

Wind ripples with colored sand in a doughnut type circular wind duct

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A doughnut type transparent circular wind duct experimental apparatus (width: 30 cm, inner diameter: 200 cm, depth: 50 cm) was made newly and colored sand according to grain sizes was installed. We performed wind ripple making experiments with 6.0 m/s wind and three issues came up: i) vent shape and position have clue to wind velocity distributions, ii) grain size mixture ratio, and iii) the secondary flow leads to spatial sorting of colored sand.

Keywords: doughnut type circular wind duct, colored sand, wind ripple, secondary flow, spatial sorting, circular wind tunnel