RÉPUBLIQUE FRANÇAISE

Liberté
Égalité
Fraternité

IRSN
INSTITUT DE RADIOPROTECTION ET DE SÛRETÉ NUCLÉAIRE

MISTRAL PLATFORM

DIESE FACILITY

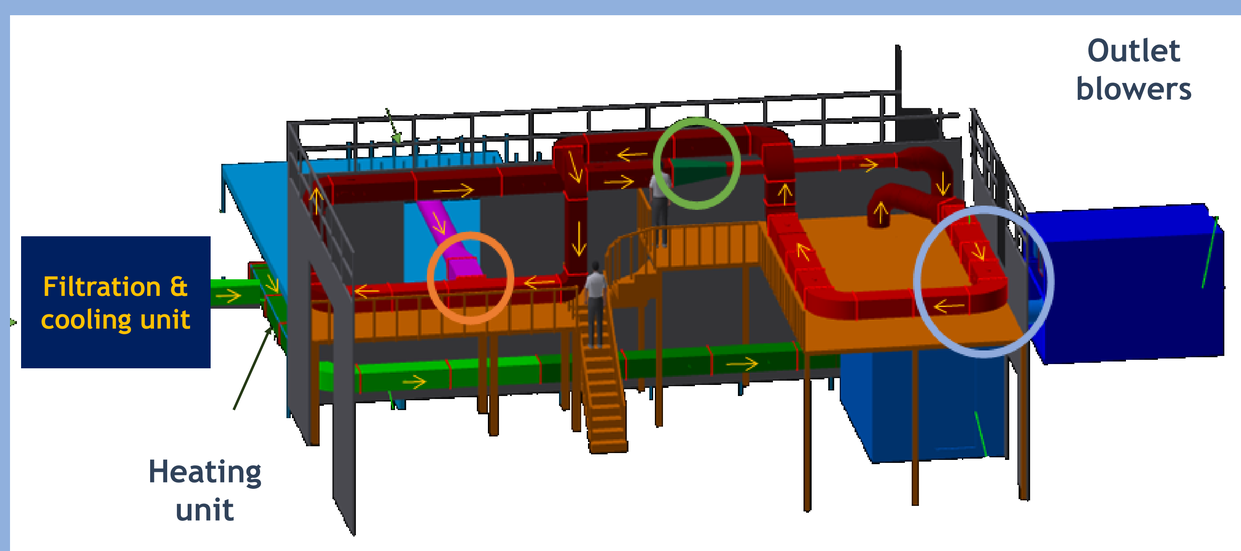
DIESE : DEPOSITION OF AEROSOLS IN INSTALLATIONS AND EQUIPMENT FOR VENTILATION AND FOR AEROSOL SAMPLING EFFICIENCY

Objective

DIESE is a large-scale facility to study aerosol transport and deposition in real-scale ventilation ducts with a high number of singularities. Its specificities make it a unique and useful tool for the validation of aerosol transport and deposition models in engineering simulation codes.

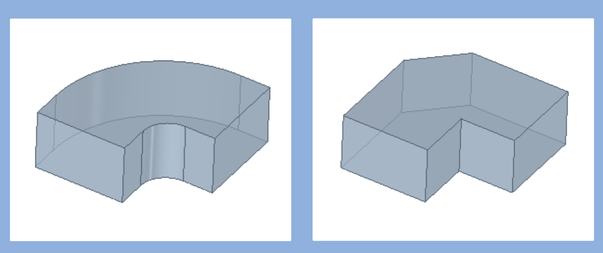
Specificity – a one of a kind facility

- 60 m length
- Real-scale ventilation ducts
- Rectangular cross-section steel ducts
- Over 10 singularities (real and academic)
- High modularity
- Local instrumentation for CFD code validation

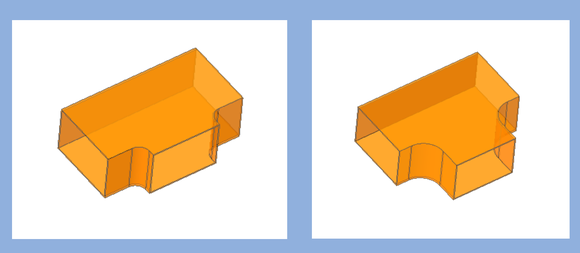


Bends, T-junctions and Reduction tested simultaneously for each test

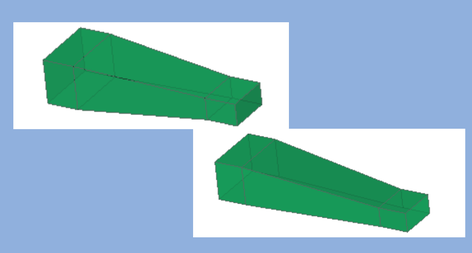
BENDS



T-JUNCTIONS



REDUCTIONS



OTHERS

Thermo-hydraulic parameters

- 2500 - 10 000 m^3/h
- 7 - 50°C
- 10 - 100% RH
- H13 aerosols filters (removable)

Aerosols parameters

- Aerosol : 1 to 10 µm
- Solid/liquid
- Nacl, droplet, powders
- Low to high mass concentrations

Janvier-2023

IRSN/FRM-604 ind. 2

MEMBRE DE
ETSON