Svensson Bolennarth

Från: John de Pont <j.depont@ternz.co.nz>
Skickat: den 9 februari 2014 21:45
Till: Svensson Bolennarth
Ämne: RE: Scuffing forces

Dear Bolennarth,

The work we did on the tyre scuffing forces was focussed on the forces applied to the pavement by the tyres rather than the drawbar forces but the experimental testing work applied a towing force in the transverse direction which was measured. This is similar to the theoretical worst case force shown by the formula in the Appendix of NZS5446:2007. In New Zealand this type of loading does occur in some applications although it is rare in others.

NZ5446 was originally published in 1987. There was quite a lot of testing and measurement work undertaken as part of the development of the standard. The principal researcher was a colleague of mine called Rod Mackay. Rod's e-mail address is rmackay@www.co.nz. I Have gone through our library collection and have not been able to find any reports on this work. Rod may be able to help you with this,

The formula in NZ5466 is derived by a simple moment-balance assuming pure scuffing. While this is a little conservative, situations very close to this can be observed in practice. I agree with you hat this is a realistic estimate of force for design purposes.

The New Zealand standard was developed in response to a situation where there were a number of crashes every year resulting from drawbar failures. Since the introduction of the standard this problem has been eliminated. The standard has certainly been very effective.

I hope you are successful in convincing your colleagues. I am sure you are right.

Regards,

John

From: Svensson Bolennarth [mailto:bolennarth.svensson@vbggroup.com]
Sent: Friday, 7 February 2014 9:53 p.m.
To: j.depont@ternz.co.nz
Subject: Scuffing forces

Dear Mr. de Pont,

I read your article on scuffing forces “TYRE SCUFFING FORCES FROM MULTI-AXLE GROUPS”
I find it very interesting. The reason why I am looking at this is that within UNECE GRRF IWG R55 we are looking at what forces shall be used when approving drawbars for lateral forces. I am arguing for the set of formulae that you find in Appendix F of the NZS 5446:2007. Other members of the informal working group is arguing for half the force level. Our company has made measurements and those agree better with the NZS 5664:2007. When I read your article I find support for the NZS 5446:2007. Would you agree with such a statement?

Do you have any more material on this subject. Perhaps you know of some other researchers (almost as good as yourself) addressing the same subject. Some more references would be even more compelling.

I thank you in advance for you support.

Have a nice weekend.

Bolennarth Svensson, PhD
Business Engineer Coupling Equipment

VBG GROUP

VBG GROUP TRUCK EQUIPMENT AB
Box 1216
SE-462 28 Vänersborg
Street address: Herman Kreftings gata 4

Tel +46 521 278126
Fax +46 521 277794
Mobile +46 706 177217
E-mail bolennarth.svensson@vbggroup.com