Comments to the document R55-11-18 on masses to be used in the in case M + TM exceeds MC

The excerpt from the TAAM in Reykjavik in May 2015 addresses the issue where the sum of the mass of the towing vehicle (M) [T] and the mass of the towed vehicle (TM) [R or C] is higher than the maximum combination mass (MC) set for the towing vehicle. TAAM discussed this but only in the light of couplings for rigid truck and full trailer. The preferred solution was to say D= T^2/MC. This is based on the assumption that T = R. It is not said whether T = R = MC/2 or some other assumptions applies. However the issue has been conveyed to the IWG-R55 for consideration.

While doing so TAAM also comments that we shall not over dimension the coupling equipment.

Reading the background to this item it is noted that the situation is in no way clear cut even for the combination addressed. Looking at other types of combinations like tractor and semitrailer or rigid and center axle trailer you find that the situation is even worse. To add even more complexity to the picture it is very common that vehicles have a maximum technical mass that is much higher than the maximum mass that is in the matriculation of a specific vehicle. I.e. you may find a rigid truck that has a maximum technical mass of let say 38 tonnes but the matriculated maximum mass is 26 tonnes. In such cases under the present matriculation the vehicle will not have a mass higher than 26 tonnes. It then sounds reasonable to use the matriculated mass rather than the maximum technical mass. This is in line with the TAAM statement not to over dimension.

As maximum towable mass is not defined by the coupling equipment installed it is not correct to mix the two things coupling dimensions on the one hand and maximum combination mass on the other hand. For a center axle trailer combination you may easily find two different trailers of the same mass where the one is acceptable from a coupling point of view while the other is not acceptable. An observation in this context is that the maximum towable mass in case of a center axle trailer may be limited either through Dc-value performance values or by V-value performance.

The flavor of the comment from TAAM is that there might be an opening to not use the maximum technical mass but some other relevant mass for the specific vehicles being combined. This is good. Furthermore it gives an indication that the maximum combination mass has priority over other masses defined.

Each individual vehicle has its specific coupling equipment installed. At different times one specific vehicle is not combined with one and the same other vehicle. Then in order to meet the TAAM comment saying that we shall not over dimension a proposal is to use the matriculated maximum mass for the calculation of coupling dimension needed. If those masses adds up to more than MC then the coupling equipment is over dimensioned. However less over dimensioned than when using maximum technical mass.