

Stay Cable Systems

DSI Product Overview

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DYNA Bond® Anchorage

DYNA Grip® Anchorage

Special Solutions




Assembling

Stressing



Stay Cable Jacks

References

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-  Brochure DYWIDAG Multistrand Stay Cable Systems, Filesize:4.5 MB
-  Brochure DYWIDAG Corrosion Protection System DYNA Protect, Filesize:1.1 MB
-  Brochure DYNA® Force Elasto Magnetic Sensor, Filesize:1.8 MB

References [read more ...](#)

-  Maumee stay cable bridge, Toledo, OH, USA
-  DYNA Protect® System

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Stay Cable Systems

General

Cable stayed bridges are very efficient structural systems with light weight superstructures and large lever arms. The most important elements of these aesthetically pleasing and often dramatic structures are the closely spaced stay cables, which transfer the loads to the foundation via the pylon. It is essential that these tensile elements are durable and easy to maintain. They are generally designed to be restressable and replaceable.

DYWIDAG has been involved in the development, construction, and execution of stay cables and cable-supported structures since 1970.

Based on internationally recognized guidelines for stay cables combined with our own design criteria of the world wide renowned DYWIDAG Multistrand tendons, we first developed stay cables with bars and applied them for large bridges (for example Dames Point Bridge, Florida USA; main span 396 m).

Thereafter we were able to take advantage of our many years of experience and expertise in post-tensioning and prestressed concrete construction, particularly in the field of long span bridges.

DYWIDAG Stay Cables

DYWIDAG Stay Cables are normally available in standard sizes up to 109 strands per anchorage. This maximum size was extended for the Maumee River Crossing project/USA, where DSI developed a cable with up to 156 strands. This cable is the largest in the world and has been proven in successfully in static, dynamic and leak tightness tests.

To meet demands of the market and requirements of international standards DSI provides stay cables with two basic types of anchorages:

- DYNA Bond® Anchorage
- DYNA Grip® Anchorage

The DYNA Bond® Anchorage is an anchorage with additional internal bond. It is normally grouted after application of the permanent loads of the superstructure.

The DYNA Grip® Anchorage is an anchorage without bond that permits monitoring and replacement of individual strands of a stay during its entire service life.

DYWIDAG Stay Cables are designed according to acknowledged international requirements e.g. PTI, fib, or CIB/Setra.

The values are based on the German Code (DIN). Adaptations to other code systems or concrete strengths (e.g. ASTM, BS, etc.) are possible.


DYWIDAG Multistrand Stay Cables were developed in the eighties to accommodate ever-increasing spans and the resulting need for economical high capacity cables. Today strand cables are widely used for many types of structures. This website gives an overview of the DYWIDAG Multistrand Stay Cable Systems. The special use of stay cables for extradosed tendons is also included. More detailed information is available on request.

Quality Assurance

To ensure high quality and consequently the performance and durability of DYWIDAG Stay Cables, all components are subjected to quality tests according to our quality assurance system. DSI is ISO 9001 certified.

For internal quality control DSI maintains a test lab in Germany for in-house testing of geometry, material and performance.



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