



Identification of the installation/facility:

Country: the Netherlands
Location (city): Amsterdam
Name of the facility: DNW-SST
Date of main refurbishment: 1964/1999
Owner: DNW
Contact point: H.B.Vos
Internet site: www.dnw.aero

Technical characteristics:

1 - Type of infrastructure

Wind tunnel	<input checked="" type="checkbox"/>
Propulsion bench	<input type="checkbox"/>
Structures facility	<input type="checkbox"/>
Material facility	<input type="checkbox"/>
Simulator (ex. Flight simulator, tower, ...)	<input type="checkbox"/>
Flight test bed (aircraft, embedded facilities, ...)	<input type="checkbox"/>
Supercomputers	<input type="checkbox"/>
Other	<input type="checkbox"/>

2 - Main technical characteristics

The SST is a blow down tunnel fed by an air storage vessel containing dry air at a pressure of 580 psi (40 bar).

Main features

Test section

- 1.2 m wide by 1.2 m height

Operating range

- $1.32 \leq Ma \leq 4.0$
- $Re_{0.1 r(S)} \leq 15 \times 10^6$
- $T \leq 290 \text{ K}$
- Run time $\leq 50 \text{ s}$

Model support

- Standard Supersonic Model Support
- Supersonic model support with alpha shifter



Auxiliary systems

- Compressed air supply with a capacity of 8 kg/s continuously at 40 bar

Typical tests

- Configuration studies, database creation (civil and military transport aircraft, fighters, spacecraft, missiles)

3 - Research domains which can be addressed (refer to ACARE taxonomy <http://www.acare4europe.com/docs/ASD-Annex-final-211004-out-asd.pdf>)

1. Flight Physics
 - a. Aeronautical Propulsion Integration
 - b. Airflow Control
 - c. High Lift Devices
9. Innovative Concepts and Scenarios
 - a. Unconventional configurations and new aircraft concepts

4 - Main (or specific) associated measurement techniques

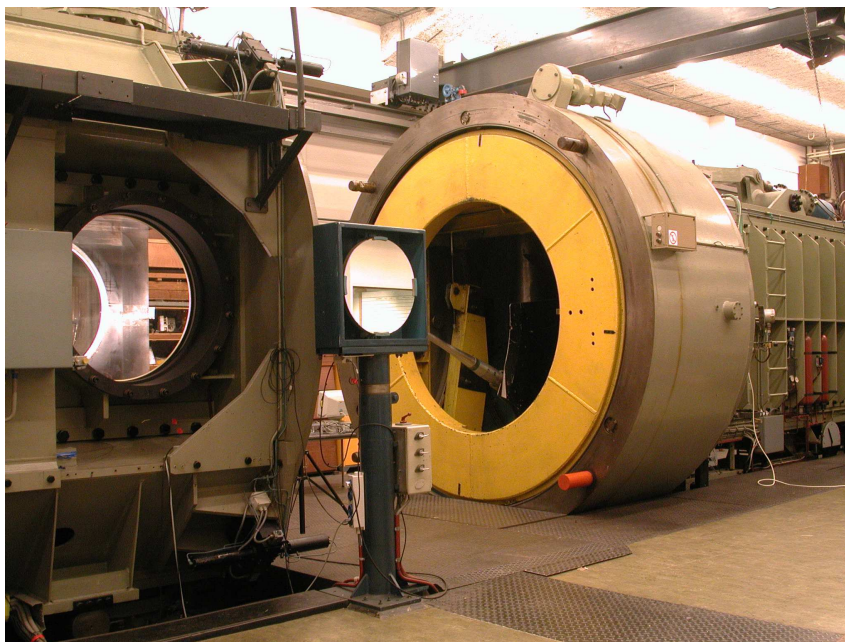
Load measurement (strain gauge balances)
Pressure measurements (static and dynamic)
Particle Image Velocimetry (PIV)
Pressure Sensitive Paint (PSP)
Schlieren technique

5 - Operational status

- Sleeping but possible to reactivate within 6 months



6 - Picture:



Financial elements:

Replacement cost (M€uros)

Less than 10

10 to 30

30 to 60

60 to 100

More than 100

Practices concerning:

Access policy : contract

Support : national

Comments:

Origin of information ('signature'): author and date

Georg Eitelberg, Director DNW,
7 December 2011