

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Perishable Foodstuffs

Seventy-seventh session

Geneva, 26-29 October 2021

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)

22 June 2021

English

**Results of the meeting of the IIR sub-commission on
refrigerated transport**

Transmitted by the International Institute of Refrigeration (IIR)



**IIR Sub-Commission “CERTE” Meeting
Zoom Meeting Hosted by Cemafruid 28th April 2021
Approved Minutes**

1.0 Welcome and Presentation

Due to the COVID-19 pandemic the 76th 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 13th and 16th October 2020.

Mr Gerald Cavalier (President of Cemafruid) welcomed the group to the video conference meeting hosted by Cemafruid and the chairman Mr Thomas Suquet welcomed the participants (31 in total from 14 test stations).

2.0 Approval of Agenda

The proposed agenda revision 4 was adopted.

3.0 Apologies

The secretary informed the participants that he had received apologies from the following:

- Mr Didier Coloumb (Director General of IIR)
- Mr Rob Mannaerts (Belgium)
- Mr Gianluca Cuccato (Italy)

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 2021 and that we would continue with the tradition of the chairman being the representative at WP11.

5.0 Minutes of the CERTE Meeting in Wageningen 2020

Minutes of the last CERTE meeting were approved on the 6th July 2020 and submitted to the 76th session of WP11 as an informal document (INF3).

6.0 Information

6.1 IIR

The 7th IIR conference on sustainability and the cold chain has been scheduled for the 11th to 13th April 2022 in Newcastle, UK:

[https://iifir.org/en/events/7th-iir-conference-on-sustainability-and-the-cold-chain.](https://iifir.org/en/events/7th-iir-conference-on-sustainability-and-the-cold-chain)

6.2 Transfrigoroute International

Mr Lionel Pourcheresse was representing Transfrigoroute International (TI) who had replaced Mr Joe Grealy as president in 2021 for three years.

6.3 CEN

A short update was given by Mr Andreas Klotz (Germany) on the latest updates to the CEN standards:

CEN/TC 413 working group 1 reached the final draft of EN16440 part 2 on eutectics which will hopefully be published this year.

CEN/TC 413 working group's discussion of EN17066 part 2 on equipment can be sent out for vote soon and part 3 on small containers has been reactivated and will be discussed at the next meeting.

There is a new discussion on a flammable refrigerant standard in TC413 with cooperation from TC182.

CEN/TC 423 has been looking at EN13486 and 13485 to take into account the new standard EN12830 which was published in 2018.

6.4 ISO

Mr Richard Lawton gave a brief outline of ISO activities: ISO1496-2 on container standards was published in October 2018 and there was also a flammable refrigerant standard recently published which should be helpful at the CEN TC413 meetings.

ISO1496-4 on non-pressurised tanks needs updating.

A very old communication standard ISO9897:1997 is being looked at to bring it up to date with modern technology that is being used; it is currently at a draft stage.

Older technology used was communications through the power cable of the reefer unit with a modem in the container, ship and container yards. What's being used now is communication via WiFi where you can upload new software, retrieve downloads, real live tracking and pre-trip inspection (PTI) checks.

7.0 Information from UN WP11 Meeting October 2020

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

- The 75th session consisted of 17 working documents and 18 informal documents.

Adopted and rejected proposals from the 76th session are summarised below:

Adopted

| | |
|--------------|--|
| UK: | Annex 1, Appendix 2 (editorial correction to model 12) |
| Spain: | Degrees Celsius and Kelvin |
| Slovenia: | Conformity acceptance in ATP handbook |
| Netherlands: | Several amendments to date on test reports |
| Netherlands: | Model 12 (English version text) |
| Netherlands: | Definitions |
| Netherlands: | Declaration of conformity |

Rejected/Amend for Next Year

| | |
|----------|--------------------------------------|
| France: | Mixed energy source |
| France: | Airflow |
| France: | Foam specification |
| UK: | Airflow |
| Russia: | ATP database |
| Germany: | Validity of test reports |
| France: | Annex 3 |
| Spain: | Annex 1, Appendix 2, Paragraph 2.2.1 |

Mr Kees de Putter who was the chairman for the 76th session commented that there would be two WP11 sessions in 2022 with the first in May and the second in October.

Link to the minutes in English, French and Russian are below:

<https://unece.org/sites/default/files/2021-03/ECE-TRANS-WP11-243e.pdf>
https://unece.org/sites/default/files/2021-03/ECE-TRANS-WP11-243f_0.pdf
<https://unece.org/sites/default/files/2021-03/ECE-TRANS-WP11-243r.pdf>

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 Methodology

This proposal from Spain was to reduce the time it takes to obtain a K value result; there was a technical report to accompany this proposal. Mr Gerald Cavalier liked this approach and said it was similar to a paper that was presented about 10 years ago.

8.1.2 Macro Modular Approach (MMA)

France presented a document on Macro Modular Approach (MMA) this was a method on how to reduce the number of ATP tests required if you had a vehicle that had more than one system. Several colleagues liked the idea but said that it would need further work. It was suggested that a small working group should be set up to discuss further and that WP11 be asked if they would support this type of approach.

8.1.3 Simplifying Liquefied Gas Unit Testing

France presented a document for simplifying how to test liquefied gas systems in ATP, it was considered a good paper but needed modification on how you could justify only testing at -20°C. It was recommended to WP11 with a slight modification.

