ICE Virtual Library - User Guide





User Guide introduction



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This presentation will guide you through searching the Virtual library and using some of it's different functions.

This includes:

- Navigating from the home page
- Using the quick search function
- Using the advanced search
- Viewing articles in PDF and HTML format

• Saving searches, setting up a marked list and using email alerts to find out about latest content

• Using the administration area to personalize your Virtual Library, view usage statistics and edit passwords and account information

Homepage



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Searigate to bookselevant preantos and colfectionssby elicking on the timesion. shown here.

> Or browse by subject using the drop down menu.



Using the Quick Search



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Perform a quick search by typing the words into the tool bar.

You can also use double quotes to search an exact phrase.



Using the Advanced Search



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On the home page you can also select the 'Advanced' search option, located here.



Using the Advanced Search



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On the advanced search page you can narrow your search criteria using the drop down menus



Using the Advanced Search



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There are drop down menus to limit searches

You can limit searches to books or journals, by subject area or by year of publication.



Refining your search



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When you have your search, you can refine it to only the items to which you are subscribed.

You can also choose to sort the search by relevance, or have newest or oldest itemsofirst.



Viewing your search results



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Viewing your search results



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You can select the searches to show abstracts of the titles or hide them if you prefer.

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Article overview



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Viewing in HTML



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In HTML format you can browse the article like a web page. Click on images to view them larger in a pop-up window.



Stressing jacks

Contraction Contraction

Typical jacks for stressing of single-strand and multi-strand tendons are shown in Figures 5 and 6, respectively, while Figure Z shows a typical jack for bar tendons. For single strands, smaller tendons or smaller bars, the jacks, weighing up to 250 kg, can usually be easily handled and manoeuvred into position with readily available lifting equipment, while for the larger tendons special lifting frames or cranes are required to move the jacks which can weigh up to 2000 kg.

Viewing articles in PDF



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Other bookmarks

In PDF format you can read the article like a document.

ICE Virtual Library : Design ... × 🎦 www.icevirtuallibrary.com/... 🕑 🔇 www.icevirtuallibrary.com/docserver/fulltext/mobe.34525.0195.pdf?expires=1308069092&id=id&accname=id23325&checksum=56714721910119998032372 😭 🔍 For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now... ice | manuals Design of prestressed concrete bridges N. R. Hewson Hewson Consulting Engineers Ltd This chapter provides coverage on all aspects of the design and construction of prestressed concrete bridges, from the fundamentals of prestressing and the equipment used, to insight into the problems that can occur and how they have been dealt with in different projects around the world.

It explains key issues for the designer to consider and provides guidance to the site engineer on some of the techniques and temporary works used in their construction. Simple in situ and precast beam bridges are described along with the more advanced techniques of precast segmental and incrementally launched decks. Both pretensioning and post-tensioning are included as well as precast and in situ construction. Recent developments in the use of non-metallic materials to improve the durability of prestressing systems and higher strength concrete are included to show

how prestressed concrete bridges are likely to develop in the future.

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Introduction

Prestressed concrete decks constitute a large proportion of the current bridge stock around the world. Since prestressing was introduced into concrete bridges in the early 1930s it has challenged the bridge engineer's imagination as new techniques developed, spans became longer and the appearance of bridges more important. In situ or precast concrete; simply supported, continuous or cablestayed structures; beams, slabs or boxes; all feature in prestressed concrete bridges.

Concrete is strong in compression but weak in tension; however, prestressing of the concrete can be used to ensure that it remains within its tensile and compressive capacity. Prestressing is applied as an external force to the concrete, by the use of wires, strands or bars and can increase the capacity of concrete alone many times. The development of prestressed concrete bridges has given the bridge engineer increased flexibility in the selection of bridge form and in the construction techniques available, resulting in prestressed concrete frequently being the

tendons. For post-tensioning, the tendon is pulled using a jack and the force is transferred directly on to the hardened concrete, while for pretensioning the tendon is jacked against a temporary anchor frame before concreting and the force released from the anchor frame to the concrete when sufficient strength has developed. In these ways an external compressive force is applied to the concrete which can be used to counter the tensile stresses generated under the bending moments and shear forces present.

The concrete can be either fully prestressed, which ensures that the longitudinal stresses are always in compression, or partially prestressed which allows some tension to occur under certain loading conditions.

Materials

Concrete

The required strength of the concrete is determined by the compressive stresses generated in the concrete by the prestress and applied forces. A minimum strength of f_{eu} equal to ASNI/ma m² is trunical for musclusered concustor I

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Composite bridges are structures that combine materials such as steel, concrete, timber or masonry in any combination. In common usage nowadays composite construction is normally taken to mean either steel and concrete construction or precast-concrete and insitu-concrete bridges. For this book the scope is limited to steel–concrete composite structures. Composites is also a term used to describe modem materials such as glass- or carbon-reinforced plastics and so on. These materials are becoming more common but are beyond the scope of this book. Steel–concrete composite structures are a common and economical form of construction used in a wide variety of structural types. This book initially reviews the forms of structure in which composite construction is used, and then the more common forms of composite construction are considered in more detail.

Compliance with codes and regulations is necessary in the design of a structure but is not sufficient for the design of an efficient, degant and economic structure. An understanding of the structure's behaviour, what physically happens and how failure occurs is vital to any designer; without this understanding the mathematical equations are a meaningless set of abstract concepts. It is also vital to understand how the structures are constructed and the effect this can have on the stress distribution. One aim of this book is to give an understanding of the behaviour of composite structures. Examples of designs of composite structures are used extensively throughout the book. Where possible these examples are based on designs or checks carried out by the author

Creating a user account



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You may want to save a specific search so that it runs automatically when new content is uploaded.

This requires you to create a personal registration.



Creating a user account



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To complete the personal registration form, fill out all the details and then create a user name and password.

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Administration menu



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By logging in with your administrator user name and password you can access the administration menu.



Personalising your Virtual Library

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Administration

By selecting "Upload institutional logo", you can create an image in the top right hand corner of the site.

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This will let users know that the site is licensed and endorsed by your organisation.

From this page you can also access counter statistics.

Accessing user statistics

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These reports can allow you to monitor the use of you subscribed content.

Setting up email alerts

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In the Librarians area you can set up email alerts for new content, as discussed earlier.

Updating account details

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Register Now

From the administration menu, you can update authentication details

Updating account details

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Help page

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If you need any more help on your Virtual Library, you can go to the help page where you can view "Frequently asked questions".

Contact us

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Alternatively, you can contact us

