European standards within CEN/TC 113/WG 13

DIN Deutsches Institut für Normung e. V.

- **CEN/TC 113/WG 13**

  Testing of cooling appliances for insulated means of transportation

Testing methodologies for cooling equipment for insulated means of transportation:

- Part 1: Mechanical refrigerating systems with forced air circulation evaporator or convection
- Part 2: Eutectic systems
- Part 3: Indirect gas refrigerant systems
- Part 4: Direct gas refrigerating systems
- Part 5: Dry ice systems
- Part 6: Special requirements for multitemp systems

European standards within CEN/TC 113/WG 13

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  Testing of cooling appliances for insulated means of transportation

Testing methodologies for cooling equipment for insulated means of transportation:

- Part 1: Mechanical refrigerating systems with forced air circulation evaporator or convection

  Inculding additional operations like
  - rated conditions
  - ambient conditions
  - controll and regulation applications
  - special requirements like distribution / loading sequences

Determination of Energy efficiency ratio
for different vehicle dimensions and engine combinations
like direct and indirect applications

European standards within CEN/TC 113/WG 13

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  Testing of cooling appliances for insulated means of transportation

Testing methodologies for cooling equipment for insulated means of transportation:

- Part 1: Mechanical refrigerating systems with forced air circulation evaporator or convection

  Definition of requirements for testing,
  at normal condition 30 °C
  elevated normal condlition 38 °C
  and tropical conditions 45 / 50°C

  Measurement of energy consumption carried out at
  30 °C / 0 °C
  30 °C / – 20 °C for refrigeration
  – 20 °C / + 12 °C for heating.

European standards within CEN/TC 113/WG 13

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  Testing of cooling appliances for insulated means of transportation

Testing methodologies for cooling equipment for insulated means of transportation:

- Part 2: Eutectic systems

  Determination of cooling capacities and consumption
  cool down cycle, long term evaluation
  full load and rated conditons including auxilieries
  Design parameters, function and safety requirements
  like volume flow, defrost, labelling, etc.

European standards within CEN/TC 113/WG 13

- **CEN/TC 113/WG 13**

  Testing of cooling appliances for insulated means of transportation

Testing methodologies for cooling equipment for insulated means of transportation:

- Part 3: Indirect gas refrigerant systems

  Determination of cooling capacities and consumption under full load and rated conditons including auxilieries

  Design parameters, function and safety requirements like volume flow, defrost, labelling, etc.

European standards within CEN/TC 113/WG 13

- **CEN/TC 113/WG 13**

  Testing of cooling appliances for insulated means of transportation

Testing methodologies for cooling equipment for insulated means of transportation:

- Part 4: Direct gas refrigerating systems

  Determination of cooling capacities and consumption
  under full load and rated conditons including auxilieries

  Design parameters, function and special safety requirements and evaluation

European standards within CEN/TC 113/WG 13

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  Testing of cooling appliances for insulated means of transportation

Testing methodologies for cooling equipment for insulated means of transportation:

- Part 5: Dry ice systems

  Determination of cooling capacities and consumption under full load and rated conditons including auxilieries

  Design parameters, function, handling, loading and special safety requirements and evaluation

European standards within CEN/TC 113/WG 13

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  Testing of cooling appliances for insulated means of transportation

Testing methodologies for cooling equipment for insulated means of transportation:

- Part 6: Special requirements for multitemp systems

  Determination of cooling capacities and consumption
  under full load and rated conditons including auxilieries
  combination of multiple compartments and sections
  thermal influences and operation parameters

  Design parameters, function and safety requirements and evaluation

European standards within CEN/TC 113/WG 13

- **CEN/TC 113/WG 13**

  Testing of cooling appliances for insulated means of transportation

Participants and experts of WG 13:

- Belgium
- Croatia
- Czech Republic
- **France**
- **Germany**
- **Italy**
- Netherlands
- Slovenia
- Spain
- Sweden
- **UK**

European standards within CEN/TC 113/WG 13

- **CEN/TC 413**

Project Committee - Testing methodologies and requirements for insulated means of transportation

Working Programme to be adopted by CEN/TC 413 PC:

(A)Insulated means of transportation
Requirements and testing
Part 1: Tankers
Part 2: Mobile Containers
Part 3: Truck or trailer bodies, road and train swap bodoes, rail wagons
Part 4: Integrated insulation for van and car derived vans

(B)Insulated transport equipment fitted or not with a refrigeration system
Requirements, dimensioning and marking

Revision and integration of national standards like
DIN 1815, DIN 8959 part 1 & 2

European standards within CEN/TC 113/WG 13

- **CEN/TC 413**

Project Committee - Testing methodologies and requirements for insulated means of transportation

Liason with

- CEN/TC 113 heat pumps and air conditioning units (WG13)
- CEN/TC 119 Swap bodies for combined goods transport
- CEN/TC 296 Tanks for transport of dangerous goods
- Additional liasons…

European standards within CEN/TC 113/WG 13

- **CEN/TC 413**

Project Committee - Testing methodologies and requirements for insulated means of transportation

Participants and experts from:

- Finland
- France
- Germany
- Spain
- UK

European standards within CEN/TC 113/WG 13

Thank you your attention