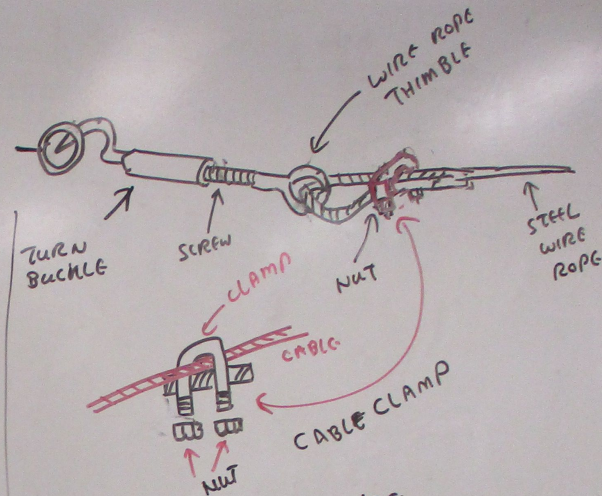
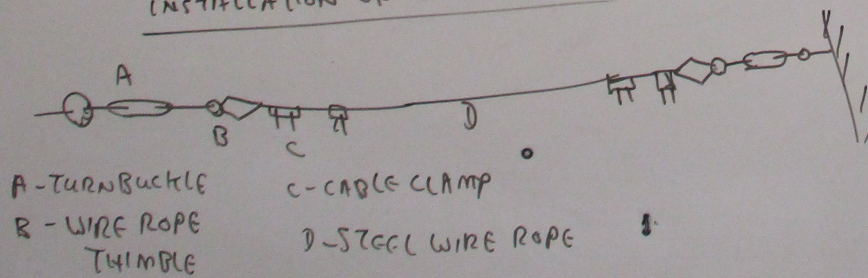
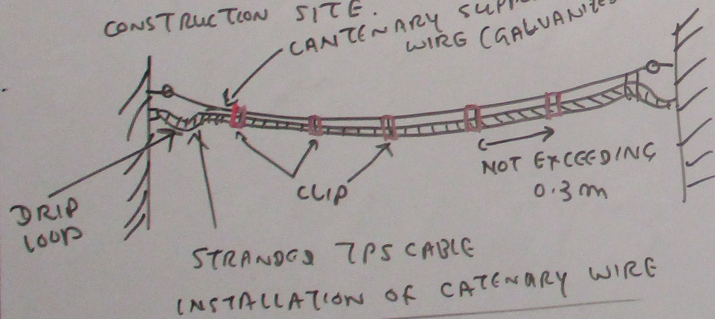


TRAILING CABLE AND CATENARY SYSTEMS

CATENARY SUPPORT SYSTEMS FOR TPS CABLES AND OTHER AERIAL SUPPORT SYSTEMS FIND USE IN A VARIETY OF INSTALLATIONS FROM BUILDING SITES TO SUPERMARKETS AND FACTORIES. THESE SYSTEMS ARE OFTEN USED WHERE CABLES HAVE TO SUPPLY AN AREA THAT IS IN LESS USE BUT STILL MAINTAIN THE HIGH LEVEL OF READINESS. ONE TYPICAL APPLICATION FOR A CATENARY SUPPORT SYSTEM IS FOR THE ELECTRICAL POWER TO THE SITE SHED ON A CONSTRUCTION SITE.



AS 3000 CLAUSE 1.4.129

A CATENARY IS A WIRE USUALLY ATTACHED TO SUPPORT A TPS CABLE.

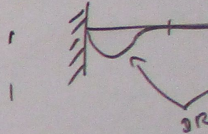
THE TPS CABLE MUST ALSO HAVE 7 STRANDS CONDUCTORS AND BE ATTACHED TO A CATENARY SUPPORT IN A WAY THAT DOES NOT DAMAGE THE THERMO PLASTIC SHEATH.

THE CLIP CAN BE USED WITH A TAPE WRAPPED AROUND THE CATENARY WIRE TO PREVENT CHAFING BETWEEN THE STRANDS OF CATENARY AND THE POWER CABLE SHEATH. THE ATTACHMENT POINT SHOULD BE AROUND 0.3m APART TO AVOID UNDUE SAG.

