

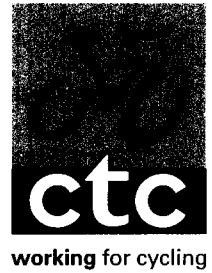
**CEN/TC 333
Cycles**



**Document: CEN/TC 333 N. 51
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**Minutes of last CEN/TC 333/WG4 meeting and letter of Mr. C. Juden to CEN/TC 333
Secretary**

date: 13 December 2000



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Dear Gian-Luca

CENTC333/WG4 Accessories

I hope you are now satisfactorily receiving documents from me to do with this WG by email. (I think that I initially had your address wrong.)

However, since this cannot be stuffed down a wire, I am enclosing the original Assignment of Exploitation Rights – attendance list from our first meeting, as I understand that the CEN TC has to keep this safe. I am sorry you were not able to attend yourself after all, and hope we did everything okay nevertheless.

As you'll have noticed perhaps from the minutes of that meeting, we passed some resolutions that have to be brought before TC333. It seems a good idea for me to progress these in this letter.

1. There was a strong feeling that a single European standard for cycle lighting equipment was badly needed and that (in the apparent absence of any other definite work on such a project) this WG should produce it. We acknowledged that different countries have different laws, but this is precisely the reason we need such a thing and should not become a pretext for inaction. I am aware that British traffic regulations have already been revised as I believe all countries must be, to allow the use of lamps and reflectors on cycles that meet "an equivalent standard of another EC country", so it seems that national sovereignties have already been pooled on this matter. There seems to be no need to wait for a directive, but if one is required I hope that you can advise how those wheels are put in motion.
2. Extending the scope of Luggage Carriers to include front ones looks quite easy and should not be controversial I hope.
3. Using ISO11243 needs no comment.
4. Likewise it follows that we would wish to take the lead under the Vienna Agreement and request that CENTC333 takes this request forward.
5. I would welcome a sample document illustrating the correct way to write standards when requirements are combined with tests.
6. Cycle locks is another area where most of the WG4 participants felt a need for a unified method of assessment. Some of us however, thought that cycle locks were more akin to other locks than cycles and so the best forum would be provided by a Committee dealing with those. Please could you enquire if there is such a committee in CEN and if so request, from TC to TC,

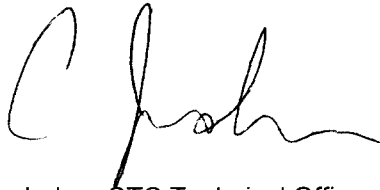


that they add cycle locks to their work.

7. I hope that the requested new target dates are acceptable (and achievable!).

Thank you for your kind attention to my requests

Yours sincerely

A handwritten signature in black ink, appearing to read 'C Juden', with a long horizontal flourish extending to the right.

Chris Juden, CTC Technical Officer

MINUTES

of 1st meeting - BSI, London - 2000.11.13

Participants

Chris Juden (CJ) - CTC - UK
Gerrit Jan Stokreef (GJS) - RAI - NL
Günter Märtin (GM) - DIN - D
Nigel Hill (NH) - ACT - UK
Pietro Boselli (PB) - ANCMA - I

Preliminary

The meeting was opened at 10:50 by CJ. The draft Agenda was adopted and CJ nominated as convenor/chair.

Apologies were received from Danish and Swedish participants, also Gian-Luca Salerio and Beverley Barrett (BSI) would have wished to attend but were unable to. Two participants were delayed but all were present by about 11:30, when matters already discussed were briefly reviewed and agreed.

Scope of WG

In addition to the mandated work item on luggage carriers (WI-6), all participants (including Rolf Thesslin, Sweden, by correspondence) wished this group to consider the subject of cycle lighting equipment. GJS said that this is even more important than luggage carriers for other work of TC333 (particularly WI-1), since lighting very often forms part of the complete bicycle and there is great need for a unified European standard. CJ thought that if WG4 tackled this then separate lighting meetings would be required, involving different experts. It was **resolved** to ask TC333 to approve this additional work item.

