

ISO 5199:2002-03 (E)

Technical specifications for centrifugal pumps - Class II

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Design	6
4.1	General	6
4.2	Prime movers	7
4.3	Critical speed, balance and vibration	8
4.4	Pressure-containing parts	9
4.5	Branches (nozzles) and miscellaneous connections	11
4.6	External forces and moments on flanges (inlet and outlet)	11
4.7	Branch (nozzle) flanges	12
4.8	Impellers	12
4.9	Wear rings or equivalent components	12
4.10	Running clearance	12
4.11	Shafts and shaft sleeves	12
4.12	Bearings	14
4.13	Shaft sealing	15
4.14	Labelling	18
4.15	Couplings	18
4.16	Baseplate	19
4.17	Special tools	20
5	Materials	20
5.1	Selection of materials	20
5.2	Material composition and quality	20
5.3	Repairs	20
6	Shop inspection and tests	20
6.1	General	20
6.2	Inspection	20
6.3	Tests	21
6.4	Final inspection	22
7	Preparation for dispatch	22
7.1	Shaft seals	22
7.2	Preservation for transport and storage	22
7.3	Securing of rotating parts for transport	23
7.4	Openings	23
7.5	Piping and auxiliaries	23
7.6	Identification	23
Annex A (normative) Centrifugal pump -- Data sheet		24
Annex B (informative) External forces and moments on branches		27

Annex C (normative) Enquiry, proposal, purchase order	40
Annex D (normative) Documentation after purchase order	41
Annex E (informative) Examples of seal arrangements	42
Annex F (informative) Piping arrangements for seals	45
Annex G (informative) Designation examples using references from annexes E and F	53
Annex H (informative) Checklist	55
Bibliography	57