

ISO 17540:2016-12 (E)

Space systems - Liquid rocket engines and test stands - Terms and definitions

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Terms and definitions	1
2.1	General	1
2.2	Engine units	1
2.3	Engine types by way of work process	2
2.4	Engine types by multiplicity of use and integration	2
2.5	Engine types by purpose	2
2.6	Low-thrust engine types by way of work process	3
2.7	General parameters and performance of engine	3
2.8	Engine time characteristics, types of operating and resources	6
2.9	Low-thrust engine performance	7
2.10	Engine operation modes	9
2.11	Low-thrust engine operation modes	10
2.12	Chamber (gas generator) components	10
2.13	Gas generator types	12
2.14	Operating process in chamber (gas generator)	12
2.15	Nozzle types	14
2.16	Nozzle items	15
2.17	Nozzle characteristics	16
2.18	Nozzle operation modes	16
2.19	Flow in nozzle	16
2.20	Turbine pump components	17
2.21	Pump characteristics	18
2.22	Turbine pump general characteristics	18
2.23	Automation units	19
2.24	Devices and methods of control efforts creation in engines	19
2.25	Engine cooling	19
2.26	Engine thermal protection	20
2.27	Engine tests: General	20
2.28	Types of engine tests: Thermal loads	21
2.29	Types of engine tests: Associate with rocket	21
2.30	Types of engine tests: Test site	21
2.31	Types of engine tests: Organizational factor and test site	21
2.32	Types of engine tests: Test conditions	21
2.33	Types of engine tests: Accelerated data accessing	22
2.34	Types of engine tests: Test purposes	22
2.35	Types of tests specific for low-thrust engines	23
2.36	Test technology	23
2.37	Test conditions	23
2.38	Test results	24
2.39	Engine reliability	24
2.40	Engine defects	25
2.41	Engine failure modes	25
2.42	Engine operation	25
2.43	Analysis of engine technical status	26
2.44	Engine reliability index	26
2.45	Engine quality control	26

2.46	Structural and functional analysis of reliability	27
2.47	Test stands: General	27
2.48	Stand types	28
2.49	Stand systems	28
2.50	Post-test processing	29
2.51	Stand system elements	30
2.52	Stand compartments	31