Director (Deputy director) of
Federal Accreditation Service

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signature initials, surname

Attachment
to Certificate of accreditation

No. RA.RU.312321
Dated "11" October 2017
on 3 pages, page 1

FIELD OF ACCREDITATION

Public Joint Stock Company "Aeroflot - Russian Airlines"
(PJSC "Aeroflot")
name of the legal entity or surname, name and patronymic
(if available) of the individual entrepreneur

Territory of Sheremetyevo-1 Airport, Khimki, 141426 Moscow Region
business address

Measuring Instruments Calibration

РДВ
code of the calibration mark

No.	Measurements, type (group) of measuring instruments	Metrology Requirements		Note
		measurement range	uncertainty (accuracy, class, category)	
1	2	3	4	5
Geometry Measurements				
1	Metal measuring tapes	(0 – 10 000) mm	Up = 0,058 mm accuracy ±0,1 mm	
2	Beam-type measuring tools	(0 – 400) mm	Up = 0,058 mm accuracy ±0,1 mm	
3	Measuring rulers	(0 – 500) mm	Up = 0,058 mm accuracy ±0,1 mm	
Mechanical Measurements				
4	Torque, scale, electronic wrenches and screwdrivers	(1 – 1000) Nm	Up = 0,046 Nm accuracy ±(0,03-30) Nm	
5	Dynamometers	(0 – 200) kgf	Up = 0,115 kgf accuracy ± 2,0 kgf	
Pressure/Vacuum Measurements				
6	Indicating and digital manometers, vacuum pressure gauges, vacuum gauges	(0 - 60) MPa	Up = 0,012 Pa accuracy class 0,1	

Time/Frequency Measurements				
7	Frequency counter electronic counting	0,01 Hz – 1500 MHz	Up =0,0011 Hz accuracy ± 0,57 Hz	
8	Low-frequency signal generators	10 Hz – 10 MHz 1 μV – 30 V Vsh (0,03 – 30)%	Up = 0,578 Hz accuracy ±(0,5-5,7) Hz Up =0,233 V accuracy ±(0,16·10^{-6} -0,2) V Up =0,055 % accuracy ±(0,5-2,0) %	
9	Measuring signal generators	100 kHz – 1200 MHz 1 μV – 1 V (0 – 100) dB	Up =0,0011 Hz accuracy ±(5·10^{-7}-5·10^{-6}) Hz Up =0,24 V accuracy ±(0,0002-0.2) V Up =0,69 dB accuracy ±(1,0-1,5) dB	
Electrical/Magnetic Measurements				
10	Digital multimeters	(1·10^{-5} – 1000) V (10 – 5·10^{5}) Hz (2,9·10^{-4} – 20,5) A (10 – 3·10^{4}) Hz (1·10^{-5} – 1020) V (1·10^{-6} – 20,5) A 0,19 nF – 110 μF (-250) °C - (+2316) °C (1·10^{-3} – 1,1·10^{9}) Ohm	Up = 7,1·10^{-6} V accuracy ±(2,5·10^{-7}±1,2) V Up = 1,2·10^{-7} A accuracy ±(0,5·10^{-6}-8·10^{-3}) A Up = 1,2·10^{-6} V accuracy ±(4·10^{-6}-8·10^{-2}) V Up = 4,04·10^{-8} A accuracy ±(8·10^{-8}-8,5·10^{-2}) A Up = 2,1·10^{-10} F accuracy ±(5·10^{-11}-3,5·10^{-6}) F Up = 0,18 °C accuracy ±(0,7-1,6) °C Up = 1,2·10^{-3} Ohm accuracy ±(4·10^{-3}-70) Ohm	
11	AC/DC ammeters and voltmeters	(1·10^{-5} – 20,5) A (1·10^{-4} – 1000) V (1·10^{-2} – 1000) V (45 – 1000) Hz (2,9·10^{-4} – 20,5) A (45 – 1000) Hz	Up = 2,02·10^{-7} A accuracy class 0,2 Up = 1,2·10^{-5} V accuracy class 0,1 Up = 7,3·10^{-5} V accuracy class 0,5 Up = 1,9·10^{-6} A accuracy class 0,5	
12	DC multi-valued resistance measures	(1·10^{-3} – 1·10^{5}) Ohm (1·10^{5} – 1·10^{9}) Ohm	Up = 4,6·10^{-6} Ohm accuracy class 0,01 Up = 0,24 Ohm accuracy class 0,02	
13	Ohmmeters	(1·10^{-3} – 1·10^{5}) Ohm (1·10^{5} – 1·10^{8}) Ohm (1·10^{8} – 1·10^{12}) Ohm	Up = 2,3·10^{-8} Ohm accuracy ±(2·10^{-5}-3,5) Ohm Up = 2,3·10^{1} Ohm accuracy ±(8-8·10^{4}) Ohm Up =1,2·10^{6} Ohm accuracy ±(4·10^{6}-12·10^{9}) Ohm	
14	DC power sources	(0 – 300) V	Up = 3,5·10^{-3} V accuracy ±(0,25-0,5) V	