3.13.1 TYPES OF C

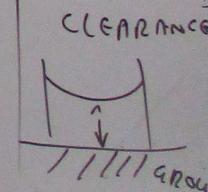
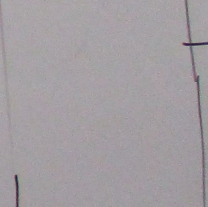
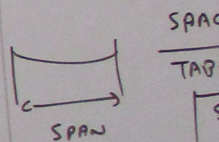
UNIFORM SUPPORT
SUFFICIENT HEIGHT

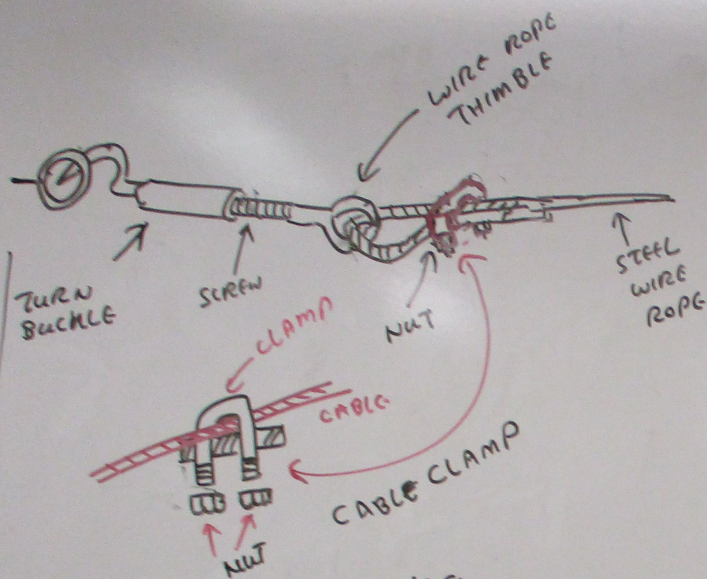
WHEN PLACING THE
SOME SLACK TO
TO PREVENT WATER
ENTERING A BUILDING



PROVIDE EARTHING
TERMINAL STRONG

ALLOWANCE FOR





AS 3000 CLAUSE 1.4.129

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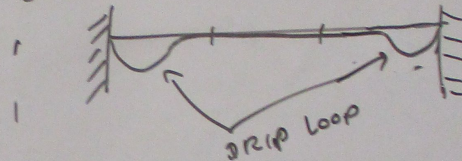
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3.13.1 TYPES OF CABLE

UNIFORM SUPPORT / CORROSION RESISTANT / WITH STAND MECHANICAL STRESS SUFFICIENT HEIGHT ABOVE THE GROUND.

WHEN PLACING THE CABLE ON CATENARY, IT NEEDS TO PROVIDE SOME SLACK TO PREVENT THE STRAIN ON CABLE. TO PREVENT WATER FROM TRAVELLING ALONG THE CABLE AND ENTERING A BUILDING, A DRIP LOOP IS NORMALLY PROVIDED.



PROVIDE EARTHING CONDUCTOR TO CATENARY CABLE

TENSILE STRENGTH → NOT EXCESSIVE THAT CAN BREAK THE CATENARY.

ALLOWANCE FOR WIND AND OTHER EXTRA LOADS.

SPACING BETWEEN AERIAL CONDUCTORS AT SUPPORT

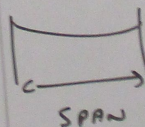
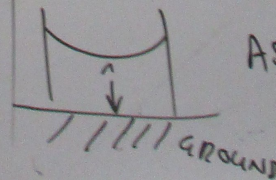


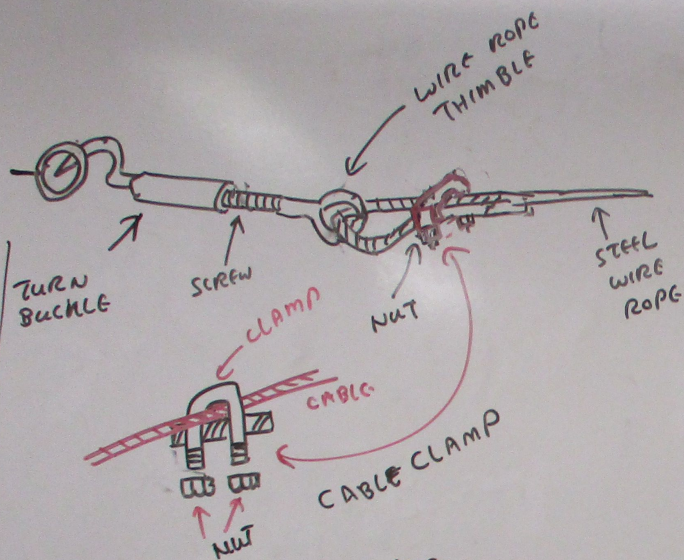
TABLE 3-10

SPAN	SPACING (m)	
	INSULATED CONDUCTOR	BARE CONDUCTOR
<10	0.2	0.4
10→20	0.3	0.5
20→45	0.4	0.6
45→60	0.5	0.7

CLEARANCE BETWEEN GROUND AND CATENARY



AS 3000 TABLE 3.8



AS 3000 CLAUSE 1.4.129

A CATENARY IS A WIRE USUALLY ATTACHED TO SUPPORT A TPS CABLE.

