

SPECIFICATION NO. CBLCT- 3.4
(Revised April 2005)

CABLE COVER TILE

1. Scope

This specification details the requirement of cable cover tiles for the protection of underground electric power cables.

2. Standard Specifications

Except where modified by this specification, the cable cover tiles shall be tested in accordance with the following :

BS 2782	:	Methods of testing plastics.
" Part 3	:	Mechanical properties
Methods	:	320A to 320F
		Tensile strength and elongation and elastic modulus.

If any other standards are proposed by the tenderer, English version of these standards shall be submitted for the approval of FEWA.

3. Site Operating Conditions

All apparatus and materials to be supplied must be suitable for operation in the following site condition.

Altitude	:	Sea level
Maximum ambient temperature	:	50 degree C.
Maximum Humidity	:	100 %
Ground Temperature	:	40 degree C.

4. Design Criteria

The Tenderer shall specify when tendering, the standards with which his offer complies.

All items to be supplied must be designed to operate/function satisfactorily under the site operating conditions indicated as above.

All materials used shall be of the best quality and of the class most suitable for working under the conditions specified and shall withstand varying temperature and atmospheric conditions arising under working conditions without distortion or deterioration or the setting up of undue stresses in any part, and also without affecting the strength and suitability of the various parts of the work which it may have to perform.

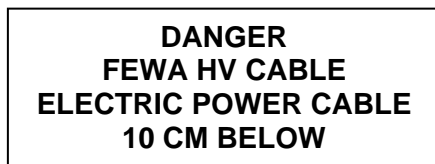
5. Construction

The cable covers should be made from base material i.e. high impact grade PVC or Polyethylene to which are added only those materials which are required to give good finish, strength, durability, colour and capacity. Cable cover tiles should be stiff and have high resistance against impact, corrosion and aggressive agents present in the soil. The dimensions of the cable cover tiles shall be 1000mm/length, 150/200mm width (as per BOQ) and 6mm thickness. Please refer to FEWA Drawing No. FEWA/E/GEN/218/02 Sheet 1 of 3 and 2 of 3, enclosed with this specification.

The cable cover tiles should be capable of being inter- locked to each other length wise by means of a peg, which shall be such as to ensure easy installation and shall have same tensile strength as cable cover tiles.(Pegs should be provided)

6. Cable Cover Tiles Identification

The cable cover tiles shall have the following caption printed on top in Arabic and English and FEWA Logo with black colour letters in not less than 15 mm size and shall be specially protected against deterioration. Cover must be marked



7. Drawing & Samples

The Tenderers shall provide drawings, samples, catalogues etc. of the items offered by them in their offer.

All drawings, catalogues and samples shall be submitted by the tenderer at his expense and shall be the property of the Authority.

8. Testing

The cable tiles shall be subjected to all tests in accordance with the relevant standards. Sample test of each lot should be conducted in the presence of FEWA Engineers.

The sample test shall include but not be limited to the following tests.

S.No.	Description of test	Unit	Required value for PVC	Required value for PE
1.	Dimensions	mm	As specified	As specified
2.	Density	Kg/m ³	1400	930
3.	Impact test at 60 Nm - Extent of penetration (Max.)	mm	5	5
4.	Elongation at break	%	120	230
5.	Tensile	N/mm ²	48	8.4
6.	Hardness	-	82 Shore D	52 Shore D

9. Impact Test

The impact test shall be carried out as per the procedure detailed below:

a) Test Equipment

A pick similar to a pick-axe will fall against the test object. The pick shall be made of steel and designed in accordance with FEWA drawing No. FEWA/E/GEN/218/02 Sheet 3 of 3 enclosed with this specification. It shall be assembled to an apparatus which enforces the impact direction and impact point as described below. The mass and fall height of the pick shall give an impact energy of 60Nm when falling on the test object.

b) Test Conditions

The test object shall be laid horizontally in dry compacted sand in a firm stable box. A sand layer of atleast 50 mm shall surround the test object. The impact point shall be 50 mm below the sand surface level.

c) Test series, each with 5 impacts shall be performed

The pick shall hit the center line of the test object. The impact point shall be located atleast 200 mm from the end of the test object or from earlier impact point. Every impact point is exposed to one hit only.

d) Requirements

Required performance is that the edge of the pick may make a deformation of tile or pass through the test object upto a length of 5 mm maximum.

