

Enviro Mentor



Measurement of
low frequency
electric and magnetic fields

T2Blue-10 and T2Blue-20

2005-11-19

TU11414

Client

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Measurement by:



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Introduction

EnviroMentors assignment was to measure low frequency magnetic and electric fields from two heating cables; T2Blue-10 and T2Blue-20.

Instruments

Low frequency magnetic fields (5 Hz-2000 Hz)
EnviroMentor BMM-3000 s# 45 Calibrated 2005-04-21

Low frequency electric fields (5 Hz-2000 Hz)
EnviroMentor EMM-4 s# 4027 Calibrated 2005-04-18

Measurement

The heating cable was connected to 230 V. Measurements in four positions and three heights above floor, figure 1 shows the positions. The measurement results is presented in table 1 and 2.

Table 1 Measurement of heating cable T2Blue-10.

T2Blue-10	Measurement results				Background field	
	B [nT]	B [nT]	B [nT]	E [V/m]	B [nT]	E [V/m]
Position	0.10 m	0.40 m	0.65 m	0.40 m	0.40 m	0.40 m
1	53	48	47	0.7	45	0.5
2	59	52	50	0.6	49	0.5
3	60	55	54	0.6	49	0.6
4	57	56	56	0.7	48	0.7

Table 2 Measurement of heating cable T2Blue-20.

T2Blue-20	Measurement results				Background field	
	B [nT]	B [nT]	B [nT]	E [V/m]	B [nT]	E [V/m]
Position	0.10 m	0.40 m	0.65 m	0.40 m	0.40 m	0.40 m
1	75	55	53	0.7	49	0.6
2	89	59	59	0.6	53	0.6
3	84	62	58	0.7	55	0.6
4	80	59	55	0.7	51	0.7

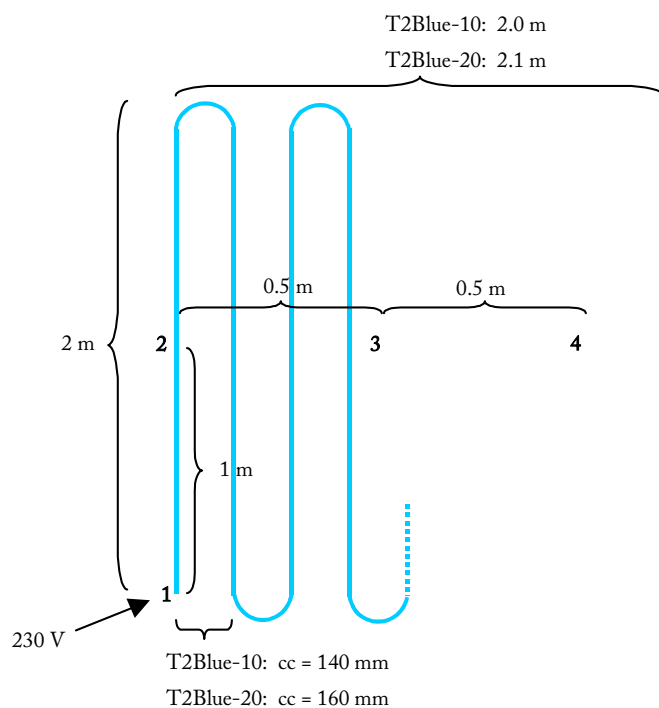


Figure 1 Four measurement positions.