

WEB BASED APPLICATION FOR THE SELECTION OF CABLE TRAYS

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Abstract. In this paper, we present an application that helps the designers and engineers decide which cable tray is the one they need for their projects. It considers both their section and weight, and from that data it offers the trays that are able to support them. It can select also among some models of bulkheads. The application has been developed in a web environment, using the ASP language in combination with a MySQL database.

Introduction

The intention in the development of this application was to make easier for the engineers and commercials to find which model of cable trays they needed for their installation projects. Sometimes, this question can lead to a series of calculations that can take a large amount of time. So, the idea was to implement a website app that could do the hard work for them.

Website and database design

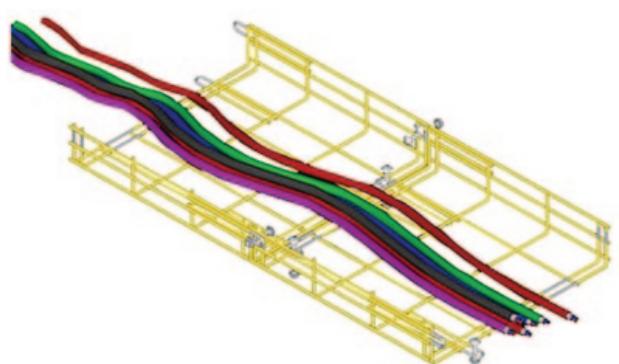
In order to control the access to the system, we have designed an SQL database, which has been installed over a MySQL server. This database will hold the data about the different users, so anyone who wants to use the application will have to log into the system.



Moreover, the fact of having a database lets the users keep a history of their last calculations, so they are able to revise them any time as needed. Finally, the database will be responsible, also, for the information about cables, cable trays and bulkhead models. It can be updated anytime, so the program will be permanently updated.

Features and implementation

The application is based in a series of forms that collect the inputs from the user. Based on those inputs, the program loads the section and weight data from the database, and looks for the cable trays that support the total volume and weight.



Besides from the basic calculations, the system has some particular features:

- Users are able to create their own cables, introducing their particular data (name, material, weight, section...). Those cables are stored in the database, so they can use them in all their later calculations like the rest of regular cables. This feature will help users not to feel dependent of the specific cables stored in the database.
- At the end of the calculation, at the results page, users are offered two documents. The first is the main datasheet of the tray, where they can find their main characteristics. The second, though, it's a dynamically generated excel table, with the selected tray and a list of related products that can be helpful in their installation. These products are also stored in the database.

Conclusions

The final application has been successfully tested with real users, and can still be improved in order to obtain more specific results. Also, the database can be permanently updated in order to offer the latest tray models and related products.