

Číslo vzorku	Rychlost skenování (mm/s)	Výkon laseru (W)	Vzdálenost šraf (μm)	Objemová hustota energie (J/mm ³)
1.2709-F1-G-01-001	180	800	105	54
1.2709-F1-G-01-002	180	800	105	54
1.2709-F1-G-01-003	180	800	105	54
1.2709-F1-G-01-004	180	800	105	54
1.2709-F1-G-01-005	180	800	105	54
1.2709-F1-G-01-006	180	800	105	54
1.2709-F1-G-01-007	180	800	105	54
1.2709-F1-G-01-008	180	800	105	54
1.2709-F1-G-01-009	180	800	105	54
1.2709-F1-G-01-010	180	800	105	54
1.2709-F1-G-01-011	180	800	105	54
1.2709-F1-G-01-012	180	800	105	54
1.2709-F1-G-01-013	180	800	105	54
1.2709-F1-G-01-014	180	800	105	54
1.2709-F1-G-01-015	180	800	105	54
1.2709-F2-G-01-001	200	1000	70	71
1.2709-F2-G-01-002	200	1000	90	56
1.2709-F2-G-01-003	200	1000	110	45
1.2709-F2-G-01-004	400	1200	70	119
1.2709-F2-G-01-005	400	1200	90	93
1.2709-F2-G-01-006	400	1200	110	76
1.2709-F2-G-01-007	200	800	70	89
1.2709-F2-G-01-008	300	800	70	134
1.2709-F2-G-01-009	250	1000	70	89
1.2709-F2-G-01-010	250	1000	90	69
1.2709-F2-G-01-011	250	1000	110	57
1.2709-F2-G-01-012	200	1400	70	51
1.2709-F2-G-01-013	200	1400	90	40
1.2709-F2-G-01-014	200	1400	110	32
1.2709-F2-G-01-015	200	800	90	69
1.2709-F2-G-01-016	300	800	90	104
1.2709-F2-G-01-017	300	1000	70	107
1.2709-F2-G-01-018	300	1000	90	83
1.2709-F2-G-01-019	300	1000	110	68
1.2709-F2-G-01-020	250	1400	70	64
1.2709-F2-G-01-021	250	1400	90	50
1.2709-F2-G-01-022	250	1400	110	41
1.2709-F2-G-01-023	350	1600	70	78
1.2709-F2-G-01-024	200	800	110	57
1.2709-F2-G-01-025	300	800	110	85
1.2709-F2-G-01-026	350	1000	70	125
1.2709-F2-G-01-027	350	1000	90	97
1.2709-F2-G-01-028	350	1000	110	80
1.2709-F2-G-01-029	300	1400	70	77
1.2709-F2-G-01-030	300	1400	90	60
1.2709-F2-G-01-031	300	1400	110	49
1.2709-F2-G-01-032	350	1600	90	61
1.2709-F2-G-01-033	250	800	70	112
1.2709-F2-G-01-034	350	800	70	156
1.2709-F2-G-01-035	400	1000	70	143
1.2709-F2-G-01-036	400	1000	90	111
1.2709-F2-G-01-037	400	1000	110	91
1.2709-F2-G-01-038	350	1400	70	89
1.2709-F2-G-01-039	350	1400	90	69
1.2709-F2-G-01-040	350	1400	110	57

Číslo vzorku	Rychlost skenování (mm/s)	Výkon laseru (W)	Vzdálenost šraf (μm)	Objemová hustota energie (J/mm ³)
1.2709-F2-G-01-041	350	1600	110	50
1.2709-F2-G-01-042	250	800	90	87
1.2709-F2-G-01-043	350	800	90	122
1.2709-F2-G-01-044	200	1200	70	60
1.2709-F2-G-01-045	200	1200	90	46
1.2709-F2-G-01-046	200	1200	110	38
1.2709-F2-G-01-047	400	1400	70	102
1.2709-F2-G-01-048	400	1400	90	79
1.2709-F2-G-01-049	400	1400	110	65
1.2709-F2-G-01-050	400	1600	70	89
1.2709-F2-G-01-051	250	800	110	71
1.2709-F2-G-01-052	350	800	110	99
1.2709-F2-G-01-053	250	1200	70	74
1.2709-F2-G-01-054	250	1200	90	58
1.2709-F2-G-01-055	250	1200	110	47
1.2709-F2-G-01-056	200	1600	70	45
1.2709-F2-G-01-057	200	1600	90	35
1.2709-F2-G-01-058	200	1600	110	28
1.2709-F2-G-01-059	400	1600	90	69
1.2709-F2-G-01-060	400	800	70	179
1.2709-F2-G-01-061	400	800	90	139
1.2709-F2-G-01-062	300	1200	70	89
1.2709-F2-G-01-063	300	1200	90	69
1.2709-F2-G-01-064	300	1200	110	57
1.2709-F2-G-01-065	250	1600	70	56
1.2709-F2-G-01-066	250	1600	90	43
1.2709-F2-G-01-067	250	1600	110	36
1.2709-F2-G-01-068	400	1600	110	57
1.2709-F2-G-01-069	400	800	110	114
1.2709-F2-G-01-070	350	1200	70	104
1.2709-F2-G-01-071	350	1200	90	81
1.2709-F2-G-01-072	350	1200	110	66
1.2709-F2-G-01-073	300	1600	70	67
1.2709-F2-G-01-074	300	1600	90	52
1.2709-F2-G-01-075	300	1600	110	43
1.2709-F3-G-01-001	350	800	110	99
1.2709-F3-G-01-002	350	800	110	99
1.2709-F3-G-01-003	350	800	110	99
1.2709-F3-G-01-004	350	800	110	99
1.2709-F3-G-01-005	350	800	110	99
1.2709-F3-G-01-006	350	800	110	99
1.2709-F3-G-01-007	350	800	110	99
1.2709-F3-G-01-008	350	800	110	99
1.2709-F3-G-01-009	350	800	110	99
1.2709-F4-G-01-001-STRUCTURE	350	800	110	99
1.2709-F4-G-01-002-STRUCTURE	350	800	110	99
1.2709-F4-G-01-003-STRUCTURE	350	800	110	99
1.2709-F5-G-01-001-STRUCTURE	350	800	110	99
1.2709-F5-G-01-002-STRUCTURE	350	800	110	99
1.2709-F5-G-01-003-STRUCTURE	350	800	110	99
1.2709-F5-G-01-004-STRUCTURE	350	800	110	99
1.2709-F5-G-01-005-STRUCTURE	350	800	110	99
1.2709-F5-G-01-006-STRUCTURE	350	800	110	99
1.2709-F5-G-01-007-STRUCTURE	350	800	110	99
1.2709-F5-G-01-008-STRUCTURE	350	800	110	99
1.2709-F5-G-01-009-STRUCTURE	350	800	110	99

