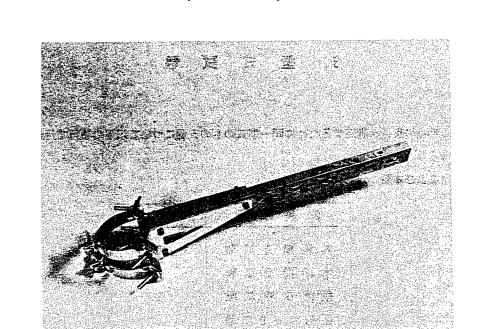
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# 6D-38 Plug-In Outdoor Terminal Joint Suspension Arm for 6600-V CVT Cable and CV Cable (Rank C)



Enforced in October 1972 (Rev. 01) September 2002 (Functionalization)

# **Distribution Department**

Tokyo Electric Power Company, Incorporated

#### 1. Scope of Application

This product is used as a suspension arm for cable termination when a 6600 V CVT cable or CV cable is raised to a pole and a suspension arm for overhead jumper lead wires.

#### 1.1 Class (Type)

The types of this product, categorized into the standard type and the vertical type, are composed of the three types shown in Table 1.

Table 1	
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Туре		Application
Standard type	L-1250	Used for a plug-in outdoor terminal joint of a 250 mm <sup>2</sup> CVT or CV cable or thicker.
	L-1050	Used for a plug-in outdoor terminal joint of a 150 mm <sup>2</sup> CVT or CV cable or thinner.
Vertical type		Used for a plug-in outdoor terminal joint of a 250 mm <sup>2</sup> CVT cable or thicker.

Note: Vertical-type products are used when standard-type products are unsuitable because of the assembly situation of the cable rising pole or other factors.

#### 2. Structure and Material

#### 2.1 General Matters

- (1) The product must not have any scratches, cracks, rust, and other flaws inappropriate for practical use.
- (2) The surfaces of galvanized portions must be smooth and uniformly plated.
- (3) This product must have a structure that can be securely fixed to a supporting structure such as those stipulated in 6D-8 (Reinforced Concrete Poles).

#### 2.2 Shape and Dimensions

The standard shape and dimensions are shown in Attached Figures 1 to 3. Note that the tolerances must be in a range where the product can be used without a hitch.

## 2.3 Requirements for the Primary Structure

(1) Materials

The material used must be steel satisfying the functional characteristics of the product.

[Explanation]

According to present expertise, the "steel satisfying the functional characteristics of the product" includes SS400 stipulated in JIS G 3101 (Rolled steels for general structure).

(2) Surface Treatment

Apply a hot dip galvanizing coating stipulated in JIS H 8641 (Zinc hot dip galvanizings) uniformly over the entire surface.

#### 2.4 Display

The symbol of the manufacturer that has been approved by TEPCO and the year of manufacture must be engraved clearly on an easy-to-see portion of this product before galvanization.

#### 3. Performance

#### 3.1 Horizontal Load Strength

On a horizontal load test, there must be no abnormality in any parts.

#### 3.2 Vertical Load Strength

On a vertical load test, there must be no abnormality in any parts.

#### 3.3 Mass of hot dip galvanizing deposite

On a hot dip galvanizing test, the mass of deposite per unit area must be 350g/m<sup>2</sup> or greater.

#### 4. Test Methods

#### 4.1 Visual Inspection

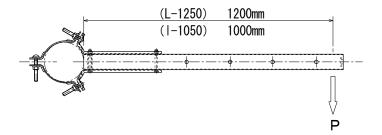
Inspect appearance-related matters visually or by touching with the hands.

#### 4.2 Structure and Dimensions Inspection

Inspect structure-related matters visually or with an appropriate graduated ruler.

#### 4.3 Horizontal Load Test

Assemble this product to a pole as shown in Figures 1 and 2, and then apply a horizontal load of 981 N to the position a prescribed length away from the surface of the pole.





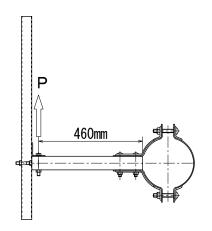


Figure 2: Vertical type

#### 4.4 Vertical Load Test

Assemble this product to a pole as shown in Figures 3 and 4, and then apply a vertical load of 2450 N to the position a prescribed length away from the surface of the pole.

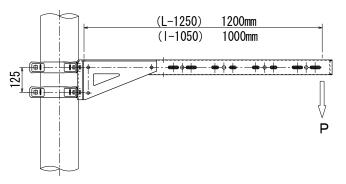


Figure 3: Standard type

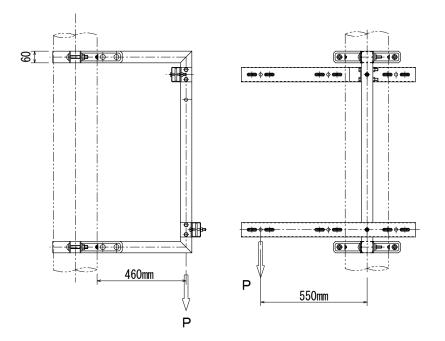


Figure 4: Vertical type

#### 4.5 Hot Dip Galvanizing Test

Measure the mass of deposite by using the method stipulated in Chapter 4, Deposite mass test method, of JIS H 0401 (Test methods for hot dip galvanized coatings) or the film thickness test method stipulated in Reference of the same JIS (average of randomly chosen five points). The screw portions for bolts and nuts must be excluded.

Note that a test specimen used for deposite mass test can be an appropriately pre-manufactured test piece to which plating is applied with the same work method in the same manufacturing process as the product.