10. Packing and Despatch

The cable cover tiles shall be packed in bundles. Cable cover tiles per bundle shall not be more than 10 Nos. These bundles will be further packed in pallets and size of each pallet should not be more than 1200mm x 1200mm x 1200mm (Length x width x height).

The pallet shall be duly covered and strapped so that the colours of the cable cover tiles do not fade when stored in open yard and pallet should have proper arrangement for lifting by forklift from all 4 sides. The straps used shall be to the approval of FEWA. Further, packing shall be such that it affords adequate protection to the enclosed materials both against climatic conditions and against mechanical damage during transport to its final destination, including rough handling during sea, rail and road transport and transition from one place to another.

SCHEDULE 'A'

SUB-MANUFACTURERS

The Tenderer shall state below the names of the sub-manufacturers to the main manufacturer and details of the equipment proposed to be manufactured or supplied by them:

Name & Address of the Sub-Manufacturer	Description of Equipment

Signature : _____

Designation : _____

Name of Tenderer ; _____

Date : _____

SCHEDULE 'B'

PLACE OF MANUFACTURE, TESTING AND INSPECTION

The Tenderer to complete the following schedule for all materials he proposes to supply

Item No.	Description	Manufacturer	Place of manufacture	Place of testing and inspection

Signature : _____

Designation : _____

Name of Tenderer : _____

Date : _____

SCHEDULE 'C'

DEVIATION FROM TENDER SPECIFICATION

The Tenderer to state in the following schedule the deviations from the tender specifications proposed in his offer. Deviations other than those specifically listed below will not be taken note of:

Item No.	Description	Precise Details of the Deviations

Signature : _____

Designation : _____

Name of Tenderer : _____

Date : _____

SCHEDULE 'D'
TECHNICAL PARTICULARS & GUARANTEES

SI No.	Description	Unit	CABLE COVER TILES	
			150 mm Wide HV Cable	200 mm Wide HV Cable
1.	a) Name of Manufacturer b) country of Manufacture c) Manufacturer's type and reference			
2.	Base material used - PVC/PE			
3.	Applicable standards - BS/IEC/Other			
4.	Service Temperature Range	Deg.C		
5.	Exact dimensions of cable cover :			
	a) Thickness	mm		
	b) Width	mm		
	c) Length	mm		
6.	Weight of single cable cover	Kg		
7.	Density	g/cu.cm		
8.	Min. Tensile strength	N/sq.mm		
9.	Min. elongation at break			
	a) Longitudinal	%		
	b) Transverse	%		
10.	Max. penetration of the pick (60 Nm. Energy)	mm		
11.	Packing :			
	a) cable covers per bundle	No.		
	b) Bundles per pallet	No.		
	c) Material of pallet cover			
12.	Approx. size of Pallet :			
	a) Length	mm		
	b) Width	mm		
	c) Height	mm		
13.	Whether sample submitted			
14.	Production process:			
15.	Hardness	Shore D		

Signature : _____

Designation : _____

Name of Tenderer : _____

Date : _____

SCHEDULE 'E'

