

HIGHER TECHNICAL INSTITUTE

CIVIL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

**AN INVESTIGATION INTO THE STRENGTH OF BOLTED
CONNECTIONS OF TIMBER**

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PREFACE

The stimulation to carry over this particular test came after some comments had been published to the "Structural Engineer" magazine regarding some discrepancies found on the B.S 5268 about the values of the safe Working Loads quoted for bolted joints in timber.

In some of these correspondence timber engineers revealed the problem that they are facing. Between the different editions of the B.S 5268 there are many fluctuations on the values of permissible loads and furthermore no explanation is given about the reason which led to these variations. Moving one step further the engineers give the different values for permissible loads on the different editions of the code and we amazedly observe that some values of the safe loads are either doubled or halved without any explanation for this.

In our case now, we tried to derive the Safe Working Load with some tests in bending and tension on Swedish and Whitewood softwoods. Of course in our mind we should always consider that timber is a very complex material and is quite difficult to set permissible values that will cover the whole range of structural timber because of the variable nature of the material, not just between pieces but also within each piece.

We just hope that our test will give some guidance to what really goes on with the fluctuation in the values of the Safe Working Loads of the B.S 5268 and we surely hope that we would not contribute to the addition of the confusion about this problem.

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