1. INTRODUCTION
We report an example of an earthquake proofing measures on the Murayama-Shimo Reservoir, an existing earth dam.

1.1 Outline of The Murayama-Shimo Reservoir
Reservoir
- Location: The northwest part of Tokyo
- Construction: Between 1916 and 1927
- Total storage capacity: 12,148,000m³
- Effective storage capacity: 11,843,000m³
- Surface area at full-filed water: 1.1km²
- Construction: Between 1916 and 1927
- Location: The northwest part of Tokyo

Embankment
- Structure: zoned earth dam
- Height: 32.6m
- Surface area at full-filed water: 1.1km²
- Effective storage capacity: 11,843,000m³
- Total storage capacity: 12,148,000m³

2. DESIGN OF REINFORCEMENT EMBANKMENT
In January 1995, a gigantic earthquake M7.3 attacked Kobe-city. Soon we performed a seismic diagnosis for this earth dam. This diagnosis cleared that the embankment would have damage at the time of an earthquake M7.0 class.

2.1 Choice of the Earthquake to Examine
- Level 1 earthquake motion (That occurred once to twice in occupied term)
  The occurrence probability 1/300 years, M7 class
- Level 2 earthquake motion (The occurrence probability is very low)
  The occurrence probability 1/300 years, M8 class

2.2 Design of Reinforcement Dam Body
Design
- At first, designing a sectional structure by use a seismic coefficient method.
- Then, confirming the earthquake proofing performance and the stability of the slope by use a dynamic analysis and a slope stability analysis.

Reinforcing structure
- To be reinforced with filling on the downstream side.
- To install an inclined drain and a horizontal drain on the downstream side.
- To be constructed in an acute angle of 45 degrees.

3. REINFORCEMENT SLOPE WITH GEO-TEXTILE
In case of normal time after completion, the sliding safety factor did not satisfy f = 1.2 of the aim, then reinforcement is necessary. We decided to perform reinforcement with the geo-textile.

3.1 The Friction Characteristics of Geo-Textiles and Filling Materials
We use pulling test for setting the friction characteristics of geo-textiles and filling materials.

3.2 Placement of Geo-Textile for Reinforcement Slop
- The geo-textile is laid at the intervals of 1.6m in height for an anti-sliding failure measures as a main.
- The geo-textile is laid at the intervals of 0.4m in height for preventing surface landslide as an assistance.

4. CONCLUSION
- We have ensured a sufficiently high seismic stability of an existing earth dam.
- This project is the first case of reinforcing an existing earth dam by means of geo-textile reinforcement.