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Translation date 2008-12-05

Modum A/S
Linköpingsvej 8
DK - 4900
DANMARK

Test of foldable ladder (1 appendix)

1 Introduction

SP has been commissioned by Modum A/S, Denmark, to perform tests of a foldable ladder.

2 Test method

The tests were performed according to relevant parts of SS 83 13 40 "Taksydd – Stegar för fast vertikal montering – Funktionskrav" utgåva 2.

3 Test objects

A foldable ladder made of aluminium, described in Appendix 1. The ladder was chosen by the client and arrived at SP on 2008-09-11 and was tested on 2008-10-07.

4 Test method and results

The ladder was mounted in a steel test rig and was loaded in accordance with SS 83 13 40, laterally, vertically as well as on one rung. When the ladder was loaded with 0.75 kN, the deformation 35 mm was recorded. Permitted deformation is a tenth of the distance between the ladder and the wall, which in this case equals 44 mm. When the ladder was loaded vertically the deformation 11 mm was recorded during the test, and when unloaded the remaining deformation was 1 mm. The requirements according to the standard are 15 mm and 2 mm respectively. When one rung was loaded, the deformation 2 mm was recorded during the test and there was no remaining deformation. The requirements according to the standard are 7 mm and 2 mm respectively.

The ladder fulfilled the requirements in all the tests.

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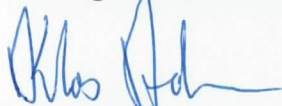
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5 Others

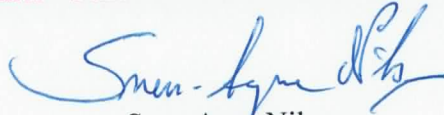
The measurement uncertainty for the applied force is $\leq 1,3$ % and for the measurements of deformation $\leq 1,6$ %. The reported uncertainties correspond to an approximate 95 % confidence interval around the measured value. The interval has been calculated in accordance with GUM (The ISO guide to the expression of uncertainty in measurements), which is normally accomplished by quadratic addition of the actual standard uncertainties and multiplication of the resulting combined standard uncertainty by the coverage factor $k=2$.

The test results refer only to the tested sample.

SP Technical Research Institute of Sweden
Building Technology and Mechanics - Solid Mechanics and Structures

Handwritten signature of Klas Johansson in blue ink.

Klas Johansson
Technical Manager

Handwritten signature of Sven-Agne Nilsson in blue ink.

Sven-Agne Nilsson
Technical Officer

Appendix

1. Drawings (6 pages)

This report is a translation from the Swedish original document. In event of any dispute as to the contents of the document, the Swedish text shall take precedence.



REPORT

issued by an Accredited Inspection Body

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Initial inspection wall ladder (1 appendix)

1 Introduction

This report presents the results from the initial production inspection of Modum A/S.

Inspection date 2008-11-06

Place of inspection The factory in Nakskov

Attendants Anders Christiansen, Modum A/S
Sven-Agne Nilsson SP

2 Products

Foldable wall ladder "Modum" according to SP certificate 23 17 01.

3 Inspection visit

3.1 General inspection

Material inspection and production were performed satisfactorily.

3.2 Inspection of the manufacturer's own inspection procedures

The manufacturer shall perform inspections of their own according to "Beskrivning tillverkning av räddningsstegen "Modum" vid Modum A/S", dated 2008-11-10.

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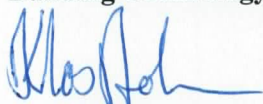
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4 Assessment

The production and own inspection procedures by Modum A/S of wall ladders have been inspected and were found to be performed satisfactorily.

Issuing of approval is recommended.

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Building Technology and Mechanics - Solid Mechanics and Structures

Handwritten signature of Klas Johansson in blue ink.

Klas Johansson
Technical Manager

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Sven-Agne Nilsson
Technical Officer

Appendix

1. Description of the manufacturer's own inspection procedures

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