

Viaduct Stura di Demonte

Highway Torino – Savona, Italy
MAURER pot bearings / integrated Shock Transmission Units
MAURER Swivel Joist Expansion Joints



Figures and Facts

| | |
|------------------------------|---|
| Location: | Highway Torino-Savona, Italy |
| Owner: | Republic of Italy, represented by Autostrada Torino-Savona S.p.A. |
| Contractor: | TOTO |
| Design: | 31 span continuous girder system Composite structure |
| Consulting engineers: | SPEA, FINZI |
| Utilisation: | extension of the existing highway |
| Total Bridge Length: | 2.730 m |
| Pier height: | up to 90 m |
| Main spans: | 29 x 90 m, 2 x 60 m |

Involvement of Maurer Soehne

Supply and installation of:

- **56 MAURER pot bearings, 17.000 kN, ± 580 mm,**
- **8 combined pot bearings + integrated STU's, ± 580 mm, max. $F_R = 17.000$ kN,**
- **2 Swivel Joist Expansion joints DS 1200**



Involvement of Maurer Söhne

The viaduct bridges the river “Stura di Demonte” next to the village of Fossano. In parallel to the existing, partially single-lane highway, a bypass was constructed which connects Torino with the city of Savona since 2001.

The composite structure with a length of nearly 3.000 m was built by incremental launching. The valley is crossed by means of a 31-span continuous superstructure. The 3 piers in the centre of the bridge (height = app. 90 m each) are used as fixed points.

Maurer Soehne manufactured and installed the following devices:

- 64 pot bearings, vertical load up to 17.000 kN, movement up to ± 580 mm, amongst them:
- 8 combined pot bearings / integrated shock transmitters, movement ± 370 mm. While producing no response force in case of slow movements (e.g. temperature), in case of fast movements (braking load or seismic impact) the design response force of 17.000 kN had to be activated within a movement of max. 5 mm.
- 2 Maurer swivel joist expansion joints with a movement capacity of 1.200 mm each.



Fig.1: view of the Viaduct “Stura di Demonte”

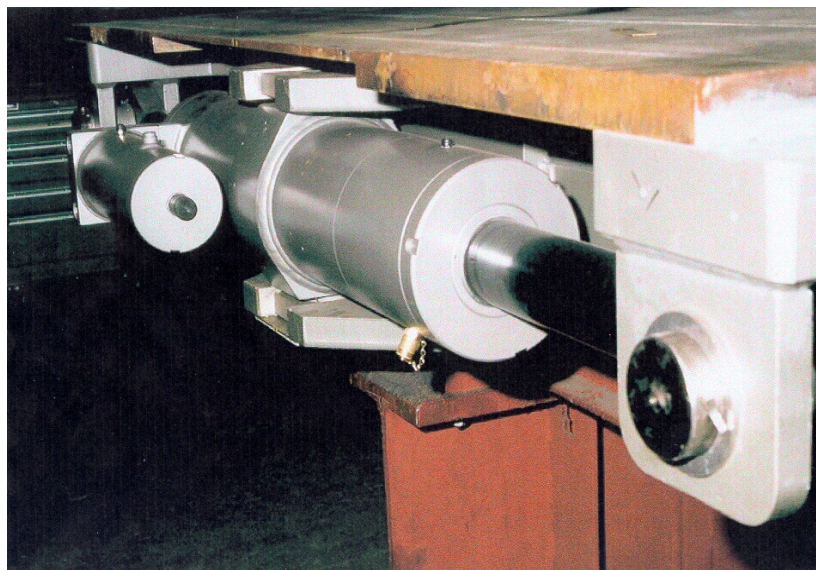


Fig.2: STU's, integrated into a pot bearing