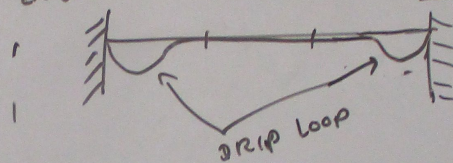
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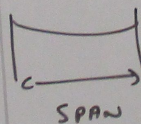
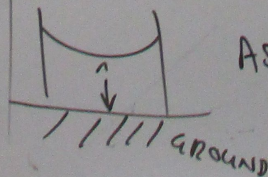


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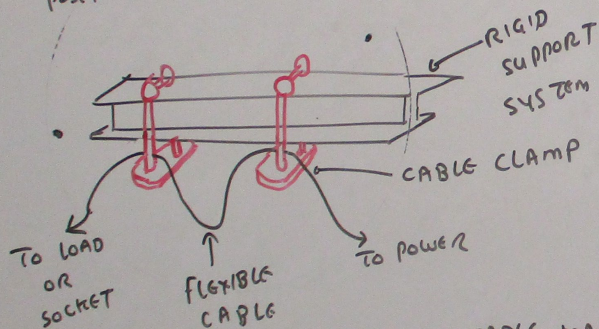


AS 3000 TABLE 3.8

TRAILING CABLES

ONE OF THE MAIN DIFFERENCE BETWEEN A TRAILING CABLE SYSTEM AND A CATENARY SUPPORT SYSTEM IS THE RELATIVE MOVEMENT BETWEEN THE SUPPORTING SYSTEM AND THE ATTACHED CABLE.

THE TRAILING CABLE SYSTEM GENERALLY SUPPORTS ELECTRICAL CABLE AND PROVIDES A METHOD FOR CONTROLLING THE POSITION WHEN THE LOAD IS SUPPLIED.



THE SUPPORT FOR THE POWER CABLE MAY BE A TIGHTLY STRAINED STEEL WIRE, A ROLLED (OR) EXTRUDED SECTION OF STEEL (OR) ALUMINIUM.

THE ATTACHMENTS BETWEEN THE SUPPORT SYSTEM AND POWER CABLE ARE MANUFACTURED TO MEET THE LOAD CAPACITY AND TYPE OF SYSTEM.

INSTALLATION REQUIREMENTS

CLAUSE 3.13

CLAUSE 3.13.3 AND TABLE 3.8

CLAUSE 1.4.20, 3.9.7.4

CLAUSE 3.7.2.8

CLAUSE 4.4.4.4 (AS 3000)

SAFETY TESTING

EARTH RESISTANCE IS SAFE AND SUFFICIENTLY LOW (CLAUSE 8.3.5)

INSULATION RESISTANCE IS SAFE AND SUFFICIENTLY HIGH (8.3.6)

CORRECT POLARITY (8.3.7)

NO TRANSPOSITION OF EARTH AND NEUTRAL WIRE (8.3.7)

NO SHORT CIRCUIT BETWEEN CONDUCTORS (8.3.8)

NO INTERCONNECTION WITH OTHER CIRCUIT (8.3.8)

VERIFICATION OF EARTH LOOP RESISTANCE (8.3.4)

OPERATIONS OF RCD (8.3.10)

CIRCUIT CONTROL AND PROTECTION DEVICES ON MAIN SWITCHBOARD

ARE CORRECTLY MARKED TO INDICATE

- CORRESPONDING CONDUCTOR FOR

- RELATIONSHIP AND VARIOUS (2.9.5)

ACCESSORIES



CABLE WIRE TENSION

① DEFINING C (AS 3000)

② IS IT N (YES)

③ IS IT A SU

④ IS CA

⑤ W SI

⑥ T

INSTALLATION REQUIREMENTS

CLAUSe 3.13

CLAUSe 3.13.3 AND TABLE 3.8

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HIGH

CORRECT POLARITY (8.3.7)

