

## Minutes of the meeting

GRRF IG R 55 Task Force Agricultural  
Couplings (TFAC)

Small Group for definition of Formulas and Test procedure for agricultural towing devices

Components: Mr. Inverardi, Mr. Afflerbach, Mr. Conrads, Mr. Mc Mahon Mr. Stokreef, Mr. Graser, Mr. Hermann and Mr Gunneriusson

TUEV NORD ESSEN, 20 March 2014

### 1- Opening of the meeting

Mr. Conrads welcomed all the participants and open the meeting at 10.00.

### 2- Roll call of participants

The components of the small group present introduce themselves. Mr Mc Mahon was not attending the meeting.

### 3- Test procedure

First have been considered all the data received from the market regarding the geometry and construction of the different kind of agricultural trailers.

Mr. Inverardi introduce and comment the data received from the Italian trailer Manufacturer.

Mr. Hermann introduce and comment the data received from the German trailers Manufacturer.

There has been a deep and detailed analysis of all the data with regards to the parameters considered to be influent and important for the V-value calculation.

Many examples have been calculated in order to compare the results.

The main considerations coming out of this work are:

- Fixing parameters for the agricultural trailers are very useful in the calculation of the V-value due to the large variety of construction, geometry and purpose of agricultural trailers;
- The best representative value for the parameter  $x/l$  is 1.2

Comparison between the German TA31 formulas:

$$F_v = S \cdot g + 0,24 \cdot D \quad \text{resp.: } \min 0,4 \cdot D$$

and the proposed ECER55-agri formulas:

$$F_v = g \cdot S + 0,3 \cdot V$$

with:  $V = 1,8 \cdot C \cdot 1,44$   
having:  
 $a = 1,8$   
 $x/l = 1,2$

always show a difference in terms of vertical test force value  $F_v$  non more than some % ( only in very few cases the difference was of 5% )

### 4- Next steps

The only open point remaining now is the evaluation if the V value calculated with the proposed formulas is valid also for the theoretical calculation of the trailer drawbar.

Mr. Conrads and Mr. Graser will prepare a table with the comparison of the actual situation taking in consideration the method used for the agricultural and industrial trailers, and will make a proposal how to consider this point.

## **5- Conclusion**

One more meeting should be necessary to become to a definitive conclusion. Meeting will be held in Essen and Mr. Conrads will fix a date according to the availability of a meeting room around the med of May 2014.

After this meeting the small group will prepare a draft proposal for the "Test Procedure" chapter of the new Regulation.

Meeting is closed at 16.00