



[cursus]

Guide to the Standards and Conventions of Graphic Representation

Reference Document

SUMMARY

The purpose of this book is to provide a structured, fully illustrated explanation of the basic standards and conventions governing technical drawing. The approach – one topic per page – is simple and effective, giving an overview of each topic addressed, and of the information provided, at a glance.

The *Guide* contains the basic definitions and conventions of technical drawing, the conventional shape description, sectional views, dimensioning, thread symbols and their specifications. An essentially visual tool in a convenient spiral notebook format, the *Guide* is a compilation of techniques and instructions to help readers improve their skills in the graphic definition of objects, including products, components, and even buildings, in accordance with the standards and conventions of technical drawing. It is a concise, up-to-date reference manual, which fully conforms to the principal Canadian and international technical drawing standards.

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TARGET AUDIENCE

This booklet is primarily intended for undergraduate engineering students, but community college students and drafting trainees will also find it useful, as it can be used as a reference manual in any course requiring a knowledge of technical drawing. Professional engineers, as well as designers and draftsmen and women working in industry, will find it an excellent reference.

AUTHOR

André Cincou, an engineer, is a Teaching Professor in the Department of Mechanical Engineering at Polytechnique Montréal, where he coordinates the computer-assisted engineering drawing course and is actively involved in the mechanical system modeling course. He holds Bachelor's and Master's degrees in civil engineering from this institution, and for a number of years has been interested in developing new teaching methods, among them, educational software on orthographic projection and spatial visualization.

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Foreword

CHAPTER 1

Drawing Conventions and Practices

Instrumental Drawing vs. Sketching
Technical Lettering
Types of Lines and Line Thickness
Hidden and Center Line Conventions

CHAPTER 2

Conventional Shape Description

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Systematic Arrangement of Views
Precedence of Lines
Isometric Drawing vs. Isometric Projection
Hidden Lines in Isometric Drawings
Graphic Signature of Normal, Inclined
and Oblique Surfaces
Structured Resolution Method for Problems
with Two Complete Views
Curved Surfaces
Types of Machined Holes
Intersections and Tangencies
Rough and Finished Surfaces
Conventional Fillets, Rounds, and Runouts

CHAPTER 3

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Standard Cutting-Plane Lines and Section Lining
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Web in Section View, Broken-Out Section,
Revolved Section and Removed Section
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Metric Thread Symbols and Specifications

CHAPTER 6

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Detail Drawing
Assembly Drawing
Construction Drawing

Appendices

Decimal Equivalents of Parts of an Inch
Standard Scales Used in Drawings
Standard Drawing Sizes
American National Standard for Unified Thread
and Tap Drill Sizes
American National Standard for Metric Thread
and Tap Drill Sizes

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