#### 5. Test

#### 5.1 General Matters

This product must go through the type approval test and the acceptance test based on the test methods stipulated in Section 4, Test Methods, and comply with the provisions stipulated in Section 2, Structure and Material, and Section 3, Performance.

# 5.2 Type Approval Test

Type approval test must be conducted on a product or a test specimen manufactured under the same conditions with products for the following test items.

Note that the test must be conducted on the same type for the following quantities.

(1) Visual inspection:	5 pcs
(2) Structure and dimensions inspection:	5 pcs
(3) Horizontal load test:	2 pcs
(4) Vertical load test:	2 pcs
(5) Hot dip galvanizing test:	1 pce

## 5.3 Manufacturing Process Inspection

Before conducting a type approval test, a series of inspections including the materials used, the quality control items in the manufacturing processes, the quality control method, fault-prevention measures, and the quality control system must be conducted as a general rule to confirm that the exactly same products as the one used for the type approval test can be produced in the production process.

# 5.4 Acceptance Test

The test items of acceptance test are as follows. Note that parts of or the entire test may be omitted for the convenience of TEPCO.

- (1) Visual inspection
- (2) Structure and dimensions inspection
- (3) Horizontal load test
- (4) Vertical load test
- (5) Hot dip galvanizing test

#### 6. Related Standards

#### 6.1 Japanese Industrial Standards

- (1) JIS H 8641 (1999) Hot dip galvanized coatings
- (2) JIS H 0401 (1999) Test methods for hot dip galvanized coatings

#### 6.2 TEPCO Standards

- (1) 6D-8 Reinforced Concrete Poles
- (2) 6E-1 Bolts and Nuts

#### 7. Miscellaneous

- (1) Items necessary for satisfying the performance and functions of the product other than those stipulated in this specification document should be determined in consultation with TEPCO.
- (2) When modifications to part of this specification document will yield a substantial benefit to the use or manufacturing, the manufacturer can change this specification document after having obtained approval from TEPCO.

#### 7.1 Cost for Test Items

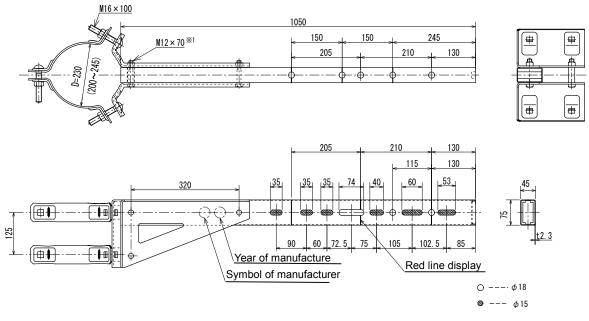
The supplier will bear the test specimens.

#### 7.2 Documents to be Submitted

The following documents must be submitted for type approval evaluation.

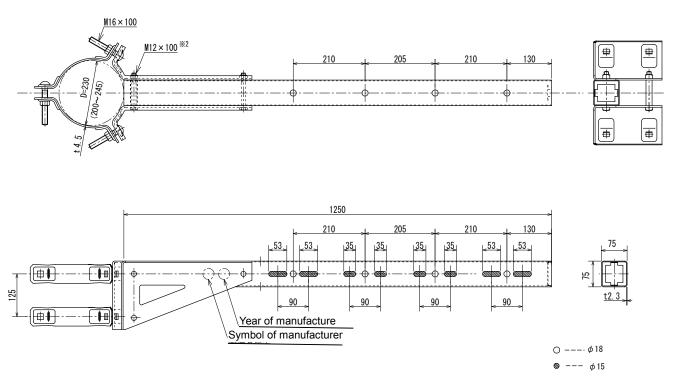
- (1) Manufacturing specifications
- (2) Test report
- (3) Quality control report
- (4) Technical documents

(Unit: mm)



\*1: The bolts and nuts must be in conformity with 6E-1.

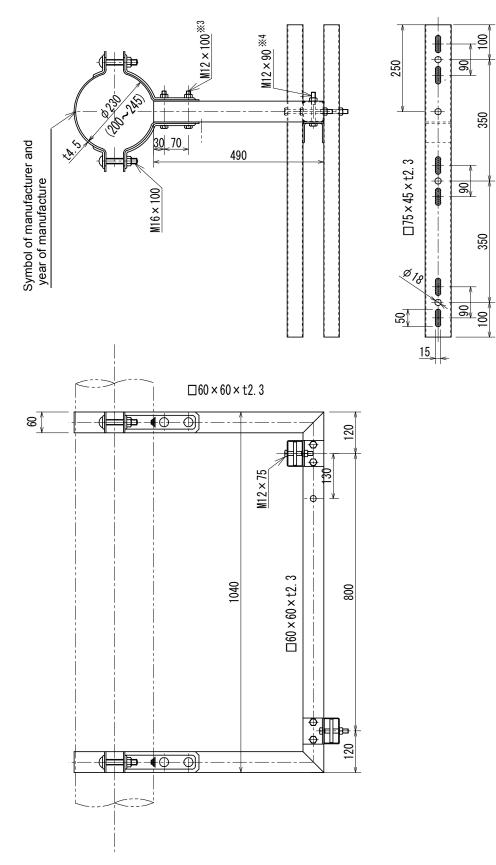
Attached Figure 1: Standard type (L-1050)



\*2: M12×100 stipulated in 6E-1

Attached Figure 2: Standard type (L-1250)

(Unit: mm)





\*4: The bolts and nuts must be in conformity with 6E-1.

Attached Figure 3: Vertical type