LEAFLET

Association Steel Fibre Technology

DOSAGE OF STEEL FIBRES FOR THE PRODUCTION OF TEST SPECIMENS FOR THE INITIAL TESTING[1)] TO DETERMINE THE PERFORMANCE CLASS

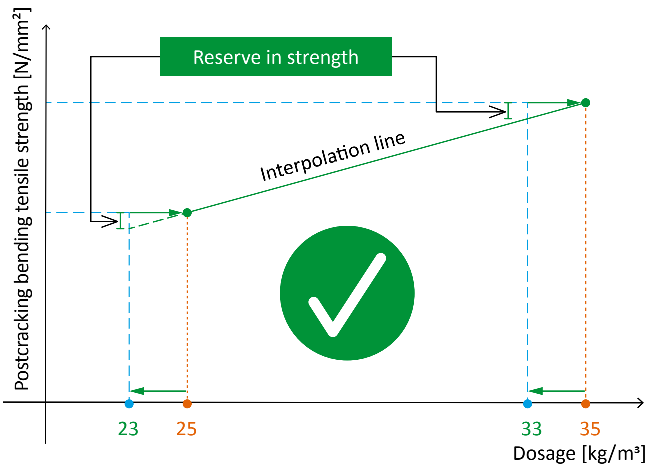
This leaflet explains the correct application of the allowance of toleranccess in accordance with Section N.5.1 of the DAfStb guideline "Steel fibre reinforced concrete":

> *"The test of the postcracking bending tensile strength according to Annex O to classify the concrete into a performance class and to check the performance class should be carried out with a allowance of tolerances, but may not be more than the minimum value of the steel fibre content $m_{f,min}$."*

- The **ready-mixed concrete manufacturer** is **responsible** for specifying the **performance class** and maintaining the corresponding performance, **regardless of which laboratory** carried out the production and testing.
- The use of allowance of tolerances for beam production is optional and is generally not used in practice.
- The correct application of the allowance of tolerances according to N.5.1 of the DAfStb guideline means that the dosage for producing the beams must be reduced. The dosage $\mathbf{m_{f,min}}$ (set steel fibre content to determine the performance class) **must not be increased under any circumstances**.

Example:

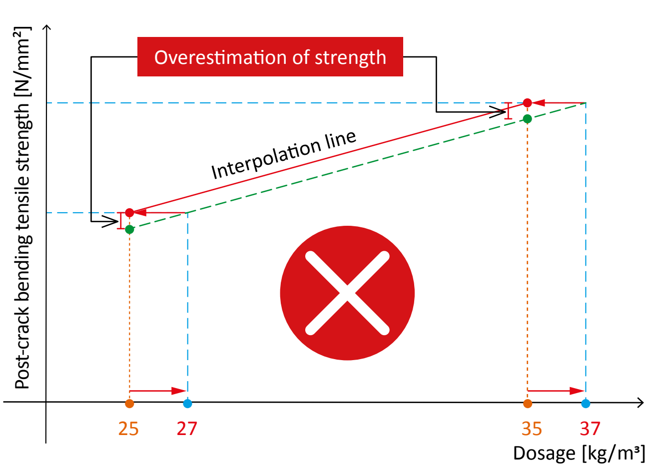
For a classification test, the declared minimum dosages are $m_{f,\,min1}$ = 25 kg/m³ and $m_{f,\,min2}$ = 35 kg/m³ and a allowance of tolerances of 2 kg/m³ should be considered. Figures 1 and 2 show the correct and incorrect – non-compliant – application of the allowance of tolerances in accordance with Section N.5.1 of the DAfStb guideline "Steel fibre reinforced concrete".



$m_{f,min1v} = m_{f,min1}$ - allowance of tolerances = 25 - 2 = 23 kg/m³

$m_{f,min2v} = m_{f,min2}$ - allowance of tolerances = 35 - 2 = 33 kg/m³

***Figure 1:** Example of the **correct** application of the allowance of tolerances for contents of 25 kg/m³ and 35 kg/m³ with a allowance of tolerances of 2 kg/m³*



$m_{f,min1v} = m_{f,min1}$ + allowance of tolerances = 25 + 2 = 27 kg/m³

$m_{f,min2v} = m_{f,min2}$ + allowance of tolerances = 35 + 2 = 37 kg/m³

***Figure 2:** Example of the **incorrect – non-compliant** – application of the allowance of tolerances for contents of 25 kg/m³ and 35 kg/m³ with a allowance of tolerances of 2 kg/m³*

[1)] Also applies to the control tests of the performance class

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