

Morandi Bridge Collapse

EPSC Learning Sheet December 2024



On 14 August 2018, during a rainstorm, a span of the 1182 m long and 45 m high Morandi bridge in Genoa broke. The bridge collapse caused 43 deaths.

Aspects:

- The 90 m high concrete pillars with diagonal cable stays were holding a 200 m wide span.
- Internal inspection of the metal inside the prestressed concrete pillars (from 1967) was difficult. In 1990 only pillar 11 was inspected, showing that 30% of the tendons (iron bundled wires) had corroded away, potentially enhanced by ingress of Chlorides from the sea.
- Unnoticed deterioration of mechanical parts in critical equipment is a well-known reason for incidents also in the chemical industry. When designing and accepting such equipment, inspection should be considered.

Assure during design that inspection of all critical parts, is quite possible