

Project:

FW_Wloszakowice

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Calculated:

2013-07-22 10:33/2.9.207



DECIBEL - Main Result

Calculation: Analiza akustyczna FW Wloszakowice (grunt niezmrożony)

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

General, Ground factor: 0,9

Meteorological coefficient, C0:

0,0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

Pure and Impulse tone penalty are added to WTG source noise

Height above ground level, when no value in NSA object:

4,0 m Allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0,0 dB(A)

WTGs

Poland CS 92					WTG type				Noise data						
	East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones
1	321 031	458 965	104,0	EW_1	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
2	320 998	458 639	103,4	EW_2	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
3	320 968	458 321	100,0	EW_3	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
4	320 922	457 946	97,9	EW_4	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
5	320 898	457 626	92,6	EW_5	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
6	320 681	455 457	100,0	EW_6	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
7	320 688	455 168	102,0	EW_7	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
8	322 561	458 359	103,0	EW_8	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
9	322 566	458 031	99,2	WE_9	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
10	322 583	457 765	98,5	EW_10	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
11	322 573	457 457	98,0	EW_11	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
12	322 369	455 127	110,0	EW_12	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
13	322 332	454 809	110,0	EW_13	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
14	323 450	456 611	108,5	EW_14	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h
15	323 741	456 280	112,6	EW_15	Yes	ansee	Wloszakowice-2 000	2 000	120,0	80,0	USER	Level 0	10,0	105,5	0 dB h

h) Generic octave distribution used

Calculation Results

Sound Level

Noise sensitive area		Poland CS 92			Demands		Sound Level		Demands fulfilled ?	
No.	Name	East	North	Z	Imission height	Noise	From WTGs	Distance to noise demand	Noise	
				[m]	[m]	[dB(A)]	[dB(A)]	[m]		
A	Bukowiec Gorny	320 956	456 627	95,6	4,0	45,0	37,4	704	Yes	
B	Bukowiec Gorny	321 137	456 767	97,9	4,0	45,0	37,9	594	Yes	
C	Bukowiec Gorny	321 382	456 739	99,1	4,0	45,0	37,7	709	Yes	
D	Bukowiec Gorny	321 581	456 751	99,5	4,0	45,0	37,8	805	Yes	
E	Bukowiec Gorny	321 795	456 889	100,5	4,0	45,0	38,5	645	Yes	
F	Bukowiec Gorny	322 039	456 975	100,6	4,0	45,0	39,7	404	Yes	
G	Bukowiec Gorny	322 088	456 749	100,0	4,0	45,0	38,6	548	Yes	
H	Bukowiec Gorny	322 189	456 627	101,1	4,0	45,0	38,3	606	Yes	
I	Bukowiec Gorny	322 364	456 391	102,4	4,0	45,0	38,0	779	Yes	
J	Bukowiec Gorny	322 541	456 115	106,6	4,0	45,0	38,1	719	Yes	
K	Bukowiec Gorny	322 811	455 979	109,2	4,0	45,0	38,6	597	Yes	
L	Bukowiec Gorny	322 925	455 915	112,7	4,0	45,0	38,8	560	Yes	
M	Bukowiec Gorny	323 225	455 861	114,8	4,0	45,0	39,6	369	Yes	
N	Bukowiec Gorny	322 929	455 632	114,9	4,0	45,0	38,8	468	Yes	
O	Bukowiec Gorny	323 006	455 371	113,6	4,0	45,0	39,0	389	Yes	
P	Bukowiec Gorny	322 999	455 249	115,1	4,0	45,0	39,3	343	Yes	

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DECIBEL - Main Result

Calculation: Analiza akustyczna FW Wloszakowice (grunt niezmrożony)