NO TRANSPOSITION
OF EARTH AND NEUTRAL (8.3.7)
WIRE

NO SHORT CIRCUIT BETWEEN (8.3.8)
CONDUCTORS

NO INTERCONNECTION WITH (8.3.8)
OTHER CIRCUIT

VERIFICATION OF EARTH (8.3.4)
LOOP RESISTANCE

OPERATION OF RCD (8.3.10)

CIRCUIT CONTROL AND PROTECTION
DEVICES ON MAIN SWITCHBOARD

ARE CORRECTLY MARKED TO INDICATE

- CORRESPONDING ACTIVE AND NEUTRAL
CONDUCTOR FOR EACH CIRCUIT
- RELATIONSHIP OF EQUIPMENT
AND VARIOUS PARTS OF INSTALLATION.
(2.9.5)

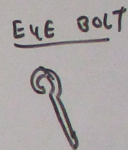
ACCESSORIES FOR CANTENARY INSTALLATION



CANTENARY
WIRE
TENSIONER



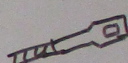
GALVANISED
& SHACKLE



EYE BOLT



VINE EYE



WIRE
HANGER

CANTENARY WIRE GRIP



QUESTIONS AND ANSWERS

① DEFINE CANTENARY SYSTEM
AS 3000 - 1.4.129

② IS IT NECESSARY TO USE GALVANISED BOLTS A CANTENARY WIRING SYSTEM?
YES

③ IS IT PERMISSIBLE TO USE SINGLE POLE SWITCH TO CONTROL
A SUSPENDED SOCKET OUTLET
AS 3000 (4.4.4.4)
NO

④ IS IT PERMISSIBLE TO USE SINGLE INSULATED CABLE ON A
CANTENARY WIRING SYSTEM.
NO (3.13.1)

⑤ WHAT HEIGHT ABOVE THE GROUND IN AN OUTDOOR
SITUATION FREQUENTED BY VEHICLES SHOULD A
CANTENARY WIRING SYSTEM BE INSTALLED?

TABLE 3.8 AS 3000

⑥ TFS CABLE CAN NOT BE USED AS CANTENARY (3.12.1)

INSTALLATION REQUIREMENTS

CLAUSE 3.13

CLAUSE 3.13.3 AND TABLE 3.8

CLAUSE 1.4.20, 3.9.7.4

CLAUSE 3.7.2.8

CLAUSE 4.4.4.4 (AS 3000)

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OPERATION OF RCD (8.3.10)

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ACCESSORIES FOR CANTENARY INSTALLATION