8.1.4 Round Robin Testing

The chairman asked if the round robin testing was still a topic for discussion at CERTE and who would be willing to organise and also participate, in the meantime we would again circulate the proposal.

8.1.5 Internal Airflow

The UK presented a revised proposal on the internal airflow requirements; with the comments taken on board at the last WP11 meeting. Mr Pekka Rantti from Finland commented that their industry had yet to study the new proposal and suggested using a figure of 110m³ rather than 100m³ but from his point of view it was acceptable. The UK would revise the proposal and submit to the next WP11 session.

8.1 Contributions Concerning Test Report Utilisation, Type Examination Certificates, Marking Rules, ATP Plate of Conformity etc.

8.1.1 Dividing Walls

This was a discussion document presented by Germany on internal dividing walls and whether internal bulkheads need testing and whether there was a need to ban certain designs from ATP.

8.1.2 Definition and Testing of Bulkheads

France presented a proposal for testing internal bulkheads as an option rather than using the figures currently in the ATP, it was commented that the figure achieved in the proposal did not take into account the ageing, the 20% rule and the leakage around the gaskets after 6 years etc. It was agreed that there should be a small working set up to discuss this further.

8.1.3 Real K Value Usage

The UK presented a discussion document on whether test stations should use the measured K coefficient or the class K coefficient specified in ATP. It was agreed that everyone should use the measured value.

8.1.4 MTMC Calculation Tool

The chairman mentioned a letter that was sent to the IIR president, members and CERTE members on the 15th March 2021 about the TI calculation tool.

8.1.5 Prototype Testing

Mr Lionel Pourcheresse from TI presented a proposal to allow prototypes to be temporary ATP approved so that manufacturers could test and develop more energy efficient equipment, introduce new technologies, conform to the demand for lower GWP refrigerants, new power trains and lower the environmental impact. The chairman felt that this was not a technical discussion to be had at CERTE and suggested that this discussion and decision should be made at WP11.

8.2 Other Matters

8.2.1 MTMC Markings

The UK presented a proposal to change the MTMC markings to FRC-M only; the chairman felt that this was decision for WP11 to make as it was simply markings.

8.2.2 ATP Certificate

The Russian delegation at the last WP11 session presented a discussion document on ATP certificates on whether you should select all that apply when selecting equipment type since some competent authorities only selected one equipment type. WP11 asked for this to be looked at by CERTE but colleagues present felt that this was still a decision to be made at WP11.

8.2.3 Definition of Independence of Equipment

France presented a proposal that they submitted to the last WP11 session on definition of the independence of a unit taking into account mixed energy source technologies, WP11 requested to add this to the CERTE agenda. Several participants felt that there was a need for this in principle but that there was more work need to be able to submit to WP11 again.

8.2.4 Mixed Vehicles

Mr Kees de Putter had emailed the chairman about an issue that had recently arisen where a vehicle had been equipped with a eutectic system that was also assisted by a mechanical refrigeration unit and how would this be classified in accordance with ATP. It was felt that further discussion should be had about this topic at a future session.

8.2.5 Lambda Value

Spain presented a proposal to use part of the method for measuring the internal surface area of panel vans for measuring tanks but with the option of selecting a different Lambda value. The idea was considered good and was recommended by CERTE for the next WP11 session.

8.2.6 Lambda and Form Factor

Spain presented a proposal to add additional text to annex 1, appendix 2, section 1.2 where you have the option of using a different Lambda value, estimated by either physical measurements or by statistical data. This was recommended by CERTE for the next WP11 session.

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

9.1 Alternative Drop-in Refrigerants for R404A

France presented a proposal to amend the text in the ATP for the use of drop-in refrigerants for R404A without the need for additional tests which was supported by CERTE and recommended for the next WP11 session.

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

Germany presented a proposal on the use of independent temperature recorders and mobile devices in annex 2 and annex 2, appendix 1. Their understanding was that temperature recorders were a component of the transport equipment but mobile devices were not as they could be changed at any time. The chairman felt that this was a discussion to be had at WP11.

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

The following points were proposed for recommendation to WP11 later this year; the deadline for working documents is the 30th July:

- Simplifying Liquefied Gas Unit Testing
- Internal Airflow with Modifications
- Lambda Value
- Lambda and Form Factor
- Alternative Drop-in Refrigerants for R404A

The following proposals were not technical discussions; these papers were more suited for WP11.

- Macro Modular Approach (MMA)
- Prototype Testing
- MTMC Markings
- ATP Certificate (Russian Document)
- Definition of Independence of Equipment
- Use of independent temperature recorders and mobile devices in annex 2 and annex 2, appendix 1

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 | |
|--|---------------------|----|----------------|----|---------------------|----|----------------|----|---------------------|----|----------------|----|
| | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Minimal insulated foam specifications | X | - | - | X | - | X | - | X | - | X | - | X |
| Internal airflow | X | - | - | X | X | - | - | X | - | X | - | X |
| Testing of prototype equipment in ATP | 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 |
| measurement of k coefficient for fixed bulkheads | X | - | - | - | - | - | - | - | - | - | - | - |
| Conformity acceptance in ATP handbook | - | - | - | - | - | - | - | - | X | - | X | - |
| K to °C | - | - | - | - | - | - | - | - | 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 |

14.0 Future Meetings

The proposed date for the next year’s meeting was 26th and 27th January 2022. There were two possible locations for the next meeting which will be finalised at a later date.

15.0 Any Other Business

No comments or discussions were raised.