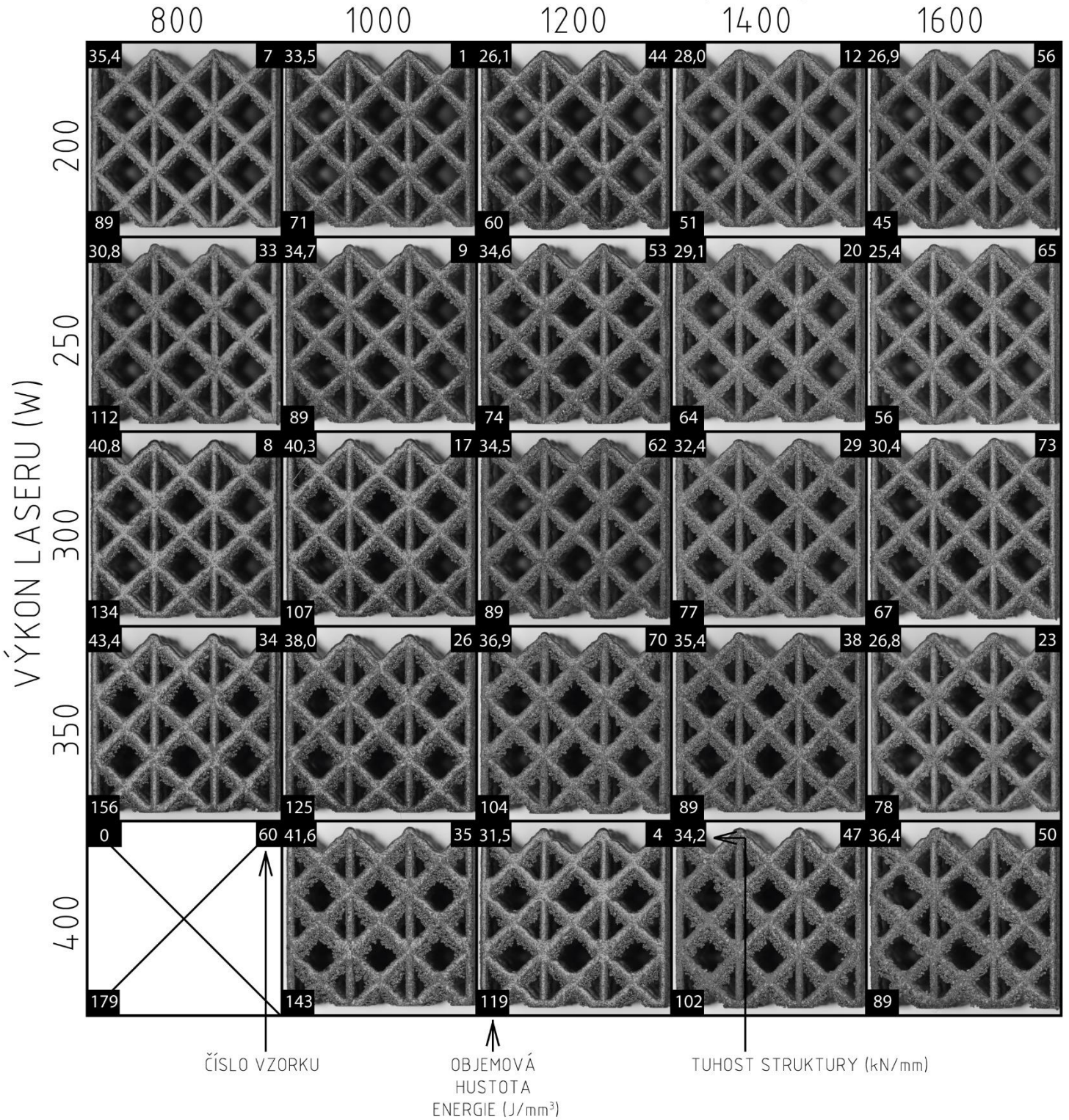
Číslo vzorku	Rychlost skenování (mm/s)	Výkon laseru (W)	Vzdálenost šraf (μm)	Objemová hustota energie (J/mm ³)
1.2709-F6-D-01-001	200	1200	70	60
1.2709-F6-D-01-002	200	1200	90	46
1.2709-F6-D-01-003	200	1200	110	38
1.2709-F6-D-01-004	250	1200	70	74
1.2709-F6-D-01-005	250	1200	90	58
1.2709-F6-D-01-006	250	1200	110	47
1.2709-F6-D-01-007	400	1200	70	119
1.2709-F6-D-01-008	300	1200	70	89
1.2709-F6-D-01-009	300	1200	90	69
1.2709-F6-D-01-010	300	1200	110	57
1.2709-F6-D-01-011	350	1200	70	104
1.2709-F6-D-01-012	350	1200	90	81
1.2709-F6-D-01-013	350	1200	110	66
1.2709-F6-D-01-014	400	1200	90	93
1.2709-F6-D-01-015	400	1200	110	76
1.2709-F6-D-01-016	200	800	70	89
1.2709-F6-D-01-017	200	800	90	69
1.2709-F6-D-01-018	200	800	110	57
1.2709-F6-D-01-019	200	1000	70	71
1.2709-F6-D-01-020	200	1000	90	56
1.2709-F6-D-01-021	200	1000	110	45
1.2709-F6-D-01-022	200	1400	70	51
1.2709-F6-D-01-023	200	1400	90	40
1.2709-F6-D-01-024	200	1400	110	32
1.2709-F6-D-01-025	200	1600	70	45
1.2709-F6-D-01-026	200	1600	90	35
1.2709-F6-D-01-027	200	1600	110	28
1.2709-F6-D-01-028	250	800	70	112
1.2709-F6-D-01-029	250	800	90	87
1.2709-F6-D-01-030	250	800	110	71
1.2709-F6-D-01-031	250	1000	70	89
1.2709-F6-D-01-032	250	1000	90	69
1.2709-F6-D-01-033	250	1000	110	57
1.2709-F6-D-01-034	250	1400	70	64
1.2709-F6-D-01-035	250	1400	90	50
1.2709-F6-D-01-036	250	1400	110	41
1.2709-F6-D-01-037	250	1600	70	56
1.2709-F6-D-01-038	250	1600	90	43
1.2709-F6-D-01-039	250	1600	110	36
1.2709-F6-D-01-040	300	800	70	134
1.2709-F6-D-01-041	300	800	90	104
1.2709-F6-D-01-042	300	800	110	85
1.2709-F6-D-01-043	300	1000	70	107
1.2709-F6-D-01-044	300	1000	90	83
1.2709-F6-D-01-045	300	1000	110	68
1.2709-F6-D-01-046	300	1400	70	77
1.2709-F6-D-01-047	300	1400	90	60
1.2709-F6-D-01-048	300	1400	110	49
1.2709-F6-D-01-049	300	1600	70	67
1.2709-F6-D-01-050	300	1600	90	52
1.2709-F6-D-01-051	300	1600	110	43
1.2709-F6-D-01-052	350	800	70	156
1.2709-F6-D-01-053	350	800	90	122
1.2709-F6-D-01-054	350	800	110	99
1.2709-F6-D-01-055	350	1000	70	125
1.2709-F6-D-01-056	350	1000	90	97