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Noise sensitive area		Poland CS 92			Imission height [m]	Demands	Sound Level	Distance to noise demand [m]	Demands fulfilled ?
No.	Name	East	North	Z [m]		Noise [dB(A)]	From WTGs [dB(A)]		Noise
	Q Bukowiec Gorny	322 786	455 745	111,0	4,0	45,0	38,8	461	Yes
	R Bukowiec Gorny	322 468	455 938	108,2	4,0	45,0	38,3	533	Yes
	S Bukowiec Gorny	322 313	456 178	104,5	4,0	45,0	37,7	769	Yes
	T Bukowiec Gorny	322 042	456 321	101,9	4,0	45,0	37,3	946	Yes
	U Bukowiec Gorny	321 818	456 469	102,0	4,0	45,0	37,2	932	Yes
	V Bukowiec Gorny	321 523	456 436	101,7	4,0	45,0	37,0	1 003	Yes
	W Bukowiec Gorny	321 293	456 413	101,0	4,0	45,0	37,1	849	Yes
	X Bukowiec Gorny	321 054	456 413	96,3	4,0	45,0	37,2	741	Yes
	Y Bukowiec Gorny	320 903	456 321	95,9	4,0	45,0	37,4	608	Yes
	Z Bukowiec Gorny	320 643	456 270	93,4	4,0	45,0	37,5	530	Yes
	AA Bukowiec Gorny	320 468	456 218	93,6	4,0	45,0	37,4	507	Yes
	AB Bukowiec Gorny	320 295	455 999	95,4	4,0	45,0	38,4	382	Yes
	AC Bukowiec Gorny	321 268	456 816	97,9	4,0	45,0	38,1	591	Yes
	AD Sadzia	323 326	454 414	112,0	4,0	45,0	34,6	772	Yes
	AE Sadzia	323 386	454 251	110,0	4,0	45,0	33,5	899	Yes
	AF Sadzia Cegielnia	322 063	453 988	112,5	4,0	45,0	35,7	585	Yes
	AG Janowko	323 191	457 553	103,8	4,0	45,0	41,8	234	Yes
	AH Janowko	323 170	457 480	104,0	4,0	45,0	41,9	226	Yes
	AI Machcin	323 721	458 036	104,4	4,0	45,0	36,8	749	Yes
	AJ Machcin	323 847	458 183	105,0	4,0	45,0	35,7	890	Yes
	AK Machcin	323 585	458 207	104,9	4,0	45,0	37,5	634	Yes
	AL Machcin	323 567	458 255	104,3	4,0	45,0	37,5	625	Yes
	AM Bukowiec Gorny	322 022	458 531	105,4	4,0	45,0	42,0	234	Yes
	AN Kierzki	321 953	459 371	102,0	4,0	45,0	37,3	698	Yes
	AO Skarzyn	322 406	459 515	106,4	4,0	45,0	35,5	868	Yes
	AP Dluzyna	320 506	459 433	97,0	4,0	45,0	38,4	403	Yes
	AQ Dluzyna	320 174	459 406	91,2	4,0	45,0	36,2	653	Yes
	AR Dluzyna	320 090	458 560	98,0	4,0	45,0	38,7	506	Yes
	AS Dluzyna	319 938	458 680	97,3	4,0	45,0	37,1	671	Yes
	AT Dluzyna	320 028	458 371	97,5	4,0	45,0	38,4	550	Yes
	AU Dluzyna	320 139	458 237	98,0	4,0	45,0	39,5	431	Yes
	AV Dluzyna	320 002	458 095	97,0	4,0	45,0	38,2	554	Yes
	AW Dluzyna	319 999	457 849	97,8	4,0	45,0	38,0	549	Yes
	AX Wloszakowice	319 731	455 901	88,5	4,0	40,0	34,8	501	Yes
	AY Wloszakowice	319 710	455 847	89,3	4,0	45,0	34,8	751	Yes
	AZ Wloszakowice	319 518	455 799	92,5	4,0	40,0	33,5	656	Yes
	BA Wloszakowice	320 022	455 660	101,0	4,0	45,0	38,2	391	Yes
	BB Wloszakowice	319 869	455 570	102,3	4,0	45,0	36,8	514	Yes
	BC Wloszakowice	319 677	455 488	98,8	4,0	45,0	35,1	690	Yes
	BD Wloszakowice	319 518	455 287	93,6	4,0	40,0	33,8	576	Yes
	BE Wloszakowice	319 645	454 893	90,3	4,0	40,0	34,1	522	Yes
	BF Wloszakowice	320 440	454 278	98,8	4,0	40,0	35,1	406	Yes

Distances (m)

WTG																
NSA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
A	2339	2013	1694	1320	1001	1202	1483	2361	2136	1986	1818	2061	2280	2494	2807	
B	2201	1877	1563	1199	892	1387	1661	2136	1908	1757	1593	2051	2294	2318	2649	
C	2254	1939	1635	1292	1011	1461	1717	2004	1753	1580	1391	1890	2151	2072	2403	
D	2281	1976	1686	1365	1110	1576	1818	1883	1615	1426	1218	1805	2082	1874	2211	
E	2212	1923	1654	1371	1161	1814	2046	1658	1378	1178	963	1853	2148	1678	2039	
F	2231	1963	1720	1480	1314	2037	2256	1479	1180	959	719	1877	2186	1457	1838	
G	2455	2182	1930	1671	1478	1910	2112	1678	1368	1130	858	1646	1955	1369	1718	
H	2609	2338	2088	1829	1632	1909	2093	1772	1454	1204	915	1511	1824	1261	1590	
I	2899	2631	2382	2121	1917	1925	2075	1978	1653	1391	1086	1264	1582	1108	1382	
J	3225	2958	2710	2444	2232	1973	2081	2244	1916	1651	1342	1003	1323	1036	1211	
K	3476	3219	2980	2727	2524	2193	2273	2393	2067	1801	1497	960	1264	899	978	
L	3590	3337	3102	2853	2653	2290	2358	2471	2146	1881	1582	964	1255	872	894	
M	3801	3561	3339	3107	2921	2576	2630	2585	2268	2009	1724	1128	1380	783	665	

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DECIBEL - Main Result**Calculation:** Analiza akustyczna FW Wloszakowice (grunt niezmrożony)

