

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Perishable Foodstuffs

Seventy-ninth session

Geneva, 25-28 October 2022

Item 3 (a) of the provisional agenda

**Activities of other international organizations dealing
with issues of interest to the Working Party:**

International Institute of Refrigeration (IIR)

19 October 2022

English

**Approved Minutes of the IIR sub-commission on Test
Stations in refrigerated transport (CERTE) Meeting**

Transmitted by the International Institute of Refrigeration (IIR)



**IIR Sub-Commission “CERTE” Meeting
Zoom Meeting Hosted by Cemafruid 17th May 2022
Approved Minutes**

1.0 Welcome and Presentation

Due to the COVID-19 pandemic, the 78th Session of WP11, to which CERTE normally reports, took place as a hybrid meeting where delegates were either present in Geneva or online. The meeting took place between 3rd and 6th May 2022.

The chairman Mr Thomas Suquet welcomed the group to the video conference meeting hosted by Cemafruid (20 in total from 11 test stations).

2.0 Approval of Agenda

The proposed agenda revision 2 was adopted.

3.0 Apologies

The secretary informed the participants that he had received no apologies

4.0 Representation from CERTE on the UN WP11 Meeting

The chairman, Mr Thomas Suquet (France), indicated that he would be able to represent CERTE at the UN WP11 meeting in October 2022 and that we would continue with the tradition of the chairman being the representative at WP11.

5.0 Minutes of the CERTE Meeting in 2021

Minutes of the last CERTE meeting were approved on the 24nd March 2022 and submitted to the 78th session of WP11 as an informal document (INF2).

6.0 Information

6.1 IIR

The 7th IIR conference on sustainability and the cold chain was held between the 11th to 13th April 2022 in Newcastle, UK. Commission meetings also took place.

The 26th IIR International Congress of Refrigeration has been scheduled for the 21st to 26th August 2023 in Paris, France. Call for abstracts has now opened with a deadline of the 29th June 2022.

6.2 Transfrigoroute International

Mr Lionel Pourcheresse was representing Transfrigoroute International (TI) and gave a brief update.

For the year 2022, the situation for industries in transport refrigeration remained very complex due to the following factors:

- On one hand, EU regulation was pushing very hard on transport decarbonisation (Green Deal, Fit for 55, etc.), which was causing a strong demand for alternative power train vehicle and related technologies;
- On the other hand, the lack of components plus financial difficulties was preventing the original equipment manufacturer (OEM) to deliver those expected vehicles and technologies.

It was also worth mentioning that a revised draft regulation concerning F-gases has been officially published on 5 April 2022. The proposal would be discussed for about 12 months. The key item was a quota system to gradually reduce the amount of HFCs that importers and producers may place on the market every year. The amount of HFCs is expressed in CO₂ equivalent meaning the quantity of greenhouse gases expressed as the product of the weight of the greenhouse gases in metric tons and of their global warming potential (GWP).

In conclusion, the transport refrigeration industry was facing major difficulties in the financial and production sectors and, at the same time, facing major challenges and expectations to contribute to transport decarbonisation and complying with new regulations related to refrigerants.

6.3 CEN

CEN/TC 413 Working Group 2

Experts from Belgium, France, Italy, Ireland, Netherland, United Kingdom and Germany with informal participation of experts from other European Nations have had several virtual meetings and working group meetings during the last 12 months.

EN 16440 — 1:2015-01 Testing methodologies of cooling equipment for insulated means of transport — Part 1: Mechanical refrigeration devices with forced air circulation evaporator with or without heating devices. The final version was published in January 2015.

The following additional parts are still under consideration:

- Part 2: Eutectic Systems: The current working draft is still under consideration with the view of sending the final version to a second CEN enquiry after the revision. Especially, the test provisions for cooling capacities and consumption for new equipment with eutectic systems. Equipment in daily operation sequences were adopted and revised also.

- Draft and project will be sent for a new ballot after the re-activation to finalise the draft version of prEN 16440-2 and CEN enquiry.
- An additional part: Special requirements on multi-temp systems: was scheduled as a further project.

CEN/TC 413 Working Group 1

Experts from Belgium, France, Finland, Italy, Ireland, Netherland, United Kingdom and Germany, supported by Latvia and Sweden with informal participation of experts from other European Nations have had several virtual meetings and working group meetings during the year.

The scope of the project committee will be a standard with the title: Insulated means of transport for temperature sensitive goods — requirements and testing. The standard applies to thermally insulated means of transport used for temperature sensitive goods in order to limit the heat exchange due to external conditions. If certain temperatures have to be maintained, they could be additionally provided with a cooling and/or heating source. The current framework is taking into account internal temperatures between -30°C and +25°C and ambient conditions between -30°C and +43°C.

