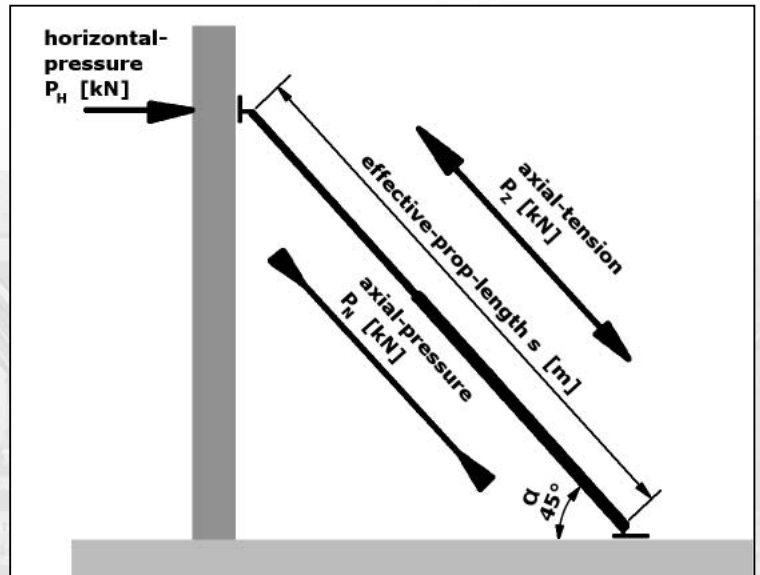
 slanted-props were tested for their bearing-capacity by the „Materialprüfungsamt Nordrhein-Westfalens“ (Report 130026880) in 1990. The following information and calculation is based on that report and already including a safety coefficient.

In case the prop has to be installed in a different angle, the maximum horizontal-pressure can be calculated as follows:

given: - effektive prop length s [m]
- angle α [°]

angle α [°]	cos α [1]
30	0,866
35	0,819
40	0,766
45	0,707
50	0,643
55	0,574
60	0,5
65	0,423
70	0,342
75	0,259



Read from the table die maximum horizontal-pressure P_H for this situation is:

$$P_H = P_N * \cos \alpha \text{ [kN]}$$

With cosinus-values for different angles see the table on the left.
The maximum axial-tension is unaffected by the angle.

Considering, that the prop is installed under an angle of 45° the bearing-capacities for the effective-prop-length can be estimated from the table:

effektive prop length s [m]	horizontal pressure P_H [kN]	axial pressure P_N [kN]	axial tension P_Z [kN]
6.20	1,27	1,79	30,0
6,00	2,12	2,99	30,0
5,75	3,17	4,49	30,0
5,50	4,23	5,98	30,0
5,25	5,29	7,48	30,0
5,00	6,35	8,97	30,0
4,75	7,40	10,47	30,0
4,50	8,46	11,97	30,0
4,25	9,52	13,46	30,0
4,00	10,58	14,96	30,0
3,75	11,63	16,45	30,0
3,50	12,69	17,95	30,0
3,25	13,75	19,45	30,0
3,00	14,81	20,94	30,0
2,75	15,87	22,44	30,0
2,50	16,92	23,93	30,0
2,25	17,98	25,43	30,0
2,00	19,04	26,92	30,0
1,85	19,67	27,82	30,0

Technical subject to change 08/ 18

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