DETAILS OF PAST EXPERIENCE OF MANUFACTURER

Name and address	Qty.	Year of supply	remarks

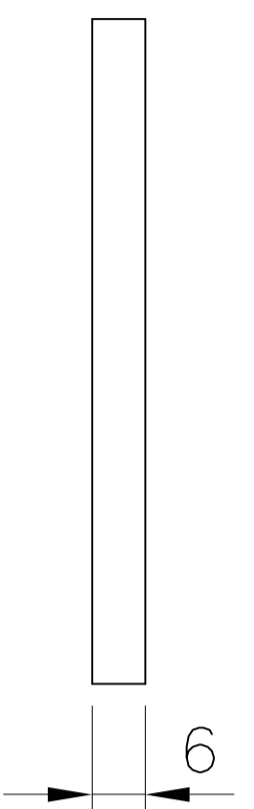
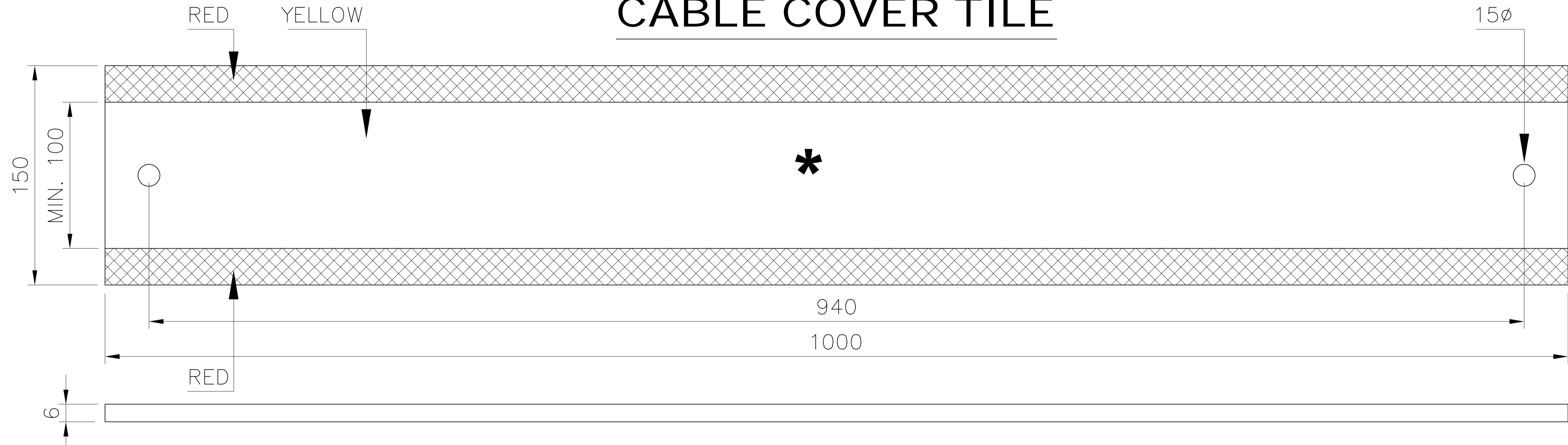
Signature : _____

Designation : _____

Name of Tenderer : _____

Date : _____

CABLE COVER TILE




FRONT VIEW

SIDE VIEW

