

ANNEXE 3 CERTIFICATS D'ÉMISSION SONORE DE L'ÉOLIENNE RETENUE

Certificats d'émission sonore de l'aérogénérateur Vestas V136 4.2MW pour les calculs de modélisation du projet Croix du Picq

Document no.: 0067-7065 V05
 Document owner: Platform Management
 Type: T05 - General Description

Performance Specification V136-4.0/4.2 MW 50/60 Hz
 Power Curves, Ct Values and Sound Curves, Power
 Optimized Mode PO1/PO1-0S

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8.3 Sound Curves, Power Optimized Mode PO1/PO1-0S

| Sound Power Level at Hub Height | | |
|-----------------------------------|--|---|
| Conditions for Sound Power Level: | Measurement standard IEC 61400-11 ed. 3 Maximum turbulence at hub height: 30% Inflow angle (vertical): 0 ±2° Air density: 1.225 kg/m ³ | |
| Wind speed at hub height [m/s] | Sound Power Level at Hub Height [dBA] Power Optimized Mode PO1 (Blades with serrated trailing edge) | Sound Power Level at Hub Height [dBA] Power Optimized Mode PO1-0S (Blades without serrated trailing edge) |
| 3 | 90.9 | 93.2 |
| 4 | 91.1 | 93.6 |
| 5 | 92.9 | 96.5 |
| 6 | 96.0 | 100.0 |
| 7 | 99.6 | 103.2 |
| 8 | 102.9 | 106.0 |
| 9 | 103.9 | 106.9 |
| 10 | 103.9 | 106.9 |
| 11 | 103.9 | 106.9 |
| 12 | 103.9 | 106.9 |
| 13 | 103.9 | 106.9 |
| 14 | 103.9 | 106.9 |
| 15 | 103.9 | 106.9 |
| 16 | 103.9 | 106.9 |
| 17 | 103.9 | 106.9 |
| 18 | 103.9 | 106.9 |
| 19 | 103.9 | 106.9 |
| 20 | 103.9 | 106.9 |

Table 8-3: Sound curves, Power Optimized Mode PO1/PO1-0S

Original Instruction: T05 0067-7065 VER 05

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 Type: T05 - General Description

Performance Specification V136-4.0/4.2 MW 50/60 Hz
 Power Curves, Ct Values and Sound Curves, Sound
 Optimized Mode SO1

Date: 2017-12-21
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10.3 Sound Curves, Sound Optimized Mode SO1

| Sound Power Level at Hub Height | |
|-----------------------------------|--|
| Conditions for Sound Power Level: | Measurement standard IEC 61400-11 ed. 3 Maximum turbulence at hub height: 30% Inflow angle (vertical): 0 ±2° Air density: 1.225 kg/m ³ |
| Wind speed at hub height [m/s] | Sound Power Level at Hub Height [dBA] Sound Optimized Mode SO1 (Blades with serrated trailing edge) |
| 3 | 90.9 |
| 4 | 91.1 |
| 5 | 92.9 |
| 6 | 96.0 |
| 7 | 99.5 |
| 8 | 101.6 |
| 9 | 101.9 |
| 10 | 101.8 |
| 11 | 102.0 |
| 12 | 102.0 |
| 13 | 102.0 |
| 14 | 102.0 |
| 15 | 102.0 |
| 16 | 102.0 |
| 17 | 102.0 |
| 18 | 102.0 |
| 19 | 102.0 |
| 20 | 102.0 |

Table 10-3: Sound curves, Sound Optimized Mode SO1

Original Instruction: T05 0067-7065 VER 05

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12.3 Sound Curves, Sound Optimized Mode SO2

| Sound Power Level at Hub Height | |
|-----------------------------------|--|
| Conditions for Sound Power Level: | Measurement standard IEC 61400-11 ed. 3 Maximum turbulence at hub height: 30% Inflow angle (vertical): 0 ±2° Air density: 1.225 kg/m ³ |
| Wind speed at hub height [m/s] | Sound Power Level at Hub Height [dBA] Sound Optimized Mode SO2 (Blades with serrated trailing edge) |
| 3 | 90.9 |
| 4 | 91.1 |
| 5 | 92.9 |
| 6 | 96.0 |
| 7 | 99.0 |
| 8 | 99.4 |
| 9 | 99.4 |
| 10 | 99.5 |
| 11 | 99.5 |
| 12 | 99.5 |
| 13 | 99.5 |
| 14 | 99.5 |
| 15 | 99.5 |
| 16 | 99.5 |
| 17 | 99.5 |
| 18 | 99.5 |
| 19 | 99.5 |
| 20 | 99.5 |

