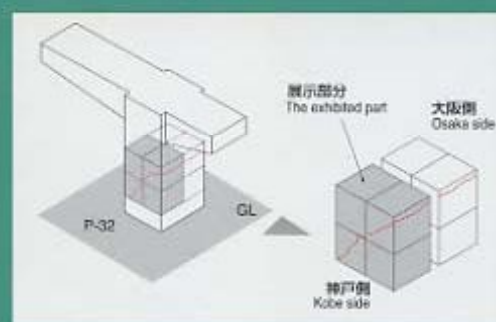


B-5 RC橋脚のせん断損傷

Shear damage of reinforced concrete pier



■ **損傷内容** / 柱基部よりやや上において、せん断損傷を受けた。外観調査では軽微な損傷と考えられていたが、詳細調査の結果、ひびわれが柱コンクリート内部にまで及んでいることが確認された

■ **位置** / 3号神戸線 神P-32 (西宮市染殿町)

■ **構造形式** / 矩形RC単柱 3.5m×4.5m

■ **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、4.1m×5.1m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** / せん断損傷部を中心に8分割したもののうち、ひびわれが顕著に認められる4ピースを展示

■ **展示物諸元**

コンクリート設計基準強度270kgf/cm²
主鉄筋 D35 (SD30)×3~2段(段落とし)
帯鉄筋 D16 (SD30)×300mmピッチ

■ **Damage descriptions** / Shear failure was occurred in the column at a height slightly above its base. Although the column was determined as a minor damage during an appearance observation for the structure, it was found from a detailed inspection that cracks had reached the inner concrete of the column.

■ **Location** / P-32 on the Kobe Route #3 (Somedonochi, Nishinomiya City)

■ **Structural configuration** / Reinforced concrete single rectangular column with a cross section of 3.5 m × 4.5 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 (4.1 m × 5.1 m) was built on site. Finally a factory-fabricated steel beam was connected on it to complete the pier.

■ **Descriptions of the exhibits** / Four pieces of the column with the significant shear cracking which portion had been cut into eight pieces

■ **Specifications of the exhibits**

Designed concrete strength: 270 kgf/cm²
Longitudinal reinforcements: D35 (SD30) in triple or double arrangement having cut-off
Lateral ties: D16 (SD30) at 300 mm intervals

