



**ESTIMATION OF NOISE IMMISSION LEVELS OF THE DIESEL POWER PLANT**

**Design of Diesel power plant:**

Standard design with el. annex at the long side of power house

No. of engines:	4	
Center of coordinate system (X=0, Y=0):	wall of mech. annex and centerline of DG set no	2
Type of engines: (32/40 or 48/60)	48/60	
No. of Cylinders:	12	
Frequency of el. system:	60 Hz	
No. of separate power houses of DPP	1	
No. of loading bays in power house:	1	
Height of exhaust gas stacks:	32 m	Exhaust gas system insulated? <b>Yes</b>
Type of cooling:	4 (1=Radiator, 2=Cool. tower, 3=combined rad./cool.tow., 4=sea-/river water)	
No. of step-up / station transformers	2	2

**Design of acoustic measures and acoustic data of components:**

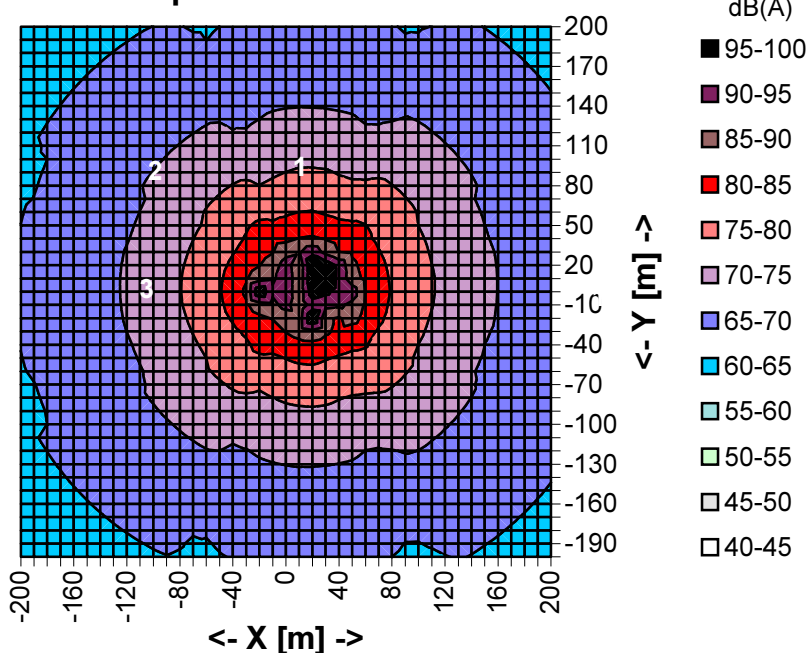
Combustion air inlet silencer:	30 dB(A)	(Standard 30, 40 or 50)
Exhaust gas silencer:	25 dB(A)	(Standard 25, 35 or 45)
Sound press. lev. of p.h. ventilation inlet:	80 dB(A) in 1m dist.	(Standard 80)
Silencer of power hs. vent. inlet: (5+)	0 dB(A)	(Standard 0)
Silencer of power hs. vent. outlet: (5+)	5 dB(A) (in p.h. roof)	(Standard 0, max. possible 30)
Attenuating capacity of walls:	15 dB(A)	(Standard 30, max. possible 50)
Attenuating capacity of doors:	20 dB(A)	(Standard 15, max. possible 30)
Attenuating capacity of roofs:	15 dB(A)	(Standard 20, max. possible 40)
Sound press. lev. of radiator coolers:	0 dB(A) in 1m dist.	(Standard 85, min. possible 65)
Sound press. lev. of step-up transformer:	85 dB(A) in 1m dist.	(Standard 90, min. possible 65)
Sound press. lev. of station transformer:	60 dB(A) in 1m dist.	(Standard 60, min. possible 45)

**Standards and conditions:**

Noise immission levels shown in noise map to be calculated acc. VDI 2714 and ISO 9613-2  
 Free field conditions, not considering reflections, ambient/external noises, meteorological influences, etc.  
 Measurements to be done acc. DIN 45635 and related parts  
 Preliminary estimations, not binding, Tolerances approx. +/- 3 dB

<b>Square of noise map:</b>
X / Y = +/- <b>200</b> m

**Noise Map Sound Pressure Levels**



<b>Sound pressure levels at defined immission points:</b>		
No.	Coordinates: (m)	Sound press. Lp (dB(A))
1	X1 = 0 Y1 = 100	Lp1 = <b>73,7</b>
2	X2 = -107 Y2 = 100	Lp2 = <b>69,2</b>
3	X3 = -107 Y3 = 0	Lp3 = <b>71,6</b>
	-100 100	
	-100 0	
	-100 -100	
	0 -100	
	100 -100	