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THERMAUS

Wind tunnel description

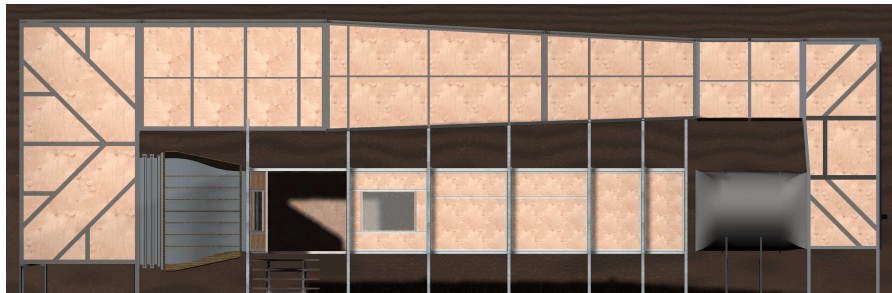
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Wind Tunnel

Tests are realized in the 1,82 meters x 1,82 meters section of the S1 wind tunnel, located in the laboratory of the research group Thermaus at the Université de Sherbrooke. A cut away of the test section is shown in the Figure. The test section is 10 meters long and the wind is generated by a 1,8 meters diameter vane axial fan driven by a 200 hp electric motor. The rotational speed of the fan, and consequently the wind speed in the test section, can be varied using a frequency control. The top air velocity in the empty 1,82 meters x 1,82 meters test section is 30 m/sec and 45 m/sec when inserts are mounted on the floor and the ceiling (1,2 m x 1,82 m). The velocity profile was measured uniform within $\pm 1\%$ except in proximity of the wall where the boundary layer has a thickness of the order of 5 cm. The level of turbulence is less than 0,3%.