* FEWA LOGO, ELECTRICAL POWER SYMBOL AND TEXT , IN BOTH ARABIC & ENGLISH LANGUAGES IN BLACK COLOUR, CONTINUOUSLY, TO THE APPROVAL OF FEWA.

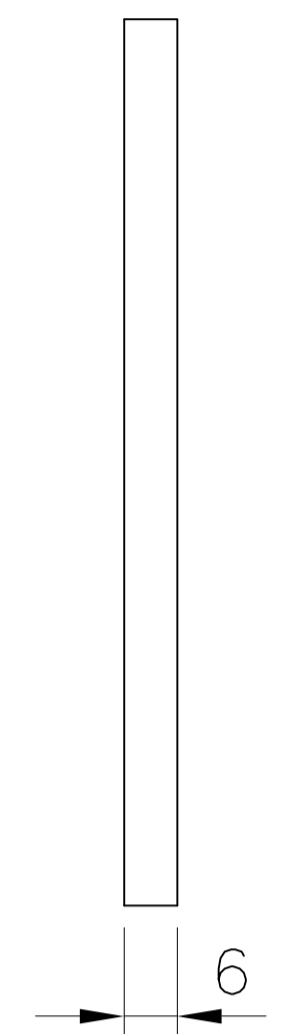
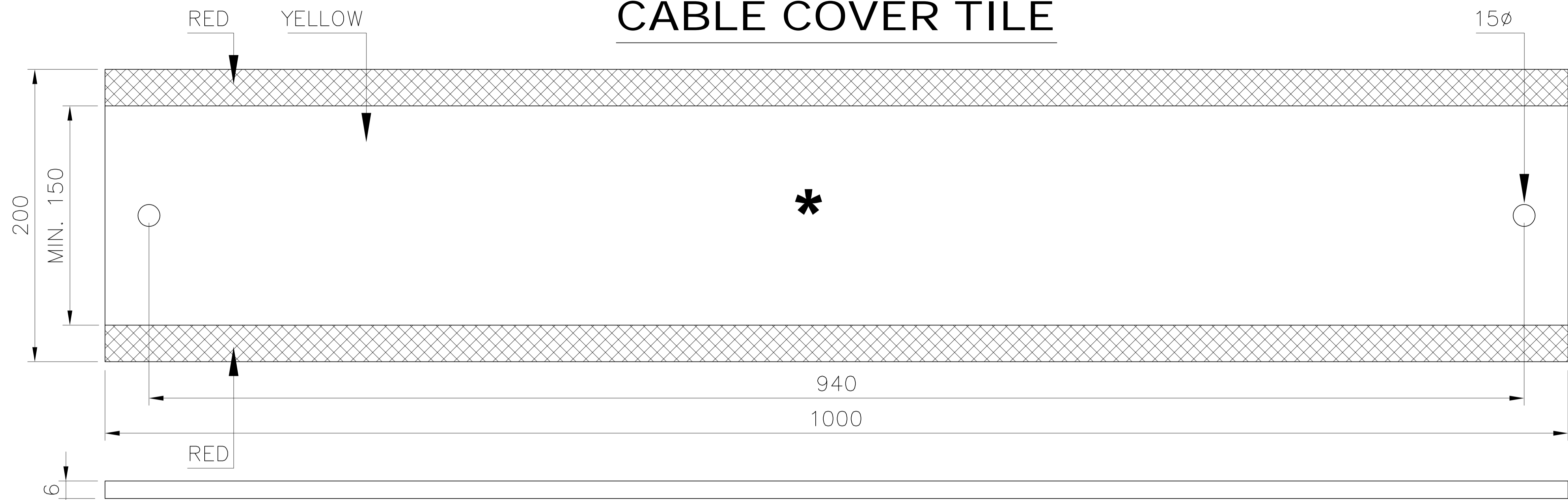
- LENGTH :- 1000 MM
- WIDTH :- 150 MM
- THICKNESS :- 6MM
- HOLE DIA :- 15 MM
- LETTER HEIGHT :- MINIMUM 15 MM
- LOGO DIA :- 100 MM

