CONNECTIONS IN REINFORCED CONCRETE AND STRUCTURAL STEEL

by

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Project Report

Submitted to

the Department of Civil Engineering

of the Higher Technical Institute

Nicosia - Cyprus

In partial fulfillment of the requirements

for the diploma of

TECHNICIAN ENGINEER

in

CIVIL ENGINEERING

June 1992

ACKNOWLEDGEMENTS

I gratefully acknowledge the assistance given by Mr. Demetris Andreou in reading and commenting my project.

June 1992

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SUMMARY

This project is concerned with the behaviour and design of connections in reinforced concrete and structural steel.

Chapter 1 provides a general introduction for the connections.

Chapter 2 deals with connections between members which are constructed in reinforced in situ concrete. Connections between beams and columns are considered first and in greater detail than connections between other types of member e.g., corbel (zero applied moments) connections, column-to-column connection, right-angled beam-to-beam connections, in -line beam-to-beam connections, slab-to-wall connections etc. Towards the end of the chapter a number of design examples are provided.

Chapter 3 deals with the behaviour and design of welded and bolted structural steel connections. Direct shear joints, single shear and double shear, are checked for failure by shear on the bolt shank, bearing on the member or bolt, tension in the member and shear at the end of the member. Eccentric connections subject to torsion and direct shear forces are considered towards. Then various types of pinned and rigid connections are discussed in greater detail e.g. beam-to-column connection, beam-to-beam connection, column-to-foundation connection etc. Structural hollow sections with their various types are considered later, a tube with another, a tube with a flat plate, a rectangular hollow section with another or with a flat plate. Towards the end of the chapter a number of design examples are provided based on the literature given in the chapter. Finally the conclusions are given.

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