Ammeraal Beltech

EP uniTool NEWS

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EP uniTool ongoing...

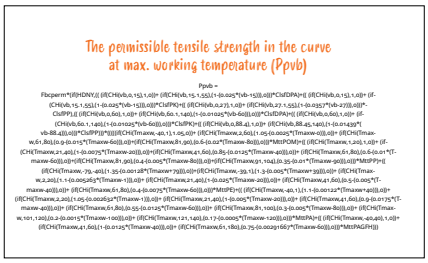
We strongly believe that our new EP uniTool – digital calculation & communication platform is just the start of digital transformation that will strengthen our business.

We need digital order and we should remove the risks of wrong calculations that can result in missing revenues.

No limitation to equations

The longest equation (so far) is now in the EP uniTool.

The below formula is the formula that can give you the allowable tensile strength in curves at a given temperature and speed for all our materials, and that it also takes into account whether normal PEHD1000, or Nylatron is used in the inner curves in the turn. The formula is a main formula, which consists of 27 sub-formulas that controls the temperature factor, as well as 12 sub-formulas that control the PV factor.



The permissible tensile strength in the curve at max. working temperature (Ppvb)

Ppvb =

Fbcperm*(IF(HDNY,(((IF(CH(Vb,0.15),1,0)+ (IF(CH(Vb,15-1.55),(1-(0.025*(Vb-15)),0)*CIsIfPK)+((IF(CH(Vb,0.15),1,0)+ (IF-(CH(Vb,15-1.55),(1-(0.025*(Vb-15)),0)*CIsIfPK)+((IF(CH(Vb,0.27),1,0)+ (IF(CH(Vb,27-1.55),(1-(0.035*(Vb-27)),0))*-CIsIfPP),(((IF(CH(Vb,0.60),1,0)+ (IF(CH(Vb,60-1.140),(1-(0.0125*(Vb-60)),0))*CIsIfDPA)+((IF(CH(Vb,0.60),1,0)+ (IF-(CH(Vb,60-1.140),(1-(0.0125*(Vb-60)),0))*CIsIfPK)+((IF(CH(Vb,0.88-4),1,0)+ (IF(CH(Vb,88-45.140),(1-(0.0143)*(Vb-88.4)),0))*CIsIfPP))))*(IF(CH(Tmaxw,-40,1),1,0)+ (IF(CH(Tmaxw,2.60),(1-(0.05-(0.0025*(Tmaxw-0)),0)+ (IF(CH(Tmaxw,61,80),(0.9-(0.0125*(Tmaxw-60)),0)+(IF(CH(Tmaxw,81,90),(0.6-(0.02*(Tmaxw-80)),0))*MtrPCMH)+((IF(CH(Tmaxw,1.20),1,0)+ (IF-(CH(Tmaxw,21,40),(1-(0.0025*(Tmaxw-20)),0)+(IF(CH(Tmaxw,41,60),(0.85-(0.0125*(Tmaxw-40)),0)+ (IF(CH(Tmaxw,61,80),(0.6-(0.01*(T-maxw-60)),0)+(IF(CH(Tmaxw,81,90),(0.4-(0.005*(Tmaxw-80)),0)+(IF(CH(Tmaxw,91,104),(0.35-(0.01*(Tmaxw-90)),0))*MtrPP)+((IF(CH(Tmaxw,-79,-40),(1-35-(0.001*28*(Tmaxw+79))),0)+(IF(CH(Tmaxw,-39,1),1-3-(0.005*(Tmaxw+39))),0)+ (IF(CH(Tmax-w,2,20),(1-1-(0.0025*(Tmaxw-1))),0)+ (IF(CH(Tmaxw,21,40),(1-(0.025*(Tmaxw-20)),0)+ (IF(CH(Tmaxw,41,60),(0-5-(0.005*(T-maxw-40)),0)+ (IF(CH(Tmaxw,61,80),(0.4-(0.0075*(Tmaxw-60)),0))*MtrPE)+((IF(CH(Tmaxw,-40,1),(1-1-(0.00125*(Tmaxw+40)),0)+ (IF(CH(Tmaxw,2,20),(1-(0.05-(0.0025*(Tmaxw-1))),0)+ (IF(CH(Tmaxw,21,40),(1-(0.005*(Tmaxw-20)),0)+ (IF(CH(Tmaxw,41,60),(0.9-(0.0175)*(T-maxw-40)),0))+ (IF(CH(Tmaxw,61,80),(0.55-(0.0125*(Tmaxw-60)),0))+ (IF(CH(Tmaxw,81,100),(0.3-(0.005*(Tmaxw-80)),0)+ (IF(CH(Tmax-w,101,120),(0.2-(0.001*(Tmaxw-100)),0)+ (IF(CH(Tmaxw,-121,-40),(0.17-(0.0005)*(Tmaxw-120)),0))*MtrPA)+((IF(CH(Tmaxw,-40,40),1,0)+ (IF(CH(Tmaxw,41,60),(1-(0.0125)*(Tmaxw-40)),0)+ (IF(CH(Tmaxw,61,180),(0.75-(0.0029)*(60)*(Tmaxw-60)),0))*MtrPAGFH)))

The pemsissible tensile strenght in the curve at max working temperature formula

This formula has sproven that no limitation to equations in EP uniTool.

Facts of EP uniTool

The number of formulas/equations is now more than 400.
Lines with codes: 154.000

Latest news

During the summer period new developments has been prepared:

Continuously calculation mode

The main advantage of using the continuously calculation mode is better user experience due to the immediate overview of the results and the impact when changing inputs.

Calculation opportunities

Basic calculations for side flexing belts with 1, 2 or 3 curves are now possible. Calculations for further three conveyors types have been added.

In pipeline

We will start uploading uni datasheets as the basic for the coming digital catalog-builder.
Illustrations that will support calculations are under development as well as the preperation for external access.

The opportunity for sharing news

The communication platform EP uniTool is slowly growing with more and more content such as news and more learning.

Building and succeeding with a digital platform is hard. Not only does it require skilled engineers to make sure a long term solution is developed, it also requires crystal clear communication, both with end users, and in the team.

The EP uniTool platform is a product that had these two pre-requisites, and the result is a well founded platform, that is just as fast to deploy features on now, as it was when it was still a baby.

Writing good software takes time. At IT-Minds we have a very clear understanding on what good software is, and we try our hardest to communicate what this means.

The core EP uniTool team at PCC understood this, which is why the result today is robust, but also very easy to continue to develop on!

Simon Bundgaard-Egeberg
Lead Developer, IT Minds

For you that not have been here yet: Find our NEW tool on the EP uniTool portal:

eptool.online

uni

Member of Ammega Group.