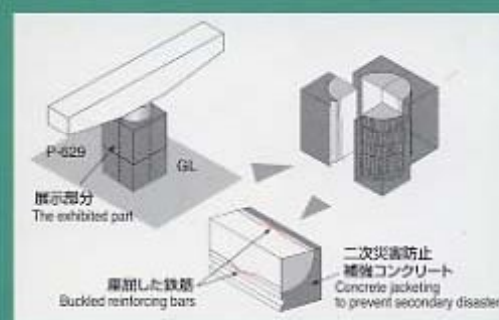


B-4 RC橋脚主鉄筋段落とし位置での曲げせん断破壊

Flexural shear failure of reinforced concrete pier at cut-off position of the main reinforcements



■ 損傷内容 / 柱高さ中央部の主鉄筋段落とし箇所付近において、主鉄筋が全周にわたって座屈する激しい曲げせん断損傷が生じた

■ 位置 / 3号神戸線 神P-629 (神戸市長田区)

■ 構造形式 / 円形RC単柱 直径2.5m

■ 竣工時期 / 昭和42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、直径2.9mのRC柱を現場で構築し、工場で製作した鋼製梁を結合した

■ 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分割したものの一つ (橋脚の撤去は展示しているようなブロックで撤出した)

■ 展示物諸元

コンクリート設計基準強度 240kgf/cm²
 主鉄筋 D35 (SD30) × 3~1段 (段落とし)
 帯鉄筋 D16 (SD30) × 300mmピッチ

■ Damage descriptions / Serious flexural shear failure was occurred at the around mid-height of the column where the longitudinal reinforcements had been cut off, causing the buckling of longitudinal reinforcement.

■ Location / P-629 on the Kobe Route #3 (Nagata-ku, Kobe)

■ Structural configuration / Reinforced concrete single cylindrical column with a diameter of 2.5 m

■ Completion / 1967

■ 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 column (diameter: 2.9 m) was built on site. Finally a factory-fabricated steel beam was connected to it to complete the pier.

■ Descriptions of the exhibits / The damaged portion of the column around which had been temporarily jacketed with 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: 240 kgf/cm²
 Longitudinal reinforcements: D35 (SD30) in triple to single arrangements having the cut-off
 Lateral ties: D16 (SD30) at 300 mm intervals