Číslo vzorku	Rychlost skenování (mm/s)	Výkon laseru (W)	Vzdálenost šraf (μm)	Objemová hustota energie (J/mm ³)
1.2709-F6-D-01-057	350	1000	110	80
1.2709-F6-D-01-058	350	1400	70	89
1.2709-F6-D-01-059	350	1400	90	69
1.2709-F6-D-01-060	350	1400	110	57
1.2709-F6-D-01-061	350	1600	70	78
1.2709-F6-D-01-062	350	1600	90	61
1.2709-F6-D-01-063	350	1600	110	50
1.2709-F6-D-01-064	400	800	70	179
1.2709-F6-D-01-065	400	800	90	139
1.2709-F6-D-01-066	400	800	110	114
1.2709-F6-D-01-067	400	1000	70	143
1.2709-F6-D-01-068	400	1000	90	111
1.2709-F6-D-01-069	400	1000	110	91
1.2709-F6-D-01-070	400	1400	70	102
1.2709-F6-D-01-071	400	1400	90	79
1.2709-F6-D-01-072	400	1400	110	65
1.2709-F6-D-01-073	400	1600	70	89
1.2709-F6-D-01-074	400	1600	90	69
1.2709-F6-D-01-075	400	1600	110	57
1.2709-F6-D-02-001	400	1400	70	102
1.2709-F6-D-02-002	400	1400	90	79
1.2709-F6-D-02-003	400	1400	110	65
1.2709-F6-D-02-004	400	1600	70	89
1.2709-F7-E-01-001	350	1000	70	125
1.2709-F7-E-01-002	350	1000	70	125
1.2709-F7-E-01-012	350	1000	70	125
1.2709-F7-E-01-003	400	1600	70	89
1.2709-F7-E-01-004	400	1600	70	89
1.2709-F7-E-01-005	400	1600	70	89
1.2709-F7-E-01-006	200	800	110	57
1.2709-F7-E-01-007	200	800	110	57
1.2709-F7-E-01-008	200	800	110	57
1.2709-F7-E-01-009	350	1000	110	80
1.2709-F7-E-01-010	350	1000	110	80
1.2709-F7-E-01-011	350	1000	110	80
1.2709-F8-G-01-001-SOLID_SIDE	400	1600	70	89
1.2709-F8-G-01-002-SOLID_FRONT	400	1600	70	89
1.2709-F8-G-01-003-SOLID_TOP	400	1600	70	89
1.2709-F8-G-01-004-GRIPPING	400	1600	70	89
1.2709-F8-G-01-005-VENTS	400	1600	70	89
1.2709-F5-G-01-006-VENTS_SIDE	400	1600	70	89
1.2709-F8-G-01-007-STRUCTURE	350	800	110	99
1.2709-F8-G-02-001-SOLID_SIDE	400	1600	70	89
1.2709-F8-G-02-002-SOLID_FRONT	400	1600	70	89
1.2709-F8-G-02-003-SOLID_TOP	400	1600	70	27
1.2709-F8-G-02-004-GRIPPING	400	1600	70	89
1.2709-F8-G-02-005-VENTS	400	1600	70	89
1.2709-F8-G-02-006-VENTS_SIDE	400	1600	70	89
1.2709-F8-G-02-007-STRUCTURE_GRAD	350	800	110	99
1.2709-F8-G-02-010-SOLID_SIDE	400	1600	70	89
1.2709-F8-G-02-011-SOLID_FRONT	400	1600	70	89
1.2709-F8-G-02-012-SOLID_TOP	400	1600	70	27
1.2709-F8-G-02-013-GRIPPING	400	1600	70	89
1.2709-F8-G-02-014-VENTS	400	1600	70	89
1.2709-F8-G-02-015-VENTS_SIDE	400	1600	70	89
1.2709-F8-G-02-016-STRUCTURE_45	350	800	110	99

Číslo vzorku	Rychlost skenování (mm/s)	Výkon laseru (W)	Vzdálenost šraf (μm)	Objemová hustota energie (J/mm ³)
1.2709-F8-G-02-020-SOLID_HOLE	400	1600	70	89
1.2709-F8-G-02-021-SOLID_TOP	400	1600	70	27
1.2709-F8-G-02-022-GRIPPING	400	1600	70	89
1.2709-F8-G-02-023-VENTS	400	1600	70	89
1.2709-F8-G-02-024-VENTS_SIDE	400	1600	70	89
1.2709-F8-G-02-025-STRUCTURE	350	800	110	99
1.2709-F8-G-02-028-SOLID_SIDE	400	1600	70	89
1.2709-F8-G-02-029-SOLID_FRONT	400	1600	70	89
1.2709-F8-G-02-030-SOLID_TOP	400	1600	70	27
1.2709-F8-G-02-031-GRIPPING	400	1600	70	89
1.2709-F8-G-02-032-VENTS	400	1600	70	89
1.2709-F8-G-02-033-VENTS_SIDE	400	1600	70	89
1.2709-F8-G-02-034-STRUCTURE	350	800	110	99
1.2709-F8-G-02-037-SOLID_SIDE	350	1000	110	80
1.2709-F8-G-02-038-SOLID_FRONT	350	1000	110	80
1.2709-F8-G-02-039-SOLID_TOP	350	1000	110	80
1.2709-F8-G-02-040-GRIPPING	350	1000	110	80
1.2709-F8-G-02-041-VENTS	350	1000	110	80
1.2709-F8-G-02-042-VENTS_SIDE	350	1000	110	80
1.2709-F8-G-02-043-STRUCTURE	350	800	110	99
1.2709-F8-G-02-044-SHELL_07_MM	185	2000	85	27
1.2709-F8-G-02-045-LAMELLAE	185	2000	85	27
1.2709-F8-G-02-046-SOLID_SIDE	400	1600	70	89
1.2709-F8-G-02-047-SOLID_FRONT	400	1600	70	89
1.2709-F8-G-02-048-SOLID_TOP	UTAJENO			
1.2709-F8-G-02-049-GRIPPING	400	1600	70	89
1.2709-F8-G-02-050-VENTS	400	1600	70	89
1.2709-F8-G-02-051-VENTS_SIDE	400	1600	70	89
1.2709-F8-G-02-052-STRUCTURE	350	800	110	99
1.2709-F9-G-01-001-SOLID	350	1000	110	80
1.2709-F9-G-01-002-GRIPPING	350	1000	110	80
1.2709-F9-G-01-003-VENTS	350	1000	110	80
1.2709-F9-G-01-004-STRUCTURE	350	800	110	99
1.2709-F9-G-01-005-SHELL_07_MM	185	1600	85	34
1.2709-F9-G-01-006-LAMELLAE	185	1600	85	34

