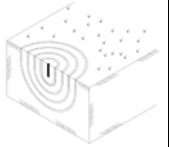




DISTRIBUTION COMMISSIONING TEST SHEET – EARTH TESTING OF ALTERED SYSTEMS
HPC-4DL-07-0037-2017



This commissioning test sheet covers the checking and testing of the earth resistance of altered systems.

NOTE: These tests must be carried out after the alteration of an existing earth system.

SAFETY: At all times maintain suitable clearance to all other electrical equipment, and verify planned escape routes.

DATE:		Project No.		Name of Officer	
Location description:					

1. LINE DETAILS

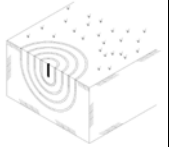
Rated System Voltage	kV	No of stakes	Estimated stake depth	m	Size of earth cables:	mm ²
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2. EARTH STAKE RESISTANCE TEST

Test each earth stake using a stakeless (clamp-on) tester. The earth stake under test (electrode 1) must **remain connected** to the earthing system.

In rural and other areas where an adequate return path for the test current does not exist, two additional test stakes shall be installed, and temporarily connected to the earth system. These additional stakes must be installed at least 10 m from the stake under test, and at least 10 m from each other. The clamp-on method is explained fully in the *Technical Maintenance Guideline for Equipment Earthing*, HPC-2NK-17-0002-2014, CS10# [4064717](#).

Stake designation	Equipment / Pole number	Location description (for equipment only), e.g. SW, NE	Stake designation	Equipment / Pole number	Location description (for equipment only), e.g. SW, NE
A			F		
B			G		
C			H		
D			I		
E			J		



This commissioning test sheet covers the checking and testing of the earth resistance of altered systems.

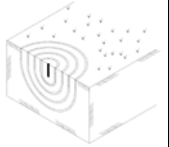
Enter below the previous earth reading (from last maintenance measurement, commissioning, design requirement, or the measurement taken immediately prior to alteration). Where no comparison reading exists, use the legacy reference table provided in section 5.

Stake number:	A	B	C	D	E	F	G	H	I	J
Previous reading	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω
Treat as <i>rural</i> (i.e. inadequate return path for test current)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stake number:	A	B	C	D	E	F	G	H	I	J
If <i>rural</i> , two additional stakes installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Measured resistance	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω
Comparison factor = Measured resistance ÷ Previous reading										
Comparison factor is between 0.8 and 1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>If the above test failed, the resistance of the stake has significantly changed. Install a replacement earth stake</i>										
If <i>rural</i> , remove the two additional stakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuity check: measured resistance between equipment earth bond and earth stake	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω

3. EARTH CONTINUITY TEST

Measured the resistance between the equipment' earth bond and each earth stake.

Stake number:	A	B	C	D	E	F	G	H	I	J
Resistance reading	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω



This commissioning test sheet covers the checking and testing of the earth resistance of altered systems.

4. OPERATIONAL HANDOVER

The commissioning officer must ensure that all checks are completed and the test results comply with the minimum standards.

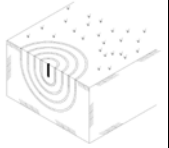
I hereby certify that all sections have been completed with satisfactory results and transfer responsibility to the network operating authority. This equipment is ready to be **SAFELY** energised.

Commissioning Officer: _____ Pay Number: _____

Signature: _____ Date: DD/MM/YY Time: HH:MM

1. Ensure the work area is left tidy with no hazards to the public.
2. Hand over responsibility to the operating authority
3. Return this sheet to the project/working file as a record of commissioning and as a document required for the Handover Certificate.

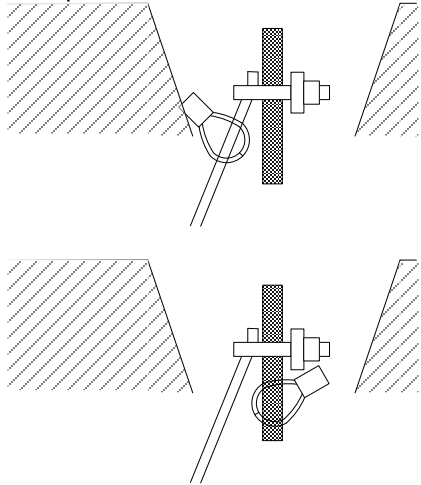
IMPORTANT: PLEASE SEND THIS SHEET TO THE RELEVANT ASSET MANAGER



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5. REFERENCE TABLE

Acceptable connection methods:



Legacy values for resistance to earth

Equipment	Maximum resistance of each stake (Ω)
Ground-mounted equipment	10
Pole-mounted equipment	30
HV-only or HV/LV pole	30
HV-only or HV/LV pole <i>with running earth</i>	30
LV-only pole	30