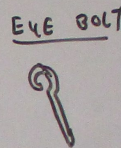
CANTENARY
WIRE
TENSIONER



GALVANISED
D SHACKLE



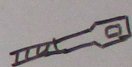
CANTENARY WIRE GRIP



EYE BOLT



VINE EYE



WIRE
HANGER

QUESTIONS AND ANSWERS

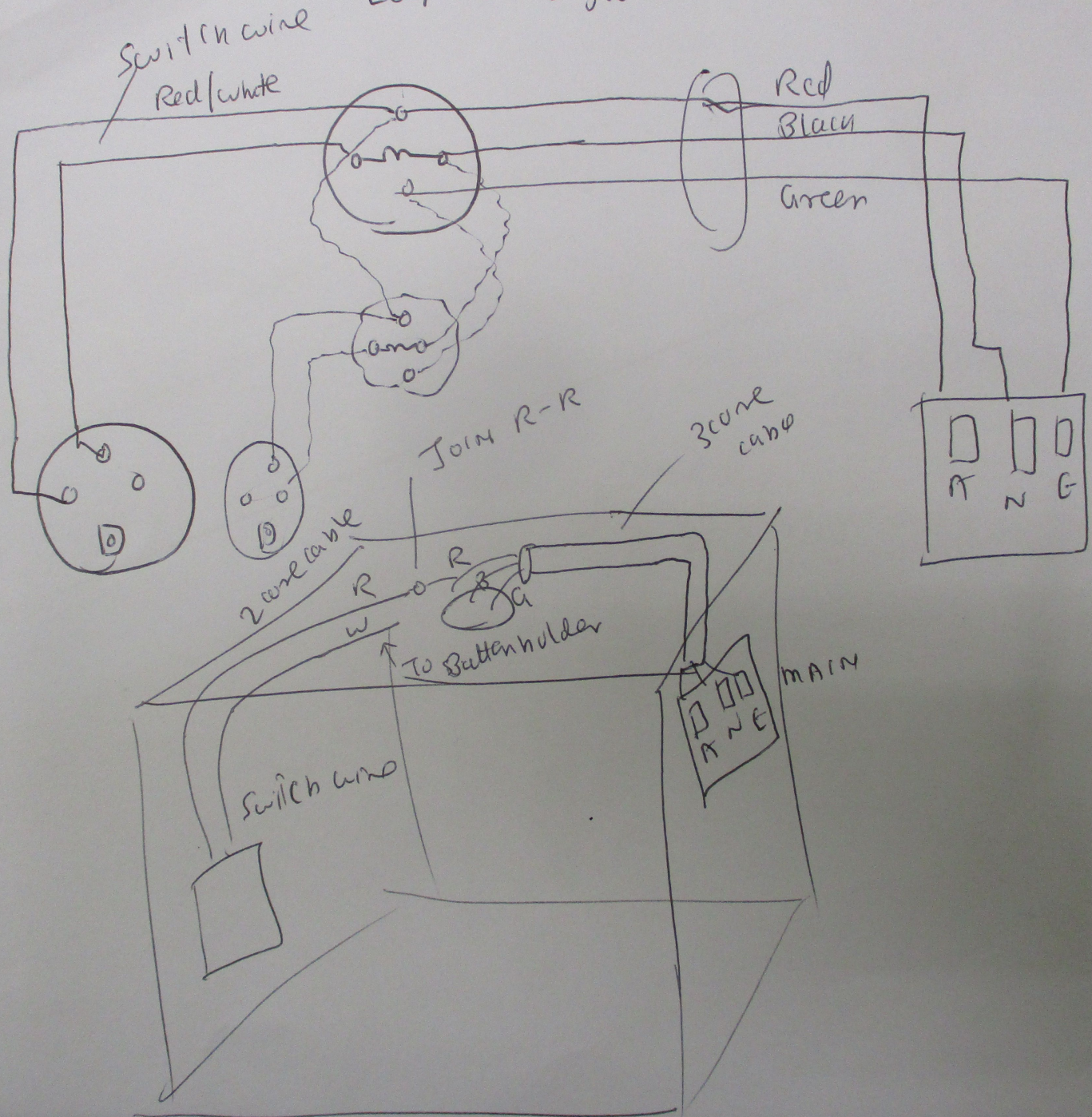
- ① DEFINE CANTENARY SYSTEM
AS 3000 - 1.4.12.9
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A SUSPENDED SOCKET OUTLET
AS 3000 (4.4.4.4)
NO
- ④ IS IT PERMISSIBLE TO USE SINGLE INSULATED CABLE ON A
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NO (3.13.1)
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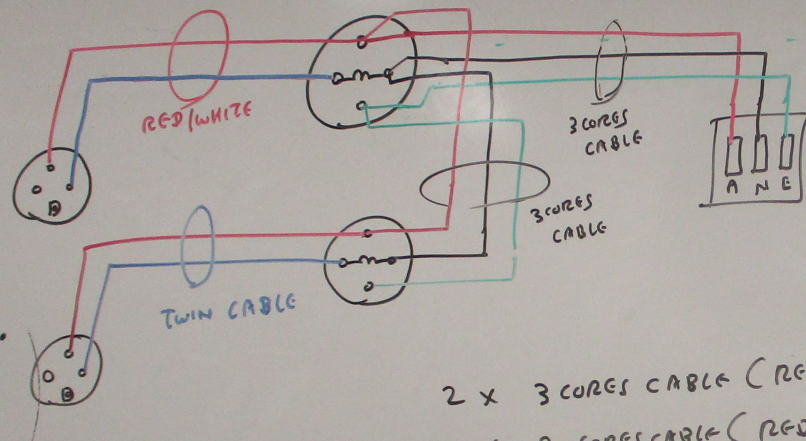
TABLE 3.8 AS 3000

- ⑤ TPE CABLE CAN NOT BE USED AS CANTENARY (3.12.1)

mes Gendie
 11 envellup
 Sam

Loop at Light





- 2 x 3 CORES CABLE (RED/BLACK/GREEN)
- 2 x 2 CORES CABLE (RED/WHITE)
- 2 x BATTERY HOLDER
- 2 x GEAR SWITCH
- ELECTRICIAN TOOL

Loop AT LIGHT

