CERTIFICATE

Client:	**DOLLE A/S**
Product:	**DOLLE Calgary**
Designation:	**Product family**
Description:	**Structural verification of the spiral staircase family Calgary. The Calgary product family has a maximum outer diameter of 140 cm and the maximum installation height is 2808 mm. DOLLE Calgary product family consists of maximum 11 treads and landing platform and minimum 11 balustrades carrying the staircase handrail and minimum 4 balustrades holding the repos handrail. The screws for fastening the platform to the wall are not included in this verification.**
Material:	**Steps: 35 mm multiplex** **Centre construction: Steel, S235 JRG2** **Spacer: ABS** **Step support pipe: Steel, S235 JRG2** **Handrail: PVC-Rigid or LDPE** **Balustrades: Steel, S235 JRG2**
Particularities:	**The structure is checked with FEM for deformations and stress.**
Eurocodes:	**EN 1991-1-1:2007 Eurocode 1: Actions on structures - Part 1-1** **EN 1991-1-4:2007 Eurocode 1: Actions on structures - Part 1-4** **EN 1993-1-8+AC:2007 Eurocode 3: Design of steel structures - Part 1-8**
References:	**[1] DOLLE® Design basis for ladders and stairs, rev. 01**
Conclusion:	**DOLLE Calgary product family is calculated according to Eurocodes [1] and the design is found to be strong and stable. The product is approved.**

ISO 9001 : 2015
Management System Certification
BUREAU VERITAS
Certification Denmark A/S

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