

# Contents

## Rules of interchangeability

1. Introduction.....	4
2. Gradation of quantities.....	5
2.1. Choice of preferred numbers.....	5
2.2. Preferred numbers.....	7
2.3. Use of preferred numbers.....	9
3. Dimensioning and tolerancing.....	10
3.1. Tolerancing of longitudinal and angular dimensions.....	11
3.2. Bases of the ISO system of limits and fits.....	16
3.3. Dimensional loops.....	24
3.4. Tolerancing of hole pitches.....	28
3.5. General tolerances.....	32
3.6. Geometrical tolerances.....	33
3.7. Tolerancing of cones.....	41
3.8. Tolerancing of threads.....	42
4. Surface texture parameters.....	44
4.1. Terms and definitions.....	44
4.2. Amplitude parameters.....	47
4.3. Spacing parameters.....	48
4.4. Hybrid parameters.....	49
4.5. Relationship between surface roughness and prescribed tolerance.....	50
4.6. Indication of surface roughness in engineering drawings.....	51
4.7. Surface roughness values produced by common production processes.....	53

## Representation and dimensioning of machine elements

5. Springs.....	54
6. Gears.....	58
7. Transmission of power, torque moment.....	67
7.1. Keys.....	67
7.2. Straight sided splines.....	69
7.3. Involute splines.....	70
7.4. Serrations, fine splines.....	70
7.5. Axial locking of a hub and shaft joints.....	71
8. Welding.....	73
9. Drawings for special purposes.....	79
9.1. Castings.....	79
9.2. Forgings.....	81
10. Basic engineering materials.....	82
11. Tasks.....	84
11.1. Screw joints and locking devices.....	84
11.2. Hub and shaft joint.....	88
11.3. Weldments.....	89
11.4. Mounting unit - drilling jig.....	91
Values of standard tolerances IT.....	93
Graphical symbols and abbreviations used in technical drawings.....	94