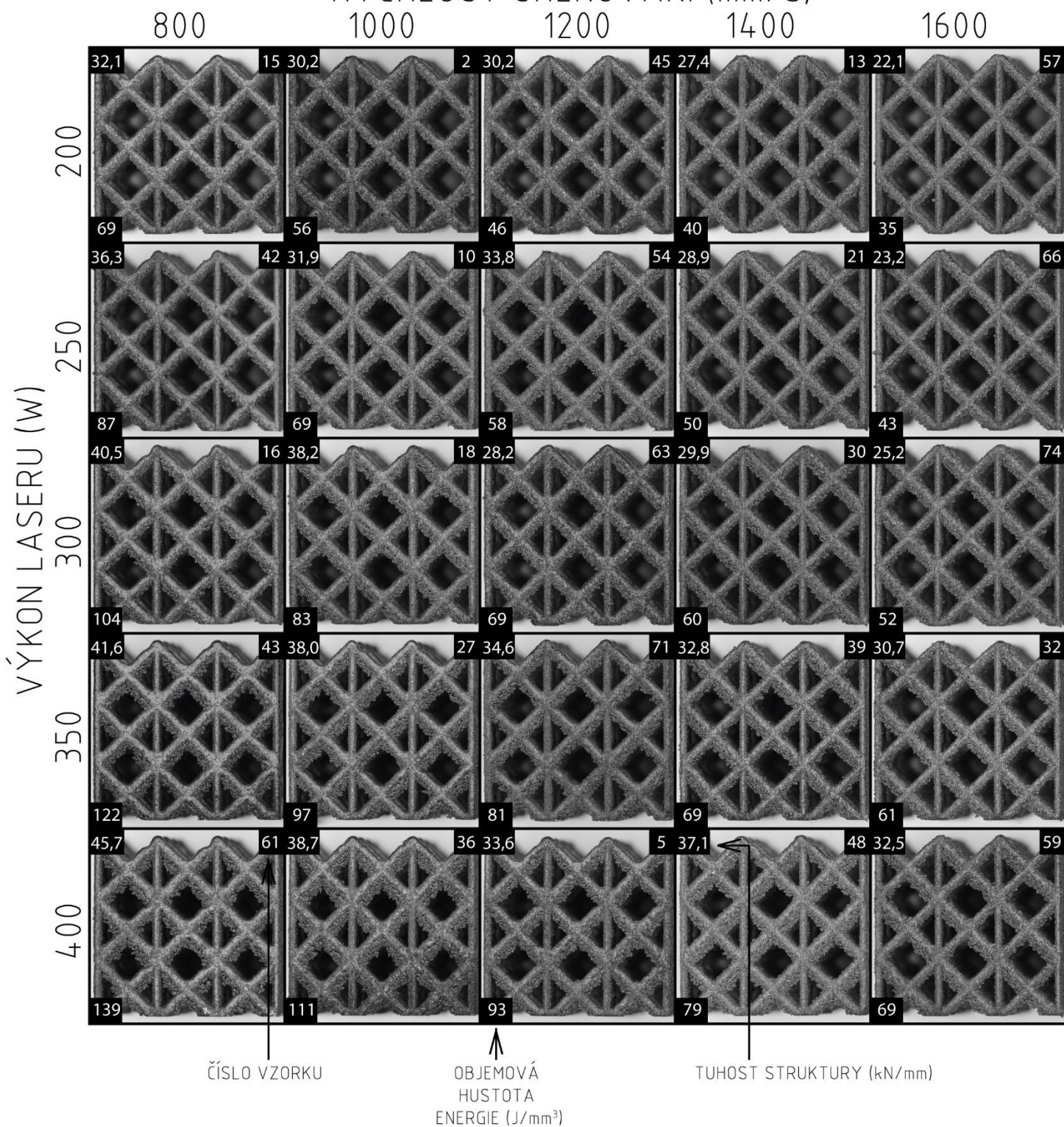
VZDÁLENOST ŠRAF 70 μm

RYCHLOST SKENOVÁNÍ (mm/s)