The standard is projected with different parts as:

- prEN 17066 Part 1: Container — Insulated means of transport for temperature sensitive goods — Requirements and testing to define the terminology, the specific requirements, test provisions, dimensioning of insulated bodies including evaluation of k value. *Final version was published in October 2019.*
- Part 2: Equipment — Combination of insulated bodies and their cooling and/or heating devices including verification of cooling and heating capacities for long distance transport as well distribution. *The current working draft would soon be sent for a CEN inquiry.*
- An additional part: *Special requirements on multi-temp systems: Was scheduled as a further project.*

A new working group has started working on a new EN standard entitled: Thermal Road Vehicles - Safety Standard for temperature-controlled systems using flammable refrigerants for the transport of goods. The current working draft would be sent out for CEN inquiry.

After inquiries are finished, the related working groups of CEN/TC 413 will take into account the results of votes and comments received on each draft for consideration during the next meetings on November-December 2022 for finalisation.

Revision of EN 12830

EN 12830:2018 — Temperature recorders for the transport, storage and distribution of chilled, frozen, deep-frozen/quick-frozen food and ice cream — Tests, performance, suitability: Revision took into account current technical developments and requirements. The scope of the revised standard has an increased temperature range from -80 to +85°C for temperature-sensitive goods in the cold chain.

Revision of EN 13485 and EN 13486

Revision of the EN 13485:2002 — Thermometers for measuring the air and product temperature for the transport, storage and distribution of chilled, frozen, deep-frozen/quick-frozen food and ice cream — Tests, performance, suitability;

Revision of the EN 13486:2002 — Temperature recorders and thermometers for the transport, storage and distribution of chilled, frozen, deep-frozen/quick-frozen food and ice cream — Periodic verification to adopt modifications and actual technical development of the published EN 12830:2018-10 — Temperature recorders for the transport, storage and distribution of temperature sensitive goods — Tests, performance, suitability.

After several virtual meetings of the CEN TC 423 were held with experts from Germany, France, Spain and Portugal, the current working drafts for both revisions would soon be sent for a first CEN inquiry.

After inquiries are finished, the CEN/TC 423 working group will take into account the results of votes and comments received on each draft, for consideration during the next meetings on November-December 2022 for finalisation.

6.4 ISO

Mr Lionel Pourcheresse (TI) informed WP.11 that a new committee TC 315 within the ISO framework had been created to develop standards dealing with cold chain logistics and that a liaison between UNECE and ISO/TC 315 has been officially approved in April 2022.

Mr Richard Lawton commented that when ISO20854 (Thermal containers - Safety standard for refrigerating systems using flammable refrigerants - Requirements for design and operation) was published in 2018 there wasn't any real push to use flammable refrigerants in refrigerated marine containers and perhaps this might be the case when a similar standard is eventually published for road transport.

A few commented that this could be the case but that they are already seeing a change in the use of flammables in other industries and that road transport would follow suit in the next few years and some felt that natural refrigerants could become more common.

7.0 Information from UN WP11 Meeting October 2021

The chairman made the following comments in relation to the WP11 meeting:

- The 78th session consisted of 19 working documents and 7 informal documents.
- There have been two new accessions to ATP since the last session (Islamic Republic of Iran on 2/12/2021 and Armenia on 25/01/2022). The number of Contracting Parties is currently 52.

Adopted and rejected proposals from the 78th session are summarised below:

Adopted

France: Editorial correction Annex 1, Appendix 2, paragraphs 7.3.7

Rejected/Amend for Next Year

France: Mixed energy source

UK: Airflow

France: Airflow

France: Insulation material information

France: Type examination certificates

France: Software versions in model report

France: Annex 1, Appendix 2, paragraph 7.3.7 (2022/3)

France: Annex 1, Appendix 2, paragraph 7.3.7 (2022/5)

France: Measurement of the thickness of insulating walls

TI: Model 14 modification to text

UK: MTMC decals

The 79th meeting is currently scheduled for 25th to 28th October 2022 and the deadline for submission of working documents is 29th July 2022.

The 80th meeting is currently scheduled for 24th to 27th October 2023 and the deadline for submission of working documents is 28th July 2023.

The ATP handbook can be found at the following link: <https://unece.org/atp-handbook>.

8.0 Discussions about ATP Implementation in the Field of Testing New Vehicles, Type Approvals and Certificates of Approval

8.1 Testing Methods

8.1.1 Alternative K Value

Mr Jose Martínez-Val (Spain) presented a proposal on an alternative method to measure the K value which would make for a shorter thermal test. It was hoped that some other test stations would use this method and present their findings at a future meeting.

