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

Transmitted by the International Institute of Refrigeration (IIR)
1.0 Welcome and Presentation

Due to the COVID-19 pandemic, this CERTE meeting took place via the zoom platform. This was to be the first of two meetings this year to coincide with the two WP11 meetings scheduled for May and October.

Mr Gerald Cavalier (President of the Science and Technology Council of the International Institute of Refrigeration) welcomed the group to the video conference meeting hosted by Cemafroid and the chairman Mr Thomas Suquet welcomed the participants (24 in total from 12 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 apologies from the following:

- Mr Didier Coloumb (Director General of IIR)
- Mr Ivan Tomasic (Croatia)
- Mr Manfred Kreitmayer (Austria)
- Ms Alibech Mireles Diaz (UNECE)

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 May 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 22nd June 2021 and submitted to the 77th 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 as an online event: https://iifiir.org/en/events/7th-iir-conference-on-sustainability-and-the-cold-chain.

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 open 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 on two topics, the first on the review of F-Gas and PFAS on the refrigerant side and the second was on transport and the market trends going away from diesel powered systems. There was a need for WP11 and ATP test stations to keep up with new equipment and technology coming on the market.

6.3 CEN

A short update was given by Mr Richard Lawton (UK) 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.

CEN/TC 413 new working group on flammable refrigerant standard will be out for review soon.

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, they are currently looking at ISO1496-4 on non-pressurised tanks.
7.0 Information from UN WP11 Meeting October 2021

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

- The 77th session consisted of 26 working documents and 13 informal documents.

Adopted and rejected proposals from the 77th session are summarised below:

Adopted

Spain: Editorial correction
Spain: Amendment to Annex 1, Appendix 2 paragraph 1.2
Spain: Iterative method for tanks
France: Amendment to Annex 1, Appendix 2, paragraph 6.2.3
France: Liquefied gas systems
France: Editorial correction
Netherlands: Amend footnote 4 in Annex 1, Appendix 3

Rejected/Amend for Next Year

Netherlands: Temperature recorders
France: Mixed energy source
UK: Airflow
France: Airflow
France: Type examination certificates
Germany: Annex 1, Appendix 2, paragraph 7.1 (a) and Annex 1, Appendix 4
Germany: Amend Annex 1, Appendix 2, paragraphs 7.3.2, 7.3.3 and 7.3.4
Germany: Validity of test reports
TI: Temporary certificates
France: Amendment to paragraph 7.3.6 of Annex 1 Appendix 2 of the ATP Handbook
France: Amendments to paragraph 6 (c) (iii) of Appendix 1 to Annex 1 of the ATP Handbook

The 78th meeting is currently scheduled for 3rd to 6th May 2022 and the deadline for submission of working documents was 4th February 2022.

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

Link to the minutes in English is below:

https://unece.org/sites/default/files/2022-01/ECE_TRANS_WP.11_245e.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

8.1.1 Testing Methods

8.1.1 Modular Approach

TI presented a document on modular approach to testing equipment to ATP in the future as during the last 40 years there had only been 4 main types of refrigeration equipment with two different refrigerant types.

Today the primary power source is not necessarily always tested, in the coming years ATP will have to manage more configurations with maybe 3 or 4 different refrigerant types.

It was agreed that a working group be setup to look at this in more details, the first two meetings were scheduled for 23rd March and the 27th April.

8.1.2 Thickness of the Insulated Truck

France presented a document for proposing a way to measure the thickness of the walls by drilling a small hole.

There was a lot of concern from test stations about this method and that it needed further discussions at CERTE as this was considered not the best solution.

8.1.3 Definition and Implication of Technical Indications in ATP Test Report Model No. 12

Dr Stefan Heuss (Germany) gave a short discussion on model 12 of the ATP and whether there was a need to have two options of either adjustable or non-adjustable for the expansion valve as almost all were adjustable it was agreed that both should be deleted from model 12.

A second discussion was about the temperature regulator in part c of model 12 and what was this referring to, it was suggested that a comment could be inserted into the ATP handbook for more clarification.

8.1.4 Status and Improvement

Mr Edo Wissink (Netherlands) presented a document on how preparing for ISO17025, which they have been doing for over two years, had helped improve the calibration requirements of their equipment for ATP.
8.1.5 Round Robin Testing
This topic was still being discussed and the chairman asked if TI could help with any future needs on this testing. TI agreed they would be happy to collect the test data and then present the data after the round robin testing.

8.1.6 Internal Airflow
The UK presented a revised proposal on the internal airflow requirements; with the comments taken on board at the last WP11 meeting. The UK would submit the revised proposal to the next WP11 session.

8.1.5 Separation of Test Reports
Mr Lionel Pourcheresse from TI presented a proposal on the separation of the test report and type test report with the creation of a new type test report with less information than the test report. It was agreed that TI should present a proposal recognising that the model reports may present a problem for test stations accredited to ISO17025. CERTE supports the principle of the document but it would need to be looked at very carefully; some colleagues suggested it may make a bigger problem than already exists.

8.1 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

9.2 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

The following points were proposed for recommendation to WP11 later this year; the deadline for working documents is the 4th February:

- Airflow
- Modification of Model 12

There was also a small working group set up to look at the modular approach that was presented by TI, the first two meetings were scheduled for 23rd March and the 27th April.
13.0 **Sub-Commission Work Plans**

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

![Table Image]

14.0 **Future Meetings**

The proposed date for the next meeting was either the 17th or 18th May 2022.