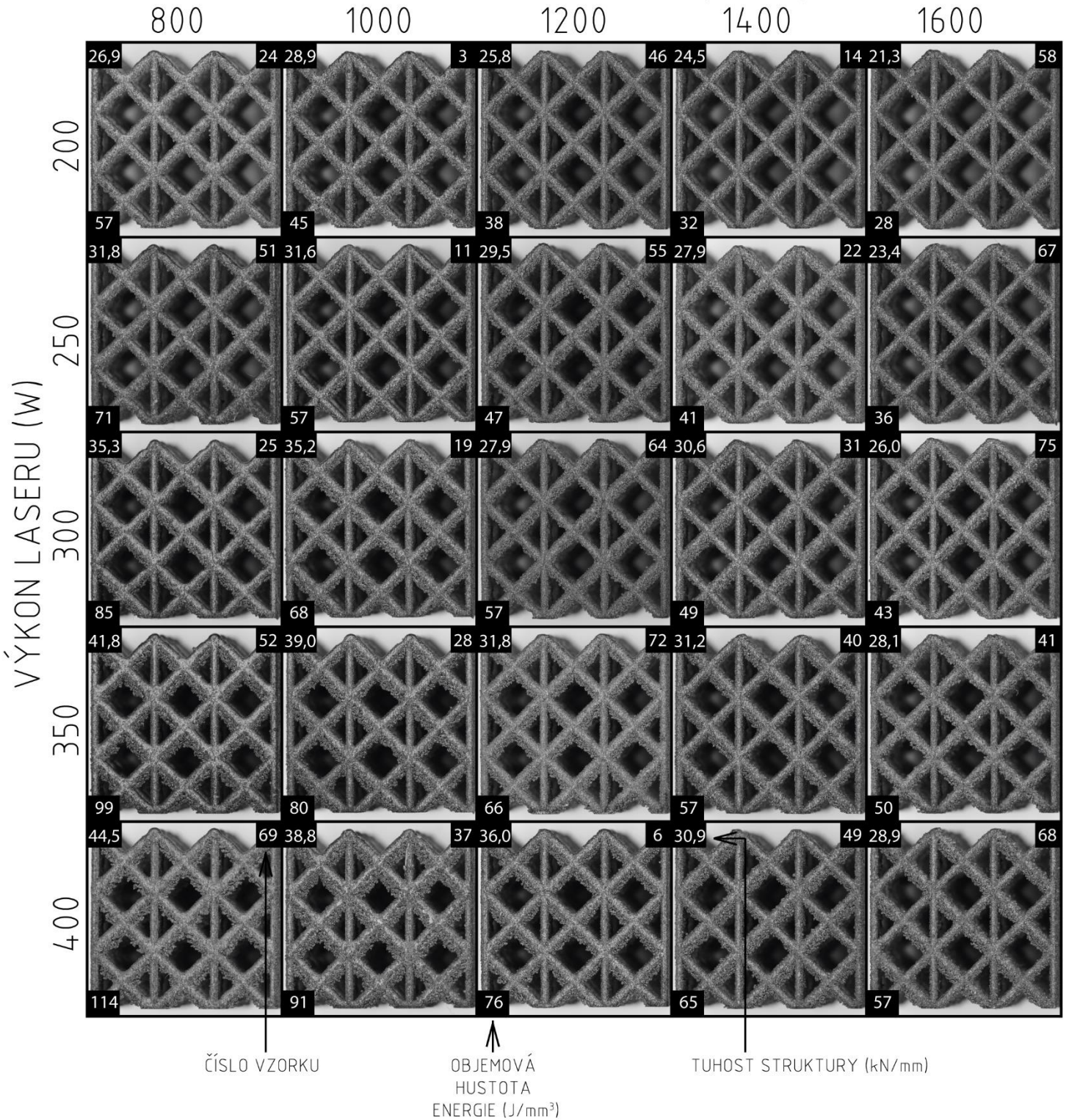
VZDÁLENOST ŠRAF 90 μm

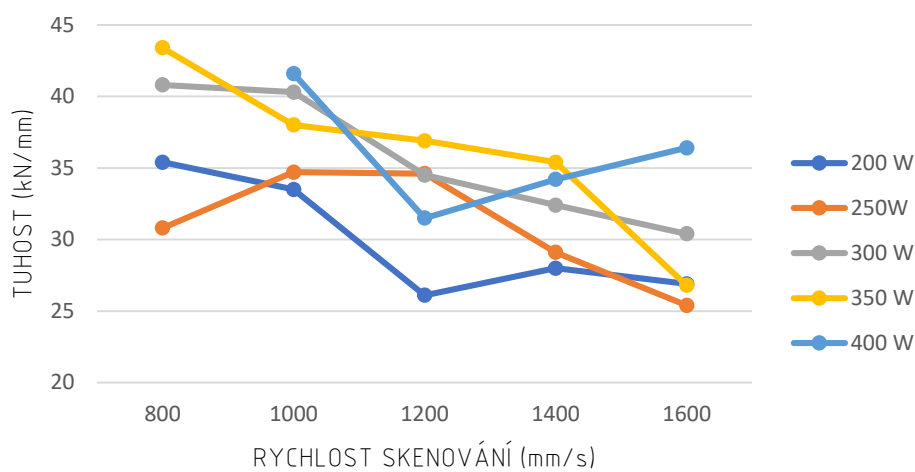
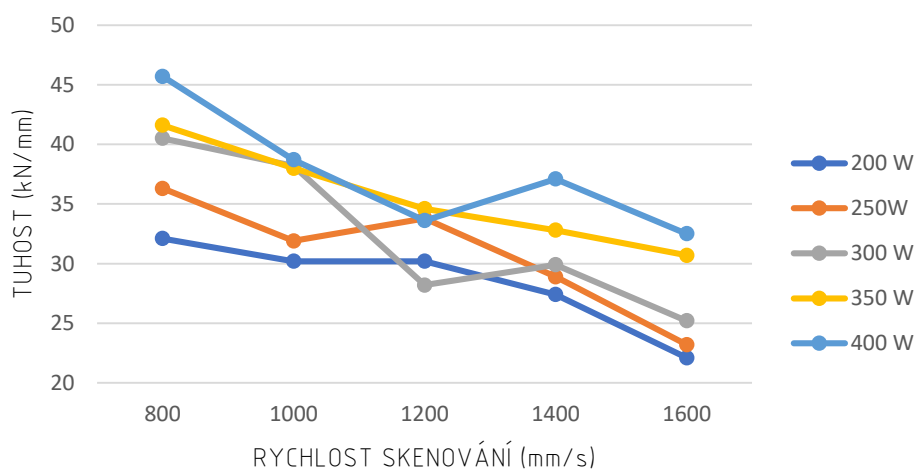
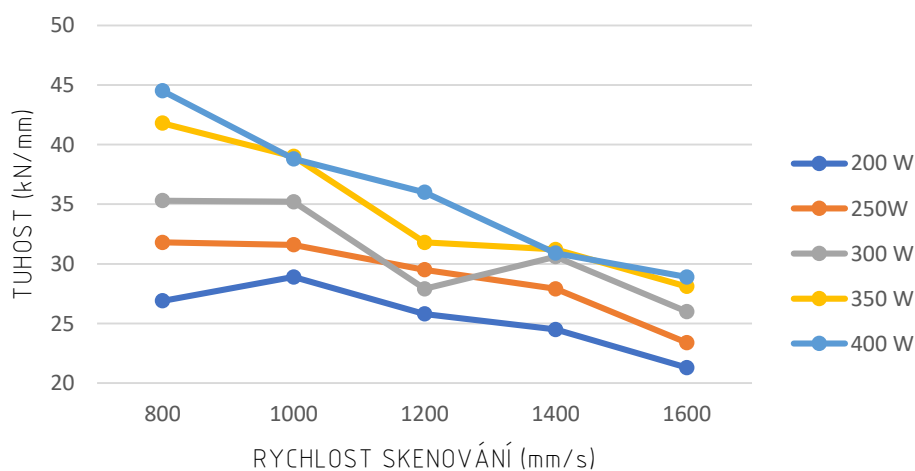
RYCHLOST SKENOVÁNÍ (mm/s)

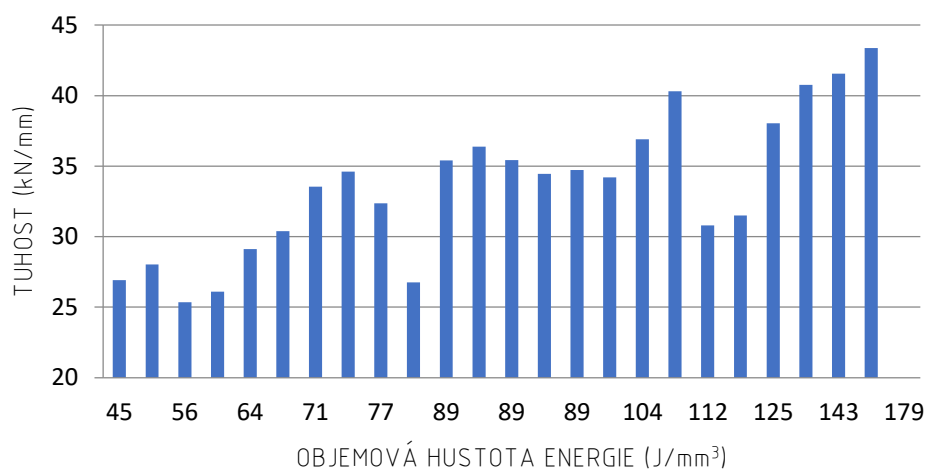
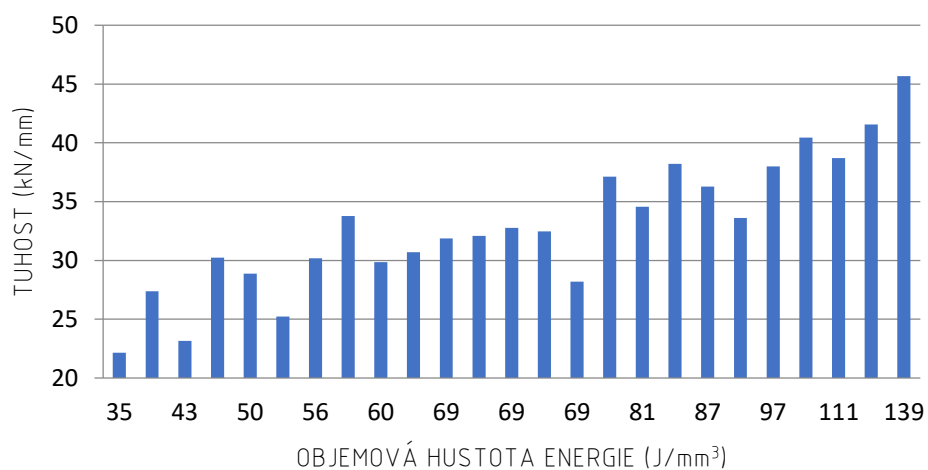
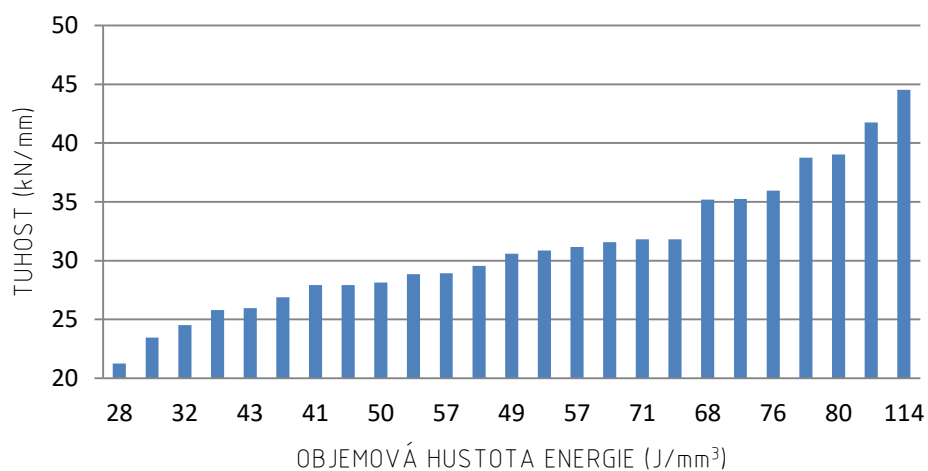


VZDÁLENOST ŠRAF 110 μm

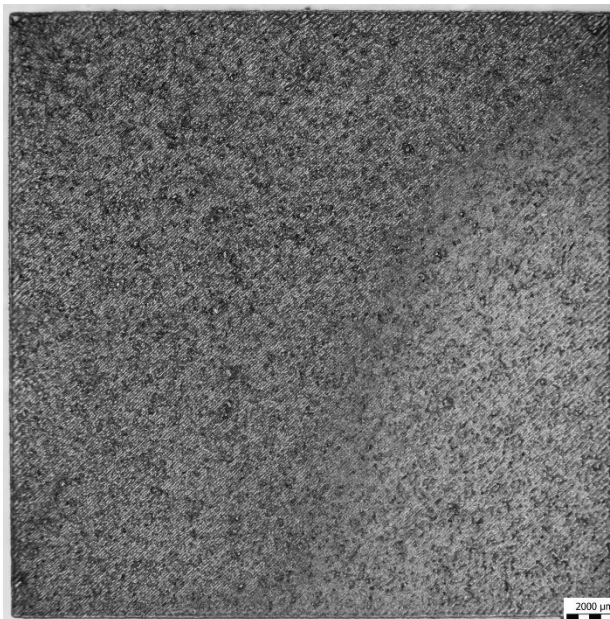
RYCHLOST SKENOVÁNÍ (mm/s)