8.1.2 Modular Approach

There was a small working group meeting on modular approach on the 23rd March and it was felt that this topic was too early for CERTE to discuss and that a request to look at this should come from WP11.

8.1.5 Round Robin Testing

No comments or discussions were raised.

8.1.5 Definition of the Independence of a Unit Taking into Account Mixed Energy Source Technologies

Mr Xining Wu (France) presented a proposal on the definition of the independence of a unit taking into account mixed energy source technologies, the chairman commented that this was on the limit of what CERTE could discuss and might be more appropriate for WP11.

8.1.6 Testing Equipment with New Refrigerants

Mr Lionel Pourcheresse (TI) asked people's views on testing equipment with new flammable refrigerants, it was commented that this was generally not a big deal when it comes to testing as long as you take the necessary measures in minimising the risks involved like high pressures and toxicity.

8.1.7 Internal Airflow

Mr Richard Lawton (UK) presented a revised proposal on the internal airflow requirements; with the comments taken on board at the last WP11 meeting and prior to this meeting. After a long discussion it was commented that perhaps we needed to simplify the proposal and make this a recommended airflow rather than mandatory. The UK would submit the revised proposal to the next WP11 session.

8.1.8 Heated Equipment

Mr Xining Wu (France) presented a proposal on how to measure the heat power from a refrigeration unit. There were comments about measuring the cooling power of the unit used at the end of the test and that a similar method had been used in measuring heat pumps. Comments were taken on board for a revised proposal in the future.

8.2 Other Matters

No comments or discussions were raised.

9.0 Discussions about ATP Implementation in the Field of Retesting and the Renewal of In-Service Vehicles

9.1 Testing of fridge unit (in service) with a change of refrigerants (drop in)

No comments or discussions were raised.

9.2 Methodologies for Renewal of Certificates of Compliance

No comments or discussions were raised.

9.3 Other Matters

No comments or discussions were raised.

10.0 Temperature Recorders Annex 2 Appendix 1

10.1 Consideration about Practices

No comments or discussions were raised.

10.2 Application of 12830, 13485 and 13486 Standards, Initial Verifications and Periodic Reverifications

No comments or discussions were raised.

10.3 Other Matters

No comments or discussions were raised.

11.0 Impact of Environmental Regulations and Considerations about Energy Efficiency

11.1 Evolution of Refrigerants (Regulation and Technical Developments)

No matters were raised for discussion.

11.2 Energy Efficiency (Energy Labels, Minimum Energy Performance Standards (MEPS))

No matters were raised for discussion.

11.3 Evolution of Foams (Legislative and Technical Developments)

No matters were raised for discussion.

12.0 Recommendations from the IIR “Test Stations” to UN WP11 Meeting in October 2021

Although there were no recommendations for the next WP11 session it was hoped that the UK airflow proposal would be adopted at the next session once the comments had been taken on board.

13.0 Sub-Commission Work Plans

The minutes shall be approved by email and submitted as an informal document at the next WP11.

CERTe Recommendations	CERTe 2018 proposal		Adopted to ATP		CERTe 2019 proposal		Adopted to ATP		CERTe 2020 proposal		Adopted to ATP		CERTe 2021 proposal		Adopted to ATP	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Minimal insulated foam specifications	X	-	-	X	-	X	-	-	X	-	X	-	-	-	-	-
Internal airflow	X	-	-	X	X	-	-	X	-	X	-	X	X	-	-	X
Testing of prototype equipment in ATP	X	-	-	X	X	-	-	X	-	X	-	X	X	-	-	X
software revision	X	-	-	-	X	-	-	X	-	X	-	-	-	-	-	-
validity of test reports for mechanically refrigerated units	X	-	-	X	X	-	-	X	-	X	-	X	-	-	-	X
measurement of k coefficient for fixed bulkheads	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Tank manhole diameter	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-
Allowances of average temperatures	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-
New test method	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-
Heated equipment	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-
Definitions	-	-	-	-	-	-	-	X	-	-	-	X	X	-	-	-
Simplifying liquefied gas system testing	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-
Lambda value	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-
Lambda and form factor	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-
Alternative drop-in refrigerants for R404A	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-
Macro modular approach (MMA)	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
Use of independent temperature recorders	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X
MTMC marking	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X

14.0 Future Meetings

The proposed date for the next meeting was either the 18th and 19th April 2023, Mr Jure Thaler commented that the invitation to host the meeting in Slovenia was still valid.

15.0 Any Other Business

Mr Lionel Pourcheresse (TI) commented that there were some important changes coming in the refrigerated road transport industry over the next few years.

Attendance: List of Participants

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	Irhsip			
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