15.0 **Any Other Business**

No comments or discussions were raised.
## Attendance: List of Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Surname</th>
<th>Country</th>
<th>Organisation</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jean-Francois</td>
<td>Assier</td>
<td>France</td>
<td>Cemafroid</td>
<td><a href="mailto:jean-francois.assier@cemafroid.fr">jean-francois.assier@cemafroid.fr</a></td>
</tr>
<tr>
<td>Gerald</td>
<td>Cavalier</td>
<td>France</td>
<td>Cemafroid</td>
<td><a href="mailto:gerald.cavalier@cemafroid.fr">gerald.cavalier@cemafroid.fr</a></td>
</tr>
<tr>
<td>Kristian</td>
<td>Dahl</td>
<td>Denmark</td>
<td>Teknologisk Institute</td>
<td><a href="mailto:kda@teknologisk.dk">kda@teknologisk.dk</a></td>
</tr>
<tr>
<td>Mohethrith</td>
<td>Eang</td>
<td>France</td>
<td>Cemafroid</td>
<td><a href="mailto:mohethrith.eang@cemafroid.fr">mohethrith.eang@cemafroid.fr</a></td>
</tr>
<tr>
<td>Stefan</td>
<td>Heuss</td>
<td>Germany</td>
<td>TÜV SÜD</td>
<td><a href="mailto:stefan.heuss@tuev-sued.de">stefan.heuss@tuev-sued.de</a></td>
</tr>
<tr>
<td>Andreas</td>
<td>Klotz</td>
<td>Germany</td>
<td>TÜV SÜD</td>
<td><a href="mailto:andreas.klotz@tuev-sued.de">andreas.klotz@tuev-sued.de</a></td>
</tr>
<tr>
<td>Richard</td>
<td>Lawton</td>
<td>UK</td>
<td>CRT</td>
<td><a href="mailto:rlawton@crtech.co.uk">rlawton@crtech.co.uk</a></td>
</tr>
<tr>
<td>Sergio</td>
<td>Marinetti</td>
<td>Italy</td>
<td>ITC CNR, Padova</td>
<td><a href="mailto:marinetti@itc.cnr.it">marinetti@itc.cnr.it</a></td>
</tr>
<tr>
<td>Juan</td>
<td>Martinez-Val</td>
<td>Spain</td>
<td>Official ATP Test Station from Spain (FFII)</td>
<td><a href="mailto:juan.mpiera@gmail.com">juan.mpiera@gmail.com</a></td>
</tr>
<tr>
<td>Tamara</td>
<td>Meglic</td>
<td>Slovenia</td>
<td>Lotric Metrology Ltd</td>
<td><a href="mailto:tamara.meglic@lotric.si">tamara.meglic@lotric.si</a></td>
</tr>
<tr>
<td>Silvia</td>
<td>Minnetto</td>
<td>Italy</td>
<td>ITC CNR, Padova</td>
<td><a href="mailto:silvia.minetto@itc.cnr.it">silvia.minetto@itc.cnr.it</a></td>
</tr>
<tr>
<td>Tobias</td>
<td>Mynott</td>
<td>UK</td>
<td>CRT</td>
<td><a href="mailto:tmynott@crtech.co.uk">tmynott@crtech.co.uk</a></td>
</tr>
<tr>
<td>R</td>
<td>Oveille</td>
<td>France</td>
<td>Cemafroid</td>
<td></td>
</tr>
<tr>
<td>Vasco</td>
<td>Pires</td>
<td>Portugal</td>
<td>ISQ-LABET</td>
<td><a href="mailto:vampires@isq.pt">vampires@isq.pt</a></td>
</tr>
<tr>
<td>Lionel</td>
<td>Pourcheresse</td>
<td>France</td>
<td>Transfrigoroute International</td>
<td><a href="mailto:Lionel.Pourcheresse@carrier.utc.com">Lionel.Pourcheresse@carrier.utc.com</a></td>
</tr>
<tr>
<td>Kees</td>
<td>De Putter</td>
<td>Netherlands</td>
<td>RDW</td>
<td><a href="mailto:kdeputter@rdw.nl">kdeputter@rdw.nl</a></td>
</tr>
<tr>
<td>Rene</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chris</td>
<td>Rhodes</td>
<td>UK</td>
<td>CRT</td>
<td><a href="mailto:crhodes@crtech.co.uk">crhodes@crtech.co.uk</a></td>
</tr>
<tr>
<td>Antonio</td>
<td>Rossetti</td>
<td>Italy</td>
<td>ITC CNR, Padova</td>
<td><a href="mailto:rossetti@itc.cnr.it">rossetti@itc.cnr.it</a></td>
</tr>
<tr>
<td>Thomas</td>
<td>Suquet</td>
<td>France</td>
<td>Cemafroid</td>
<td><a href="mailto:thomas.suquet@cemafroid.fr">thomas.suquet@cemafroid.fr</a></td>
</tr>
<tr>
<td>Jure</td>
<td>Thaler</td>
<td>Slovenia</td>
<td>Lotric Metrology Ltd</td>
<td><a href="mailto:jure.thaler@lotric.si">jure.thaler@lotric.si</a></td>
</tr>
<tr>
<td>Oliver</td>
<td>Valet</td>
<td>France</td>
<td>Cemafroid</td>
<td><a href="mailto:olivier.valet@cemafroid.fr">olivier.valet@cemafroid.fr</a></td>
</tr>
<tr>
<td>Edo</td>
<td>Wissink</td>
<td>Netherlands</td>
<td>Wageningen Food &amp; Biobased Research</td>
<td><a href="mailto:edo.wissink@wur.nl">edo.wissink@wur.nl</a></td>
</tr>
<tr>
<td>Martin</td>
<td>Zeller</td>
<td>Germany</td>
<td>DNV Germanischer Lloyd</td>
<td><a href="mailto:martin.zeller@dnvgl.com">martin.zeller@dnvgl.com</a></td>
</tr>
</tbody>
</table>