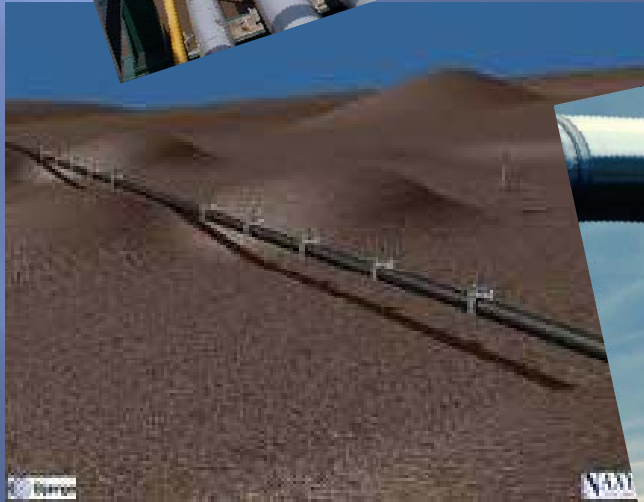


# Ductgrove Limited Design Workshops



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# DUCTGROVE LIMITED DESIGN WORKSHOPS

**Workshops – for Design Calculations for Process Plant and Equipment**  
**By C. Knapper IEng MIED**

## Preface

### About the author / compiler of these workshops

Carl Knapper has been working in the field of pressure vessel and piping technology for over 32 years, Starting as a Design R&D Engineer at a small fabrication company, and has spent many years extending the methods of computer Stress Analysis design code compliance on Plant and Engineering facilities in the UK.

He has participated on various national and international projects related to design, structural reliability, Fitness for Service, and inspection programme development for Petrochemical and Nuclear applications in pressure vessel design and in particular piping technology and analysis. He is a member of the Institute of Engineering designers.

There are many calculations which can be performed to qualify piping and process equipment these are normally covered by a design code, and in most high pressure applications legislation is involved and approval is required.

The objective of these short workshops is to give the user / engineer the basic understanding of the requirements for each part of a pressure system design.

These notes calculations must be checked and approved by a qualified engineer, here at Ductgrove limited we have many template of calculations to qualify plant and equipment to show its code compliance.

We hope these workshops are informative and help you to understand your responsibilities as an owner / manager or designer – to ensure any work carried out on an operating plant is code compliant.

Thank you Carl Knapper

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