There was also a desire amongst most of the participants to produce standards on locks and cycle trailers. CJ was not sure that this WG had sufficient expertise regarding cycle locks (which seemed to have more in common with other locks than with cycles) and advised that CENTC252/WG7 had already volunteered to standardise cycle trailers, but done no work yet. CJ deferred discussion of these other items in view of the need to get started on luggage carriers.

Working document

It was **resolved** to adopt ISO11243.

ISO/CEN Vienna agreement:

It was **resolved** that this WG should take the lead with regard to work on cycle luggage carriers

Discussion of working document

Scope

It was suggested by CJ and **resolved** that this would be expanded to include front carriers. It was noted that this did not include front carriers of the sort that are attached to the frames of delivery bicycles, nor bags and baskets attached to handlebars.

Definitions

Separate definitions are needed for rear carriers and the two distinct types of front carriers: those with a platform above the wheel (like rear carriers) and the "low-load" variety – with two more or less separate side-frames that each have a top rail (from which a pannier hangs) about 150mm above the wheel centre. It was proposed to define low-load with reference to the height of this rail.

It was anticipated that slightly different testing regimes and/or limits upon the load capacity may be required for front versus rear and for the two different types of front carriers.

Beam-type rear carriers were also identified as a separate species. These are a simple cantilever structure simply clamped to the seatpost. No reason could be seen as to why these could not be subjected to the same battery of tests as other rear carriers and it was considered appropriate to limit their capacity to 10kg maximum. Some thought that this type of carrier may produce excessive bending stress in the seatpost. However the rider's weight is many times greater, and although acting at a lesser distance does also produce a bending moment due to the angle and lay-back of the seatpost. It was considered that a 10kg upper limit ensured that the bending moments due to these carriers would be relatively small besides those the post is necessarily designed to resist.

Classification

After some discussion it was agreed to keep class S. However, in order to restrain the perhaps over-ambitious claims of some manufacturers for capacities of 40kg or so (because the carrier itself is strong enough to pass our tests with that loading even if the bicycle may not be) CJ proposed that capacities over 25kg would require fastenings to the bicycle frame larger than 5mm diameter.

Above wheel front carriers would be limited to 10kg because of the deleterious effect upon steering of a load attached to the fork this far away from its axis of rotation. Low-load front carriers would be permitted up to 18kg, since a load carried here has its centre of gravity close to the steering axis; but its moment of inertia about this axis is nevertheless of some consequence for quick control of the bicycle.

Dimensions

As prEN 00252017 (child seats) still allows attachment to ordinary luggage carriers (despite the controversial nature of this matter), the width restriction (120–175mm) remains justified for 18 and 25kg rear carriers.

Structure – cracks

It was noted that this clause (6.3 in ISO11243) answers the enquiry from Christian Wetterberg regarding cracks where it says that a carrier shall not show any "visible signs of fracture" (i.e. cracks) after testing. Visible cracks are therefore a failure. Confusion may arise however, where the dynamic test method says to continue for the specified number of cycles or until failure if this occurs first. Here failure means part of the carrier is broken right through and flapping about – so it would be dangerous to continue testing. The carrier may nevertheless have failed if it is found to have visible cracks upon completion of the requisite number of cycles. The WG decided that visible cracks are a failure even if the carrier can still pass the static tests.

The WG thought it would be easier to avoid problems like this if standard were to be written in the alternative format permitted by CEN, where requirements are not separated from test methods but instead presented together. It PB observed that other TC333 WGs had decided to work this way and a **resolution** was passed to do likewise in WG4.

Materials

The environmental tests on metals were approved, but plastics are a problem due to a lack of realistic and reasonable UV and Ozone test methods. It was suggested that few carriers have plastic parts so maybe it could be omitted, however some carriers have commonly been made by insert moulding metal rods into plastic joints (notably ESGE) where plastic plays a key structural role. It was decided to use similar wording to prEN 00252017 which merely alerts the carrier manufacturer to the need for some resistance to UV and Ozone.

