 Aerial Oy PL22 / Pietolankatu 9A 04401 / 04400 Järvenpää Fax: 09-2910210 Tel: 09-2790120 www.aerial.fi aerial@aerial.fi	Document name: M4000-114-36N tower certificate	Created: 6.8.2024 Ver:2 Last change date: 12.3.2025
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Certificate of M4000-114-36N guyed mast

1. DESIGN

The design and analysis of mast type PM4000-114-36N is based on European norm Eurocode 3: EN 1993-3-1. The calculations have been made with DE-Tower -program made especially for design of guyed, self-supporting and tubular tower structures. The wind speed in calculations is according to European norm Eurocode 1: EN 1994-1-4, terrain category 1, reliability class 2, $v_{b0}=21\text{m/s}$. Estonian NA applies.

2. QUALITY

Aerial Oy has a certified quality system according to ISO9001/2008.
In production following norms are applicable:

General instructions: EN 1090-2
 Structural steels: EN 10025, EN 10219
 Raw material certificates: EN 10204; 3.1
 Welding classes: EN ISO 5817
 Welding guides: EN ISO 3834 1...4
 Proficiency rating of welders: EN 287-1, EN-ISO 9606-1
 Procedure test of welding: EN ISO 15614-1
 Hot dip galvanizing: EN ISO 1461, EN ISO 10684
 Screws and nuts: EN ISO 4759

The appropriate quality of products services, accessories and materials is ensured by tests, continued observance and quality control. The tower has execution class EXC2. Tower is CE-marked.


3. PAINTING

Mast is not painted.

4. FEATURES

The tilt/twist of mast PM4000-114-36N is calculated according Eurocode 1: EN 1994-1-4: $V_{ref} = 21 \text{ m/s}$. Maximum tilt/twist < 0.1 degrees.

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5. WIND LOADING

Total effective wind areas:

Radome: $A_{eff} = 17 \text{sqm} @ 38.5\text{m}$ (center line).

Stairs: $A_{eff} = 1 \text{sqm/m}$ from 0-36m.



Aerial Oy
 Arno Tiihonen
 CAD-Engineer

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