

ISO 8528-5:2022-06 (E)

Reciprocating internal combustion engine driven alternating current generating sets - Part 5: Generating sets

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms, definitions and symbols	1
3.1	Terms and definitions	1
3.2	Symbols	9
4	Other regulations and additional requirements	10
5	Frequency characteristics	11
5.1	General	11
5.2	Safety frequency	11
6	Voltage characteristics	11
7	Sustained short-circuit current	12
8	Factors affecting generating set performance	12
8.1	General	12
8.2	Power	12
8.3	Frequency and voltage	12
8.4	Load acceptance	13
9	Cyclic irregularity	15
10	Starting characteristics	17
11	Stop time characteristics	18
12	Parallel operation	19
12.1	Generating sets coupled with each other without grid	19
12.1.1	Active power sharing	19
12.1.2	Reactive power sharing	22
12.2	Generating sets connected to the grid	24
12.2.1	General	24
12.2.2	Influence on operating behaviour	24
12.2.3	Design features	24
13	Rating plates	28
14	Additional factors influencing generating set performance	30
14.1	Starting methods	30
14.2	Shutdown methods	30
14.3	Fuel and lubrication oil supply	31
14.4	Combustion air	31
14.5	Exhaust system	31
14.6	Cooling and room ventilation	31
14.7	Monitoring	31

14.8	Noise emission	32
14.9	Coupling	32
14.10	Vibration	32
14.10.1	General	32
14.10.2	Torsional vibration	32
14.10.3	Linear vibration	33
14.11	Foundations	33
15	Performance class operating limit values	33
15.1	General	33
15.2	Recommendation for gas engine operating limit values	34
	Bibliography	37