

DEPOT DES AÉROSOLS DANS LES INSTALLATIONS, LES ÉQUIPEMENTS ET LES SONDES D'ÉCHANTILLONNAGE

DIESE : Deposition of aerosols in Installations and equipment for ventilation and for aerosol Sampling Efficiency

A large test bench of 40 m length, section of 400 mm x 600 mm, for the study of aerosol deposition (1) in tubes, (2) in bends of different shapes and orientations, (3) in various valves, (4) in reductions/adaptators of different shapes, (5) in derivations and T-junctions, (6) and in sampling heads (circular inlet section)

State of the art

Number of experimental studies in the open literature → 2017

D_h	Geometry	Tube	Bend	Reduction	T-junction	Valve
< 10 cm	Circular	5	6	1	0	0
	Rectangular	2	1	0	0	0
> 10 cm	Circular	2	1	0	0	0
	Rectangular	4	4	0	0	0

Real-scale industrial ventilation ducts with detailed laboratory instrumentation

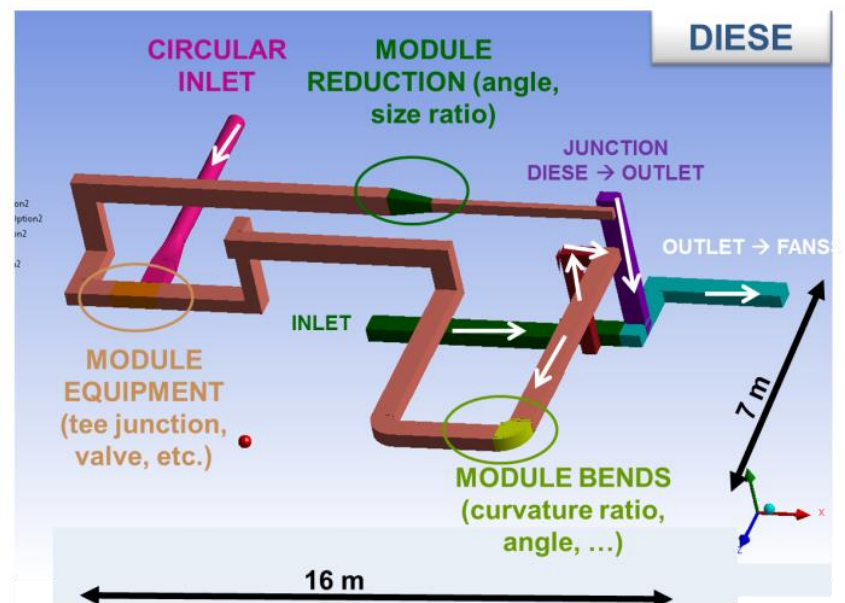
400*600 mm ducts, over 40 m length

Turbulent flow laser diagnostics (PIV)

Particulate Matter (PM) measurements (in flow and deposited)

Standard aerosol metrology

Development of innovative technics



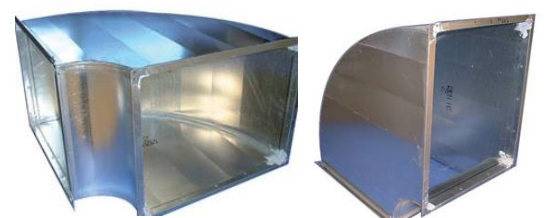
MODULE EQUIPMENT



CIRCULAR SECTION



MODULE REDUCTION



MODULE BENDS