RION - ANTIRION
SPANNING POSEIDON’S REALM

EXCEPTIONAL COMBINATION:

- DEEP WATER
- WEAK ALLUVIUMS
- STRONG SEISMIC ACTIVITY
- TECTONIC MOVEMENTS
WEAK ALLUVIUMS:

- SAND AND GRAVEL
- CLAY
- SILT

RION

ANTIRION

65 m.

DESIGN SPECTRUM

ACCELERATION [g]

0.00 1.00 2.00 3.00 4.00 5.00

PERIOD [s]

Damping 5%

TEKTONIC MOVEMENTS

- ELEVATION: VERTICAL SLIP: 2 m
- PLAN: HORIZONTAL OPENING: 2 m

PIER BASE

FOUNDATIONS?

SEISMIC SPECTRUM

WATER ADDED MASSES

HUGE SEISMIC FORCES
FOUNDATIONS?
- PILES
- EMBEDDED CAISSONS
- SOIL SUBSTITUTION
- SOIL IMPROVEMENT

SOIL IMPROVEMENT?
- DYNAMIC COMPACTION
- STONE COLUMNS
- NEW SOLUTION

Inclusions

REINFORCED SOIL YIELD CRITERIA
- SOIL CONTACT PRESSURE
- INCLUSION SHEAR AND BENDING
SPANS?

SUSPENSION BRIDGE

OR CABLE STAYED SPANS?
RION-ANTIRION (Greece)

Rion

286 560 560 560 286
2252

Antirion

TATARA (Japan)

270 890 320
1480

TING KAU (Hong Kong)

277 448 475 127
1177
CONSTRUCTION METHODS

RION ANTIRION BRIDGE

OFFSHORE FOUNDATIONS

RION ANTIRION BRIDGE

CABLE STAY SPANS