

ISO 31657-1:2025-10 (E)

Plain bearings - Hydrodynamic plain journal bearings under steady-state conditions - Part 1: Calculation of multi-lobed and tilting pad journal bearings

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols and units	1
5	General principles, assumptions and preconditions	7
6	Calculation method	12
6.1	General	12
6.2	Load-carrying capacity	14
6.3	Frictional power	14
6.4	Lubricant flow rate	14
6.5	Heat balance	15
6.6	Maximum lubricant film temperature	17
6.7	Maximum lubricant film pressure	18
6.8	Operating states	18
6.9	Further influencing parameters	18
6.10	Stiffness and damping coefficients	19
Annex A (informative) Calculation examples		24
Bibliography		38