Field Drilling of Nordic X-Lam Floor Slabs

This technical note provides guidelines for field drilling of holes in Nordic X-Lam floor slabs.

This technical note is applicable to simple or multiple span slabs with uniformly distributed loads only.

The holes must conform to the following geometries. If these requirements cannot be met, the drilling of holes must be verified by a qualified engineer.

Notes:
1. Hole size: The hole should be round and the hole diameter ($d$) should not exceed 150 mm.
2. Distance from support ($a$): The hole should have a minimum clear distance, as measured from the edge of the hole to the nearest inside face of support, of 1.5 hole diameter or 100 mm, whichever is larger.
3. Edge distance ($e$): The hole should have a minimum clear distance, as measured from the edge of the hole to the nearest edge of the panel, of 1.5 hole diameter or 100 mm, whichever is larger.
4. Longitudinal spacing ($S_p$): The minimum clear distance parallel to grain between adjacent hole edges shall exceed 3 times the diameter of the largest adjacent hole or 100 mm, whichever is larger.
5. Transverse spacing, in a zone of 1/8 of the span from the support ($S_{Q1}$): The minimum clear distance perpendicular to grain between adjacent hole edges shall exceed 7 times the diameter of the largest adjacent hole or 200 mm, whichever is larger.
6. Transverse spacing, in the middle 3/4 of the span ($S_{Q2}$): The minimum clear distance perpendicular to grain between adjacent hole edges shall exceed 3 times the diameter of the largest adjacent hole or 100 mm, whichever is larger.