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Annexure II
A Letter from TRC



ශ්‍රී ලංකා විදුලි සංදේශ නියාමන කොමිෂන් සභාව
 இலங்கை தொலைத்தொடர்புகள் ஒழுங்காற்றும் ஆணைக்குழு
 Telecommunications Regulatory Commission of Sri Lanka

376, පැරණිවිල පාර, කොළඹ 08. 376, පැරණිවිල පාර, කොළඹ 08. 376, Stringala (Mawatha), Colombo 08.

අංකය Reference Telephone	අංකය Ref Tel	අංකය Ref Tel
TRC/NW/ESK/11/01	TRC/NW/ESK/11/01	TRC/NW/ESK/11/01
දිනය Date	දිනය Date	දිනය Date
		24.05.2011

Mr. D. Palitha Herath
 Regional Manager-Network Operations
 Etisalat Lanka (Pvt) Ltd
 3rd Floor, Mukthar Plaza
 78, Grandpass Road
 Colombo 14

Dear Sir,

Katubemma – Kotte (Etisalat RBS Site)



University of Moratuwa, Sri Lanka.
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Please take early action to attend to the following issues to minimize the neighborhood resident concerns:

- (a) Replace the existing generator with a sound proof generator.
- (b) Install surge diverters and other necessary preventive measures to avoid complaints.

Please treat this very much urgent and essential.

Yours faithfully

TELECOMMUNICATIONS REGULATORY COMMISSION OF SRI LANKA



W. D. De Alwis
 Deputy Director - Networks

Annexure III

Material, configuration and minimum cross-sectional area of air-termination conductor, air-termination rods and down-conductor

Material	Configuration	Minimum cross-sectional area mm ²	Comments ¹⁰⁾
Copper	Solid tape	50 ⁸⁾	2 mm min. thickness
	Solid round ⁷⁾	50 ⁸⁾	8 mm diameter
	Stranded	50 ⁸⁾	1,7 mm min. diameter of each strand
	Solid round ^{3), 4)}	200 ⁸⁾	16 mm diameter
Tin plated copper ¹⁾	Solid tape	50 ⁸⁾	2 mm min. thickness
	Solid round ⁷⁾	50 ⁸⁾	8 mm diameter
	Stranded	50 ⁸⁾	1,7 mm min. diameter of each strand
Aluminium	Solid tape	70	3 mm min. thickness
	Solid round	50 ⁸⁾	8 mm diameter
	Stranded	50 ⁸⁾	1,7 mm min. diameter of each strand
Aluminium alloy	Solid tape	50 ⁸⁾	2,5 mm min. thickness
	Solid round	50	8 mm diameter
	Stranded	50 ⁸⁾	1,7 mm min. diameter of each strand
	Solid round ³⁾	200 ⁸⁾	16 mm diameter
Hot dipped galvanized steel ²⁾	Solid tape	50 ⁸⁾	2,5 mm min. thickness
	Solid round ⁹⁾	50	8 mm diameter
	Stranded	50 ⁸⁾	1,7 mm min. diameter of each strand
	Solid round ^{3), 4)}	200 ⁸⁾	16 mm diameter
Stainless steel ⁵⁾	Solid tape ⁶⁾	50 ⁸⁾	2 mm min. thickness
	Solid round ⁶⁾	50	8 mm diameter
	Stranded	70 ⁸⁾	1,7 mm min. diameter of each strand
	Solid round ^{3), 4)}	200 ⁸⁾	16 mm diameter

1) Hot dipped or electroplated minimum thickness coating of 1 µm.

2) The coating should be smooth, continuous and free from flux stains with a minimum thickness coating of 50 µm.

3) Applicable for air-termination rods only. For applications where mechanical stress such as wind loading is not critical, a 10 mm diameter, 1 m long maximum air-termination rod with an additional fixing may be used.

4) Applicable to earth lead-in rods only.

5) Chromium ≥ 16 %, nickel ≥ 8 %, carbon ≤ 0,07 %.

6) For stainless steel embedded in concrete, and/or in direct contact with flammable material, the minimum sizes should be increased to 78 mm² (10 mm diameter) for solid round and 75 mm² (3 mm minimum thickness) for solid tape.

7) 50 mm² (8 mm diameter) may be reduced to 28 mm² (6 mm diameter) in certain applications where mechanical strength is not an essential requirement. Consideration should, in this case, be given to reducing the spacing of the fasteners.

8) If thermal and mechanical considerations are important, these dimensions can be increased to 60 mm² for solid tape and to 78 mm² for solid round.

9) The minimum cross-section to avoid melting is 16 mm² (copper), 25 mm² (aluminium), 50 mm² (steel) and 50 mm² (stainless steel) for a specific energy of 10 000 kJ/Ω. For further information see Annex E.

10) Thickness, width and diameter are defined at ±10 %.

Annexure IV

Material, configuration and minimum dimension of each electrodes

Material	Configuration	Minimum dimensions			Comments
		Earth rod Ø mm	Earth conductor	Earth plate mm	
Copper	Stranded ³⁾		50 mm ²		1,7 mm min. diameter of each strand
	Solid round ³⁾		50 mm ²		8 mm diameter
	Solid tape ³⁾		50 mm ²		2 mm min. thickness
	Solid round	15 ⁸⁾			
	Pipe	20			2 mm min. wall thickness
	Solid plate			500 x 500	2 mm min. thickness
	Lattice plate			600 x 600	25 mm x 2 mm section Minimum length of lattice configuration: 4,8 m
Steel	Galvanized solid round ^{1) 2)}	16 ⁹⁾	10 mm diameter		2 mm min. wall thickness
	Galvanized pipe ^{1) 2)}	25			3 mm min. thickness
	Galvanized solid tape ¹⁾		90 mm ²		3 mm min. thickness
	Galvanized solid plate ¹⁾			500 x 500	3 mm min. thickness
	Galvanized lattice plate ¹⁾			600 x 600	30 mm x 3 mm section
	Copper coated solid round ⁴⁾	14			250 µm minimum radial Copper coating 99,9 % copper content
	Bare solid round ⁵⁾		10 mm diameter		
	Bare or galvanized solid tape ^{5) 6)}		75 mm ²		3 mm min. thickness
	Galvanized stranded ^{5) 6)}		70 mm ²		1,7 mm min. diameter of each strand
	Galvanized cross profile ¹⁾	50 x 50 x 3			
Stainless steel ⁷⁾	Solid round	15	10 mm diameter		
	Solid tape		100 mm ²		2 mm min. thick

1) The coating should be smooth, continuous and free from flux stains with a minimum thickness of 50 µm for round and 70 µm for flat material.

2) Threads shall be machined prior to galvanizing.

3) May also be hot-dipped.

4) The copper should be intrinsically bonded to the steel.

5) Only allowed when completely embedded in concrete.

6) Only allowed when correctly connected together at least every 5 m with the natural reinforcement steel of the earth touching part of the foundation.

7) Chromium ≥ 16 %, nickel ≥ 5 %, molybdenum ≥ 2 %, carbon ≤ 0,08 %.

8) In some countries 12 mm is allowed.

9) Earth lead in rods are used in some countries to connect the down-conductor to the point where it enters the ground.