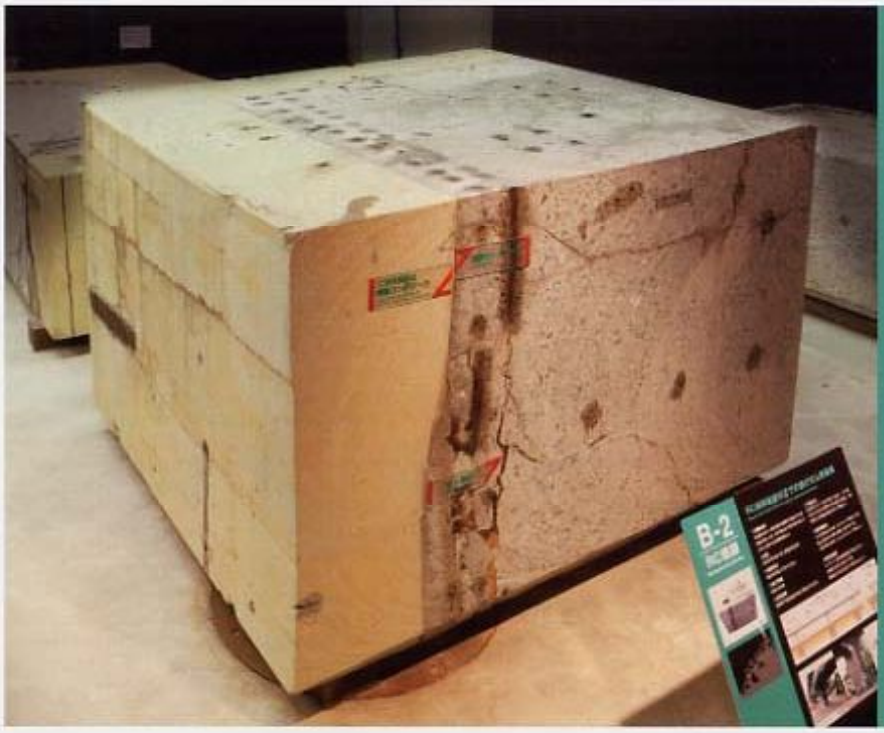
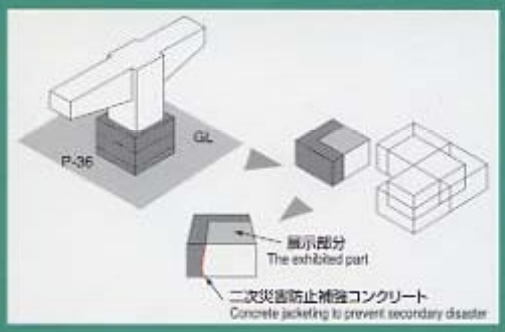
B-2 RC橋脚基部付近での曲げせん断破壊

Flexural shear failure around the base of reinforced concrete pier



神P-36の被災状況 Damages on P-36



■**損傷内容**／柱基部付近に一部主鉄筋が座屈する曲げせん断損傷を受け、また、神戸側および梁の張り出しが大きい山側へ柱が残留傾斜した

■**位置**／3号神戸線 神P-36（西宮市石在町）

■**構造形式**／矩形RC単柱 3.5m×3.5m

■**竣工時期**／昭和44年度

■**適用基準**／道路橋下部構造設計指針（昭和41年）ほか

■**復旧方法**／柱基部において柱を切断・撤去し、その後、3.9m×3.9mの矩形RC柱を現場で構築し、工場で製作した鋼製梁を結合させ、再構築した

■**展示物紹介**／二次災害防止のため、コンクリートで巻き立て補強した部分を4分割に切断したものの一部（橋脚の撤去は展示しているようなブロックで搬出した）

■**展示物諸元**

コンクリート設計基準強度270kgf/cm²
主鉄筋 D32（SD30）×2段
帯鉄筋 D16（SD30）×300mmピッチ

■**Damage descriptions**／ Flexural shear failure was occurred at the column base with the buckling of longitudinal reinforcement, and resulted in a residual inclination toward the east (Kobe side) and also toward the north in which direction the beam had large overhang.

■**Location**／ P-36 on the Kobe Route #3 (Ishizaicho, Nishinomiya City)

■**Structural configuration**／ Reinforced concrete single rectangular column with a cross section of 3.5 m × 3.5 m

■**Completion**／ 1969

■**Major standards applied**／ Design Guidelines for Highway Bridge Substructures (1966)

■**Restoration**／ The damaged column was cut at the base and removed, and subsequently a new reinforced concrete rectangular column (3.9 m × 3.9 m) was built on site. Finally a factory-fabricated steel beam was connected on it to complete the pier.

■**Descriptions of the exhibits**／ The damaged portion of the column around which had been temporarily jacketed with the concrete for secondary disaster prevention is exhibited. The column was divided into four blocks to remove from the site, as shown here.

■**Specifications of the exhibits**

Designed concrete strength: 270 kgf/cm²
Longitudinal reinforcements: D32 (SD30) in double arrangement
Lateral ties: D16 (SD30) at 300 mm intervals