		(0 – 10) A	Up = $6{,}9 \cdot 10^{-4}$ A accuracy ±(0,02-0,04) A	
15	Aircraft hardware measurement and control devices	(0 – 300) V (0 – 20) A (0 – 300) V (10 – $5 \cdot 10^{5}$) Hz (0 – 20) A (10 – $3 \cdot 10^{4}$) Hz ($1 \cdot 10^{-3}$ – 10^{12}) Ohm	Up = $2{,}3 \cdot 10^{-4}$ V accuracy ±($2 \cdot 10^{-3}$-0,6) V Up = $1{,}2 \cdot 10^{-4}$ A accuracy ±($1 \cdot 10^{-4}$-$2 \cdot 10^{-2}$) A Up = $5{,}8 \cdot 10^{-4}$ V accuracy ±(5-10^{-3}-1,5) V Up = $5{,}8 \cdot 10^{-4}$ A accuracy ±($5 \cdot 10^{-4}$-0,1) A Up = $2{,}3 \cdot 10^{-8}$ Ohm accuracy ±(2-10^{-5}-$2 \cdot 10^{7}$) Ohm	
Radio Engineering/ Radio Electronic Measurements				
16	Oscillographs	1 mV – 200 V (0 – 1 000) MHz	Up =0,057 V accuracy ±0,15 V	
17	Aircraft hardware measurement and control devices	(0 – 100) dB (0 – 4,5) GHz	Up =0,69 accuracy ±1,2 dB	
18	Digital multipurpose voltmeters	($1 \cdot 10^{-5}$- 1 000) V (10-$5 \cdot 10^{5}$) Hz ($2.9 \cdot 10^{-4}$-20,5) A (10-$3 \cdot 10^{4}$) Hz ($1 \cdot 10^{-5}$- 1 000) V ($1 \cdot 10^{-6}$ – 20,5) A ($1 \cdot 10^{-3}$ – $1{,}1 \cdot 10^{9}$) Ohm	Up = $7{,}1 \cdot 10^{-6}$ V accuracy ±($2{,}5 \cdot 10^{-7}$-1,2) V Up = $1{,}2 \cdot 10^{-7}$ A accuracy ±($0{,}5 \cdot 10^{-6}$-$8 \cdot 10^{-3}$) A Up = $1{,}2 \cdot 10^{-6}$ V accuracy ±($4 \cdot 10^{-6}$-$8 \cdot 10^{-2}$) V Up = $4{,}04 \cdot 10^{-8}$ A accuracy ±($8 \cdot 10^{-8}$-$8{,}5 \cdot 10^{-2}$) A Up = $1{,}2 \cdot 10^{-3}$ Ohm accuracy ±($4 \cdot 10^{-3}$-70) Ohm	

Director of Aircraft Maintenance Department E.V. Ushakov

L.S.