Table 12-3: Sound curves, Sound Optimized Mode SO2

Original Instruction: T05 0067-7065 VER 05

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14.3 Sound Curves, Sound Optimized Mode SO11

| Sound Power Level at Hub Height | |
|-----------------------------------|--|
| Conditions for Sound Power Level: | Measurement standard IEC 61400-11 ed. 3 Maximum turbulence at hub height: 30% Inflow angle (vertical): 0 ±2° Air density: 1.225 kg/m ³ |
| Wind speed at hub height [m/s] | Sound Power Level at Hub Height [dBA] Sound Optimized Mode SO11 (Blades with serrated trailing edge) |
| 3 | 90.9 |
| 4 | 91.1 |
| 5 | 92.9 |
| 6 | 94.5 |
| 7 | 95.6 |
| 8 | 96.9 |
| 9 | 98.0 |
| 10 | 98.8 |
| 11 | 99.1 |
| 12 | 99.2 |
| 13 | 99.2 |
| 14 | 99.2 |
| 15 | 99.2 |
| 16 | 99.2 |
| 17 | 99.2 |
| 18 | 99.2 |
| 19 | 99.2 |
| 20 | 99.2 |

Table 14-3: Sound curves, Sound Optimized Mode SO11

Original Instruction: T05 0067-7065 VER 05

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16.3 Sound Curves, Sound Optimized Mode SO12

| Sound Power Level at Hub Height | |
|-----------------------------------|--|
| Conditions for Sound Power Level: | Measurement standard IEC 61400-11 ed. 3 Maximum turbulence at hub height: 30% Inflow angle (vertical): 0 ±2° Air density: 1.225 kg/m ³ |
| Wind speed at hub height [m/s] | Sound Power Level at Hub Height [dBA] Sound Optimized Mode SO12 (Blades with serrated trailing edge) |
| 3 | 90.9 |
| 4 | 91.1 |
| 5 | 92.9 |
| 6 | 95.0 |
| 7 | 97.1 |
| 8 | 98.8 |
| 9 | 99.7 |
| 10 | 99.9 |
| 11 | 99.9 |
| 12 | 99.9 |
| 13 | 99.9 |
| 14 | 99.9 |
| 15 | 99.9 |
| 16 | 99.9 |
| 17 | 99.9 |
| 18 | 99.9 |
| 19 | 99.9 |
| 20 | 99.9 |

Table 16-3: Sound curves, Sound Optimized Mode SO12

Original Instruction: T05 0067-7065 VER 05

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18.3 Sound Curves, Sound Optimized Mode SO13

| Sound Power Level at Hub Height | |
|-----------------------------------|--|
| Conditions for Sound Power Level: | Measurement standard IEC 61400-11 ed. 3 Maximum turbulence at hub height: 30% Inflow angle (vertical): 0 ±2° Air density: 1.225 kg/m ³ |
| Wind speed at hub height [m/s] | Sound Power Level at Hub Height [dBA] Sound Optimized Mode SO13 (Blades with serrated trailing edge) |
| 3 | 90.9 |
| 4 | 91.0 |
| 5 | 91.4 |
| 6 | 92.4 |
| 7 | 93.1 |
| 8 | 94.3 |
| 9 | 95.8 |
| 10 | 96.5 |
| 11 | 96.9 |
| 12 | 97.0 |
| 13 | 97.0 |
| 14 | 97.0 |
| 15 | 97.0 |
| 16 | 97.0 |
| 17 | 97.0 |
| 18 | 97.0 |
| 19 | 97.0 |
| 20 | 97.0 |

Table 18-3: Sound curves, Sound Optimized Mode SO13

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