All dimensions are in mm only

REV	DATE	CADD	CHECKED	APPROVED	DESCRIPTION
 United Arab Emirates Federal Electricity & Water Authority Directorate of Planning P.O.Box 1672, DUBAI					
PROJECT --					
TITLE CABLE COVER TILE					
DRG. No. FEWA/E/GEN/218/02		TENDER No.		REV. 0	SCALE: 1:5
SHEET 1/3					DATE APR.2007
PLANNED AND APPROVED BY THE SPECIFICATION COMMITTEE					

A:\BARKAT\FEWA\GEN\GEN_218.dwg, 6/27/2007 12:42:57 PM
 User: barkat

CABLE COVER TILE




FRONT VIEW

SIDE VIEW

* FEWA LOGO, ELECTRICAL POWER SYMBOL AND TEXT , IN BOTH ARABIC & ENGLISH LANGUAGES IN BLACK COLOUR, CONTINUOUSLY, TO THE APPROVAL OF FEWA.

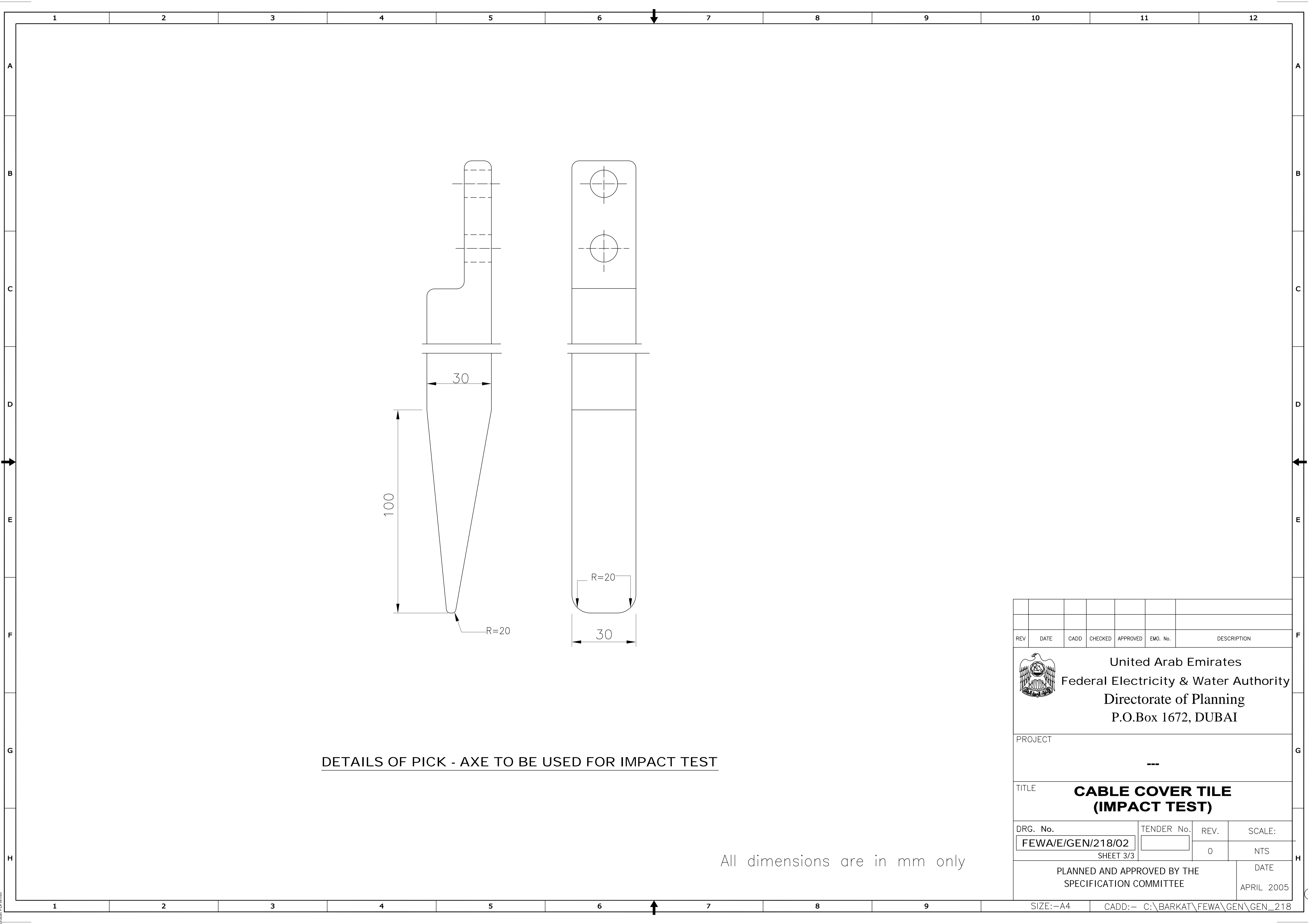
LENGTH :- 1000 MM
 WIDTH :- 200 MM
 THICKNESS :- 6 MM
 HOLE DIA :- 15 MM
 LETTER HEIGHT :- MINIMUM 15 MM
 LOGO DIA :- 100 MM

All dimensions are in mm only

REV	DATE	CADD	CHECKED	APPROVED	EMO. No.	DESCRIPTION
 <p>United Arab Emirates Federal Electricity & Water Authority Directorate of Planning P.O.Box 1672, DUBAI</p>						
PROJECT						


TITLE						
CABLE COVER TILE						
DRG. No.		TENDER No.		REV.	SCALE:	
FEWA/E/GEN/218/02				0	1:5	
SHEET 2/3						
PLANNED AND APPROVED BY THE SPECIFICATION COMMITTEE					DATE	
					APR.2007	

A:\FEWA\GEN\GEN_218.dwg, 6/27/2007 12:44:15 PM
 User: PPK



DETAILS OF PICK - AXE TO BE USED FOR IMPACT TEST

All dimensions are in mm only

REV	DATE	CADD	CHECKED	APPROVED	EMO. No.	DESCRIPTION
 <p>United Arab Emirates Federal Electricity & Water Authority Directorate of Planning P.O.Box 1672, DUBAI</p>						
PROJECT						

TITLE						
CABLE COVER TILE (IMPACT TEST)						
DRG. No.		TENDER No.		REV.	SCALE:	
FEWA/E/GEN/218/02				0	NTS	
SHEET 3/3						
PLANNED AND APPROVED BY THE SPECIFICATION COMMITTEE					DATE	
					APRIL 2005	
SIZE: -A4		CADD: - C:\BARKAT\FEWA\GEN\GEN_218				

A:\BARKAT\FEWA\GEN\GEN_218.sht 1, 2,3.dwg, 6/27/2007 12:45:13 PM
 User: PPK