The high and low temperature test were retained unaltered for similar reasons.

There was a brief digression on cycle locks and trailers.

Static tests

These were approved and it was considered that the same regime would apply to front carriers, except that low-load types would have separate half-loads applied first to one and then both sides, making the same total loading. After discussing the dynamic tests, it was decided that the permitted lateral deflection of front carriers should be reduced from 15 to 10mm, due to greater effect of front carrier flexibility upon control of the bicycle.

GM questioned the lack of any impact tests. It was agreed that the dynamic tests were more onerous and probably made impact tests unnecessary.

It was decided that all tests should be conducted upon one sample carrier in a specified sequence. Static tests should come after dynamic tests but other details of that sequence were not decided.

Dynamic tests

These were approved without alteration for rear carriers.

It was decided that front carriers should be subjected to more severe test conditions because a failure of a front carrier is more safety critical and because front carriers are likely to experience more severe vibration due to the smaller proportion of the rider's own weight acting upon the front tyre and the ability of the fork to flex vertically. This will be further exacerbated when a front carrier is fitted to the lower legs of a suspension fork (increasingly fitted to trekking bikes), so the carrier load becomes an almost completely unsuspended mass.

For front carriers, it was decided to increase the amplitude of both dynamic tests by 50%. For the lateral test on low-load carriers the axis of swing would be at a distance of about 450mm (to be confirmed by measurement) below the load rail. A definition of this rail – onto which the panniers hook – will be required.

Other requirements

It was suggested by CJ and agreed after some discussion that rear carriers shall be required to be supplied with some means, integral or by an additional bracket, of attaching the two most common de-facto standard configurations of rear carrier-mounted reflector and lamp. These are the Dutch/European Z-type which has two holes set 50 or 80mm apart horizontally for M5 screws and the US/CPSC-type with two holes 3/4 inch apart vertically for 1/4in screws. (Possibly this could be rationalised to just the 50mm Euro, other fittings optional.) This is important because the attachment of a rear carrier to a bicycle and placement of loads upon it interferes with most of the other common locations for rear lamps and reflectors. Carriers that come with an integral lamp and reflector (approved to a recognised European standard) would be exempt of course.

Instructions

These should be "in a language of the country in which the product is sold".

An extra instruction to balance the load between the two sides of a front carrier was suggested by GM and agreed, with the observation that this is also good practice with rear carrier loads.

An instruction to level the carrier platform or load rail was also agreed.

Other Business

Further discussion on locks led to a **resolution** to ensure that someone, if not this WG then perhaps another CENTC concerned with locks in general, is charged with bringing together the work being done independently in various European countries to test and grade cycle locks for their thief proof qualities. NH spoke of the Sold Secure methods and GJS described a similar process used by TNO. The likelihood of theft is for many individuals a significant disincentive to everyday cycling and to investment in better quality (safer?) new bicycles.

Target dates

The first target date having already passed, it was resolved to ask for a new date of 2001.03 for stage 32. It was hoped nevertheless to meet the 2002.09 date for stage 49 and split the difference to arrive at a target of 2001.12 for stage 20/40.

Next meeting

A number of dates were suggested: 2001.02.05, 06 and 12, so as to help others who had not been able to attend this time. CJ would try to obtain a room at BSI London.

Further to the meeting, having heard from Sweden that only the 12th is possible, a room has been booked for that date (room 408 from 10:30), at BSI London.

Resolutions

1. This Working Group proposes also to standardise cycle lighting.
2. Luggage carriers shall include front carriers attached to the fork.
- 3. ISO11243 will be used as a base document.
4. This Working Group wishes to take the lead under the Vienna agreement with regard to work on cycle luggage carriers.
5. The standard will be written in the form where requirements are connected to the associated test.
6. This Working Group is aware of independent work on cycle lock testing in the UK and Netherlands and requests TC333 to enquire whether any committee of CEN is active in the standardisation of cycle locks.
7. Postponed target dates for WI-6 are requested from CENTC333 of 2001.03 for stage 32 and 2001.12 for stage 20/40.

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