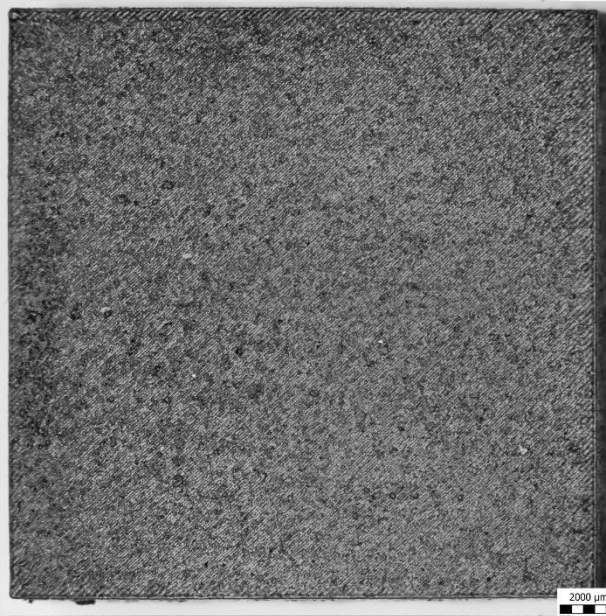
VZDÁLENOST ŠRAF 70 μm VZDÁLENOST ŠRAF 90 μm VZDÁLENOST ŠRAF 110 μm 

VZDÁLENOST ŠRAF 70 μm VZDÁLENOST ŠRAF 90 μm VZDÁLENOST ŠRAF 110 μm 

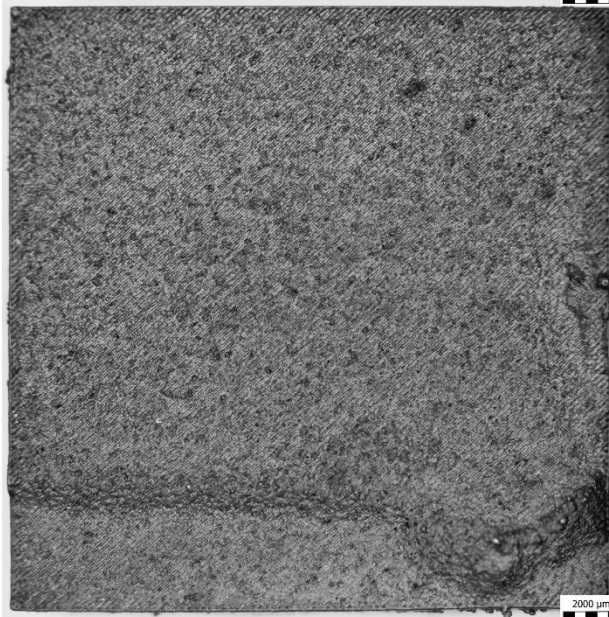
SKOŘEPINA NA
3 mm BUŇKÁCH ➤

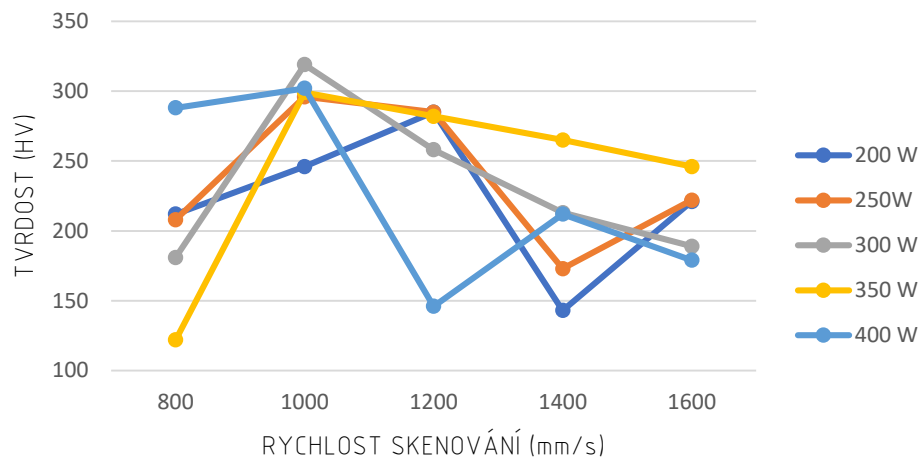
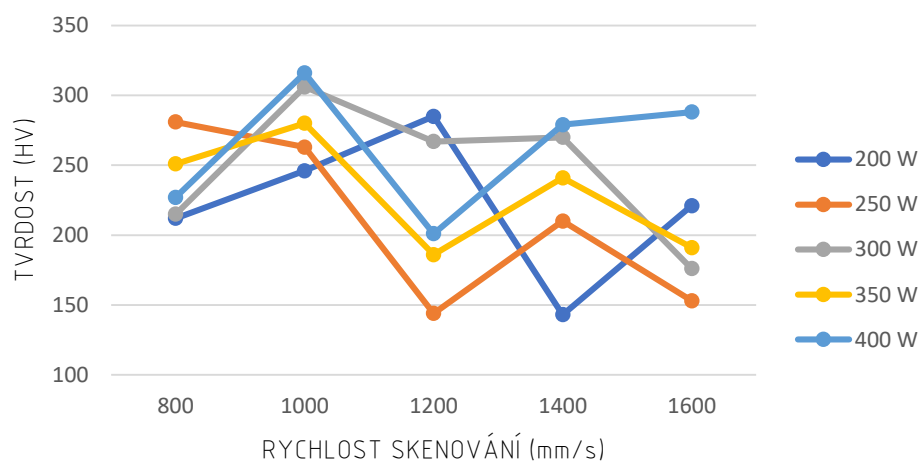
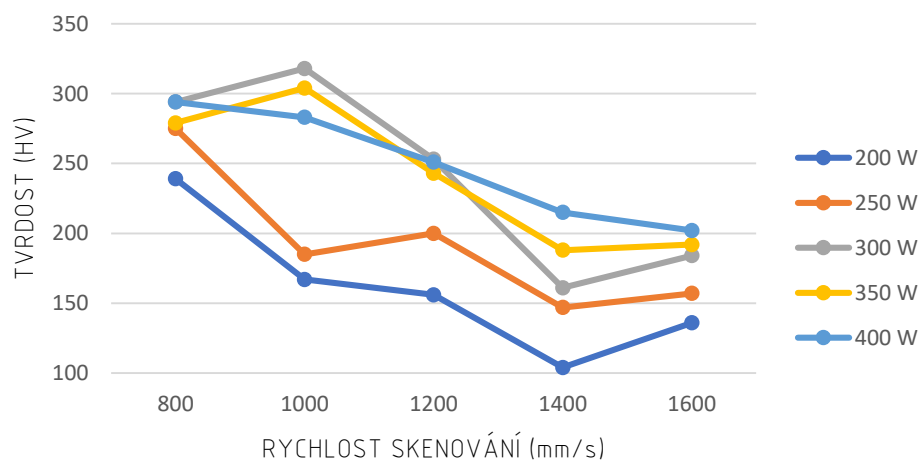


