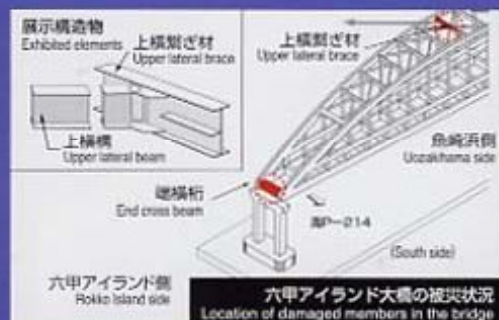
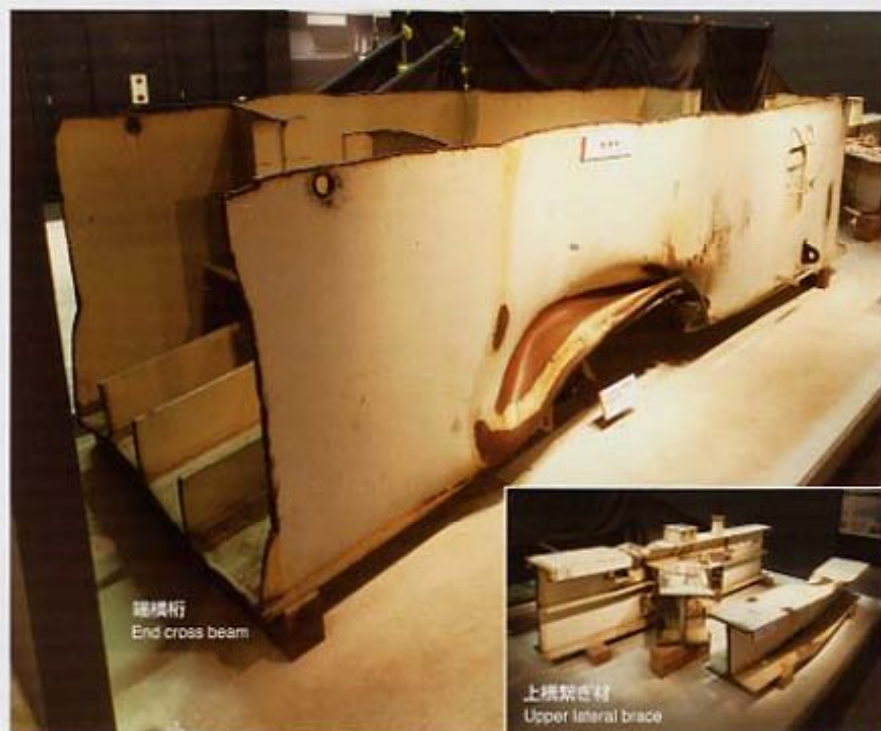


A-1 アーチ橋の上横繫ぎ材の座屈と端横桁の変形

Buckling of upper lateral brace and deformation of end cross beam in long arch bridge



■**損傷内容**／①六甲アイランド側の海P-214橋脚上の可動支承(ピボットローラー支承)が損傷②約9,200tの橋が東側に約3mほど水平移動③橋脚梁上に設置してあったジャッキアップ用の架台が端横桁にめり込んだ④アーチが2箇所の固定支承とジャッキアップ架台の3点支持となり、上横繫ぎ材が座屈した

■**位置**／5号湾岸線 六甲アイランド大橋(海S-213)(神戸市魚崎浜町～六甲アイランド)

■**構造形式**／鋼アーチ橋(下路橋、ダブルデッキ)

■**竣工時期**／平成4年度

■**適用基準**／道路橋示方書(平成2年)ほか

■**復旧方法**／2隻のクレーン船で橋全体をつり上げて元の位置に戻し、損傷した部分を新しい部材に取り替えた

■**展示物紹介**／ジャッキアップ用架台がめり込んだ端横桁部アーチ橋の上横繫ぎ材

■**展示物諸元**

端横桁	下フランジ(材質SM570、板厚32mm) ウェブ(材質SM570、板厚28mm)
上横繫ぎ材	上下フランジ(材質SS400、板厚16mm) ウェブ(材質SS400、板厚9mm)

■**Damage descriptions**／①A movable bearing (a pivot roller bearing) on the end pier in the Rokko Island side (P-214) was damaged.②The bridge with about 9,200 tons in weight moved about 3 m toward the east horizontally.③A jack-up support placed on the pier beam dented into the end cross beam.④The jack-up support together with two fixed bearings formed a three-point support for the arch, causing the upper lateral brace to buckle.

■**Location**／ Rokko Island Bridge (S-213) on the Wangan Route #5(From Uozakihama-machi to Rokko Island, Kobe)

■**Structural configuration**／ Steel arch bridge (through bridge with double deck)

■**Completion**／ 1992

■**Major standards applied**／ Specifications for Highway Bridges (1990)

■**Restoration**／ The entire bridge was lifted and replaced to its original position using two floating cranes. In addition, the damaged members were replaced with the new ones.

■**Descriptions of the exhibits**／ End cross beam into which the jack-up support dented Upper lateral brace of the arch bridge

■**Specifications of the exhibits**

End cross beam	Bottom flange (material: SM570; thickness: 32 mm) Web (material: SM570; thickness: 28 mm)
Upper lateral brace	Top and bottom flanges (material: SS400; thickness: 16 mm) Web (material: SS400; thickness: 9 mm)

