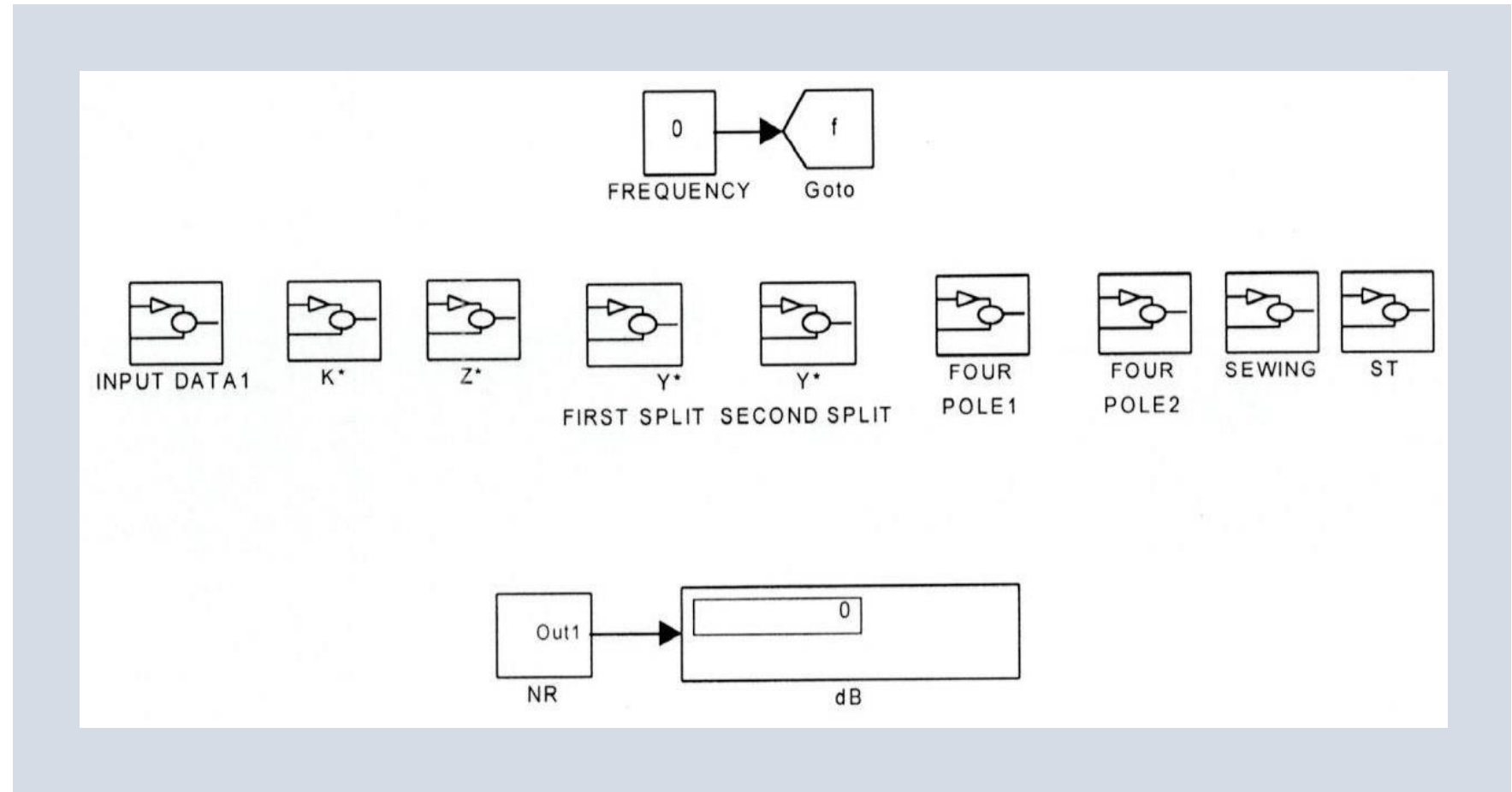
- Proposed design assignment is composing the silencer effective in the entire normalized frequency range in a wide duct
- Proposed transforming silencer is device formed by dividing the air duct by curved partitions into rows of expansion chambers narrow in one direction of the cross section and wide in the other direction





Solution methods

- Proposed algorithmic model of the silencer uses the principle of modularity provides the construction of various S-models





Conclusions

Results, implementation

- students tuning the basic device taking into account the propagating waves and self-found optimal indicator of changes in the lengths of elements in the rows of expansion chambers have developed the skill of composing silencer for specific ventilation systems
- students discussing the developed silencers have noted an increase in their level of readiness for project and expert activities in the field of acoustic safety
- automating the calculations have allowed to complete the design task in full without additional costs of training time
- modernized practical lesson on acoustic safety can be recommended for usage



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