SKOŘEPINA NA
5 mm BUŇKÁCH ➤



SKOŘEPINA NA
7 mm BUŇKÁCH ➤



VZDÁLENOST ŠRAF 70 μm VZDÁLENOST ŠRAF 90 μm VZDÁLENOST ŠRAF 110 μm 

VZDÁLENOST ŠRAF 70 μm

RYCHLOST SKENOVÁNÍ (mm/s)

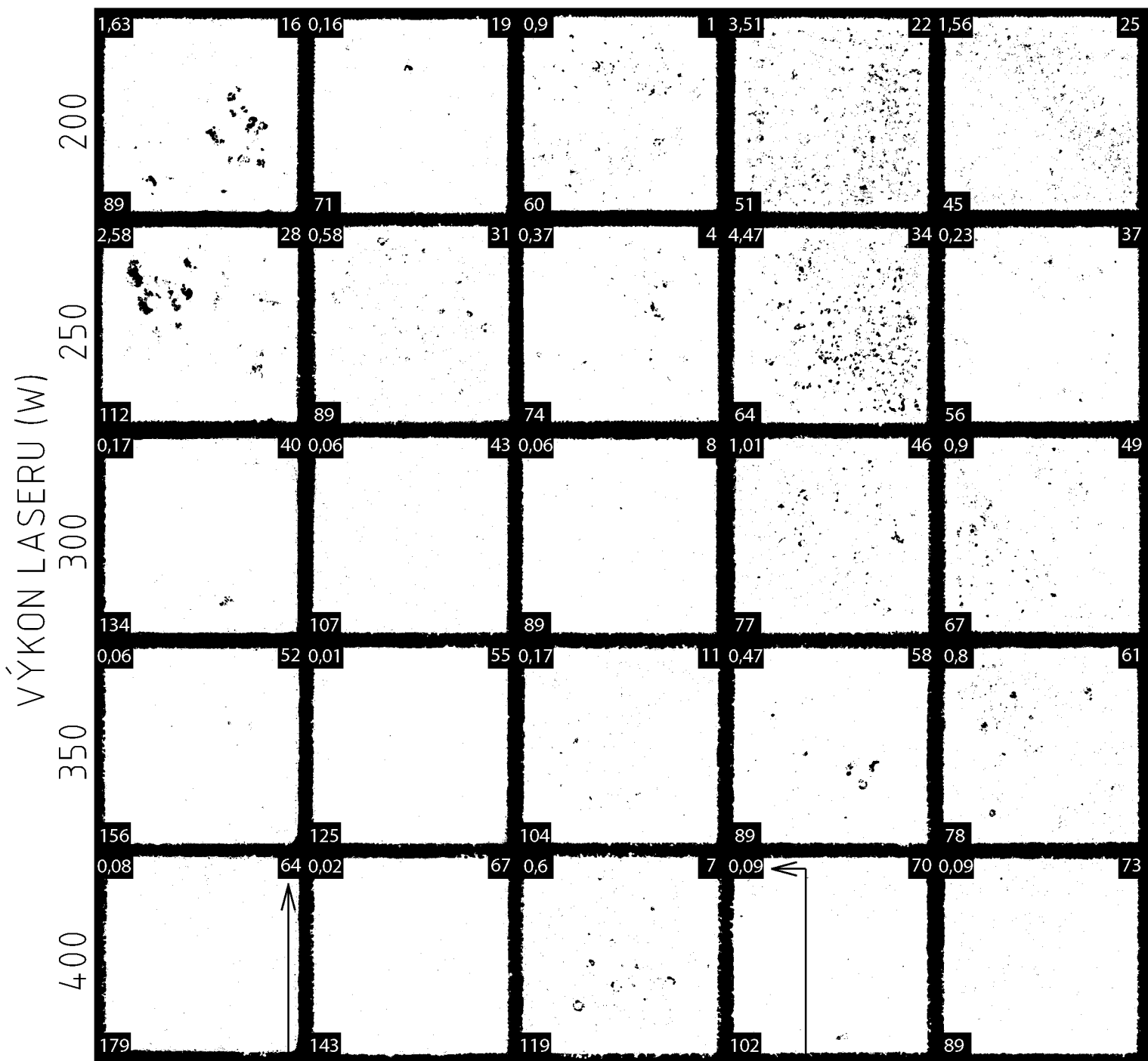
800

1000

1200

1400

1600



ČÍSLO VZORKU

OBJEMOVÁ
HUSTOTA
ENERGIE (J/mm³)

POROZITA (%)

VZDÁLENOST ŠRAF 90 μm

RYCHLOST SKENOVÁNÍ (mm/s)

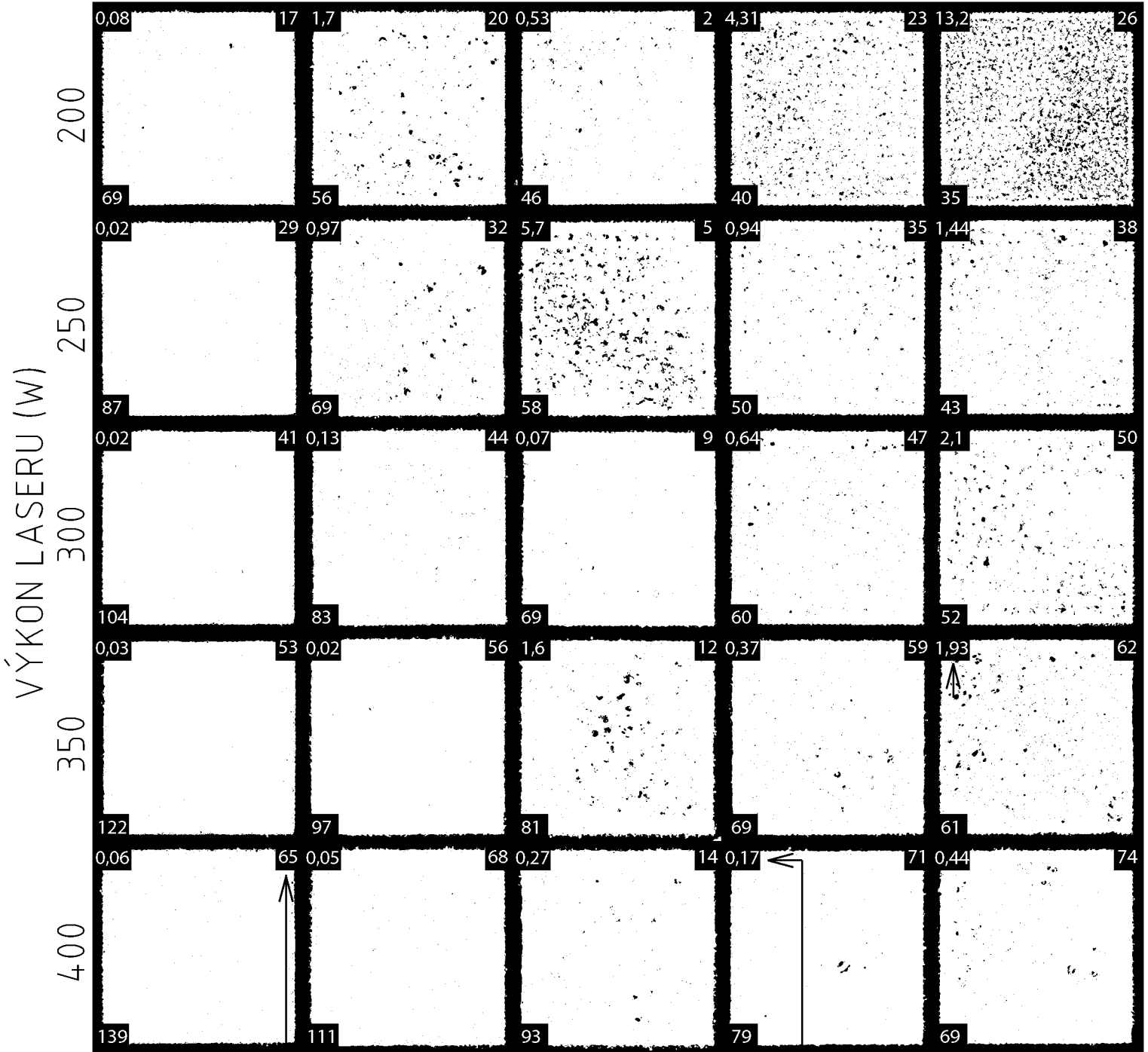
800

1000

1200

1400

1600



ČÍSLO VZORKU

OBJEMOVÁ
HUSTOTA
ENERGIE (J/mm³)

