

Pressure sensors detected wind noise produced in wind tunnel

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As infrasound and pressure disturbance induced by local wind around infrasound sensors are partially in the same frequency range, amplitude of the infrasound signal is sometimes lower than that of pressure disturbance by strong wind. Thus, obtaining the infrasound signal by analyzing software from the observation data with such wind noises is one of the technical objectives to solve. Usually, some porous pipes connected with the infrasound sensors have been used in order to reduce such local wind disturbances.

To evaluate such system for wind noise reduction, we conducted experimental study by using a wind tunnel with wind speed up to 60 m/s. We used nano-resolution pressure transducer (6000-16B manufactured by Paroscientific Inc., USA) and microphone type infrasound sensors

(Chaparral physics, Model25 manufactured by Univ. of Alaska Fairbanks) in the wind tunnel of the Railway Technical Research Institute (RTRI), Japan. In this presentation, we will show the relationship between the wind speed and porous pipe configuration installed in the wind tunnel.

In this presentation, we show the relation between wind speed and pipe direction.

Keywords: Infrasound, wind noise reduction, pipe reduction system, wind tunnel