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WTG															
NSA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
N	3836	3574	3328	3063	2846	2255	2289	2752	2426	2161	1860	754	1017	1109	1039
O	4101	3836	3586	3313	3087	2327	2327	3021	2696	2431	2131	682	878	1317	1169
P	4205	3937	3683	3404	3173	2327	2312	3141	2816	2550	2249	642	799	1435	1270
Q	3667	3402	3153	2884	2665	2125	2176	2624	2297	2030	1725	746	1040	1091	1095
R	3351	3075	2816	2534	2305	1851	1939	2423	2095	1831	1523	817	1137	1191	1318
S	3068	2790	2530	2250	2025	1784	1913	2195	1870	1610	1305	1052	1369	1217	1432
T	2831	2542	2270	1974	1736	1612	1778	2103	1789	1542	1254	1238	1540	1438	1700
U	2617	2320	2038	1728	1478	1522	1723	2031	1732	1505	1244	1451	1738	1638	1932
V	2577	2265	1965	1625	1344	1291	1518	2185	1906	1700	1465	1559	1817	1935	2224
W	2566	2246	1936	1577	1276	1135	1384	2323	2059	1869	1652	1677	1911	2166	2452
X	2552	2227	1910	1539	1223	1026	1298	2461	2215	2041	1843	1839	2051	2404	2690
Y	2647	2320	2001	1625	1305	892	1173	2627	2385	2215	2020	1891	2080	2564	2838
Z	2723	2396	2077	1699	1380	814	1103	2836	2608	2449	2266	2070	2233	2828	3098
AA	2804	2478	2162	1787	1472	790	1073	2994	2773	2620	2443	2192	2337	3008	3274
AB	3056	2732	2418	2046	1735	665	919	3272	3047	2890	2705	2250	2359	3214	3458
AC	2162	1843	1535	1182	891	1480	1747	2013	1778	1622	1454	2016	2272	2192	2530
AD	5097	4824	4564	4273	4027	2843	2744	4019	3696	3433	3135	1193	1070	2201	1912
AE	5270	4996	4734	4441	4193	2962	2850	4190	3868	3605	3308	1342	1193	2361	2060
AF	5083	4772	4469	4119	3820	2017	1812	4399	4074	3813	3506	1179	864	2967	2841
AG	2581	2447	2352	2303	2294	3270	3457	1023	787	644	625	2562	2875	977	1387
AH	2604	2462	2357	2295	2276	3207	3392	1069	817	652	597	2486	2799	913	1329
AI	2846	2789	2768	2801	2853	3987	4174	1204	1155	1170	1286	3208	3513	1451	1756
AJ	2923	2885	2882	2935	3001	4178	4367	1298	1290	1331	1466	3395	3699	1621	1906
AK	2664	2623	2620	2676	2749	4000	4199	1035	1034	1095	1260	3311	3622	1602	1933
AL	2634	2598	2600	2663	2742	4020	4221	1011	1026	1099	1275	3350	3661	1648	1983
AM	1082	1030	1075	1246	1443	3354	3618	566	739	949	1207	3422	3735	2393	2832
AN	1007	1203	1440	1759	2039	4116	4389	1181	1474	1725	2012	4264	4578	3140	3571
AO	1481	1658	1869	2160	2417	4409	4674	1166	1493	1759	2065	4388	4707	3086	3500
AP	703	934	1204	1544	1849	3980	4269	2319	2492	2664	2860	4692	4972	4078	4517
AQ	964	1126	1344	1640	1922	3981	4269	2607	2759	2915	3091	4809	5078	4306	4743
AR	1025	912	910	1034	1235	3159	3444	2480	2532	2617	2717	4121	4370	3885	4305
AS	1130	1061	1091	1228	1426	3308	3591	2643	2707	2799	2905	4305	4552	4076	4497
AT	1166	1006	941	990	1145	2986	3270	2533	2561	2626	2704	4001	4242	3848	4261
AU	1151	948	833	835	974	2832	3118	2425	2436	2489	2556	3827	4070	3689	4099
AV	1348	1135	992	932	1011	2724	3006	2573	2565	2602	2649	3796	4028	3754	4156
AW	1520	1274	1078	928	926	2487	2768	2612	2574	2585	2604	3609	3832	3666	4058
AX	3328	3017	2718	2367	2083	1049	1205	3749	3546	3407	3240	2749	2821	3786	4028
AY	3386	3075	2776	2424	2139	1046	1191	3800	3595	3455	3285	2755	2820	3817	4054
AZ	3509	3203	2909	2565	2290	1212	1329	3977	3778	3641	3476	2929	2983	4015	4250
BA	3456	3135	2824	2457	2152	690	828	3706	3478	3315	3121	2407	2462	3558	3770
BB	3588	3270	2963	2599	2299	820	912	3876	3651	3491	3297	2539	2578	3729	3937
BC	3731	3417	3113	2755	2462	1004	1060	4070	3849	3692	3502	2716	2741	3937	4141
BD	3977	3664	3363	3007	2716	1175	1176	4324	4101	3942	3747	2856	2854	4149	4338
BE	4302	3983	3675	3309	3007	1180	1079	4530	4287	4109	3892	2734	2688	4175	4325
BF	4724	4397	4078	3700	3379	1204	924	4600	4314	4093	3829	2108	1966	3809	3861