POROZITA (%)

VZDÁLENOST ŠRAF 110 μm

RYCHLOST SKENOVÁNÍ (mm/s)

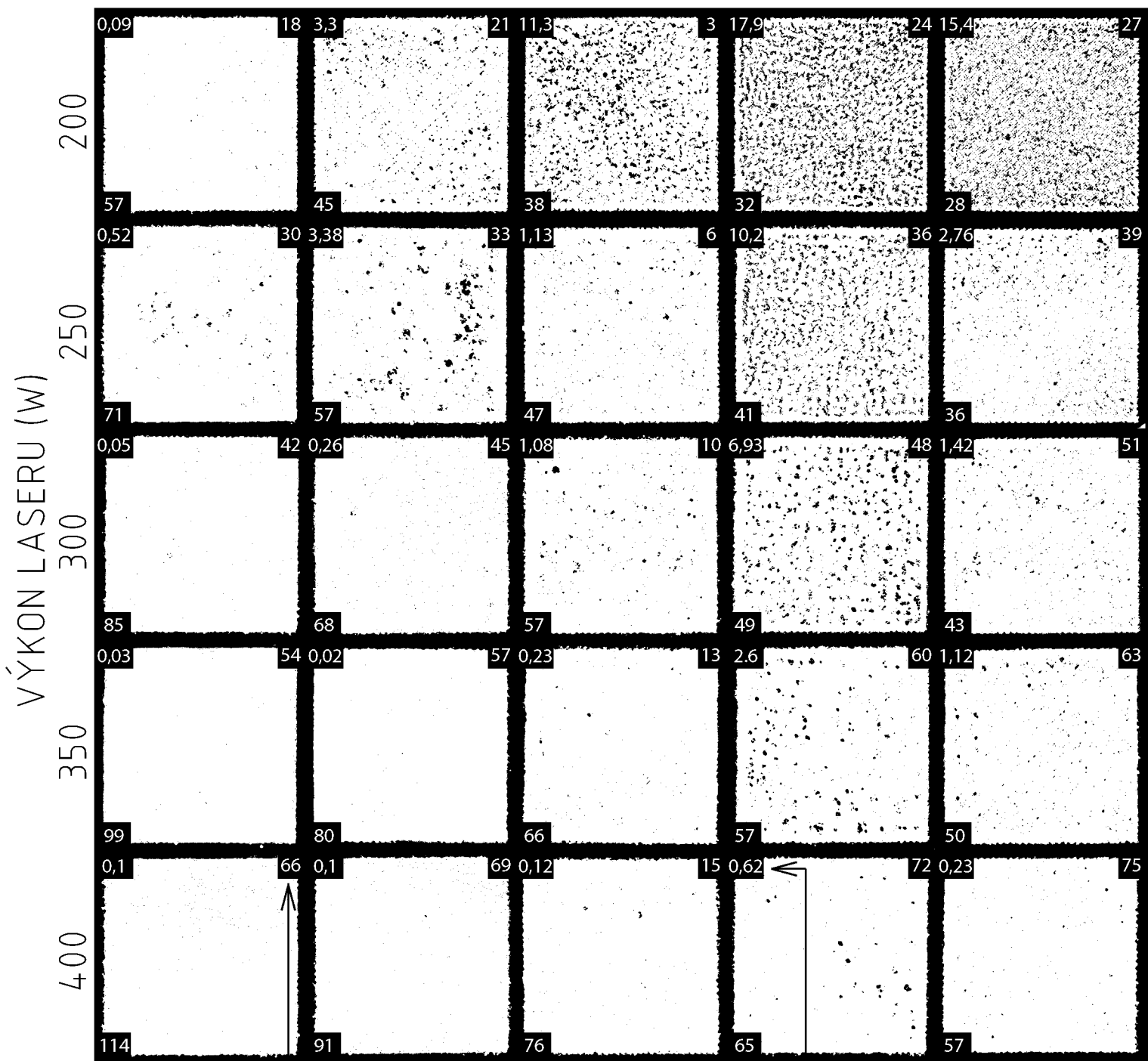
800

1000

1200

1400

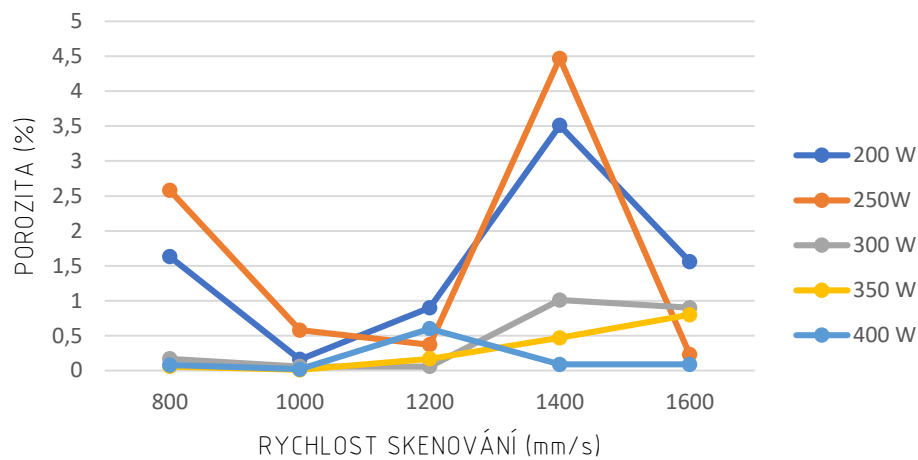
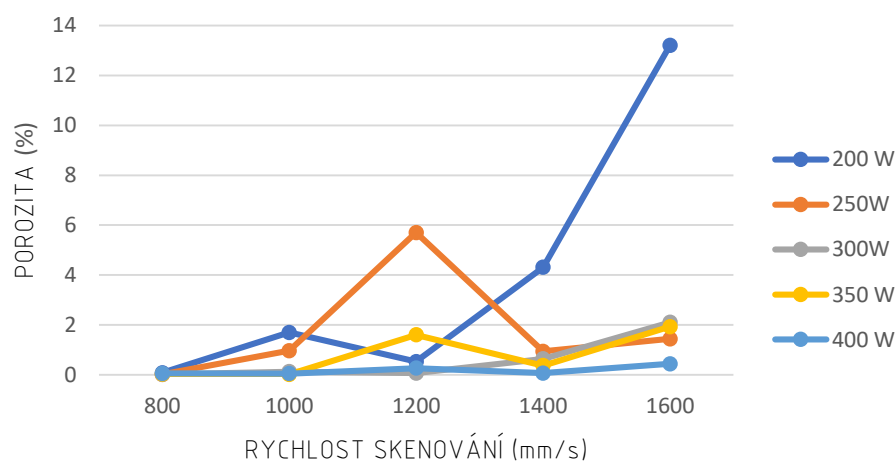
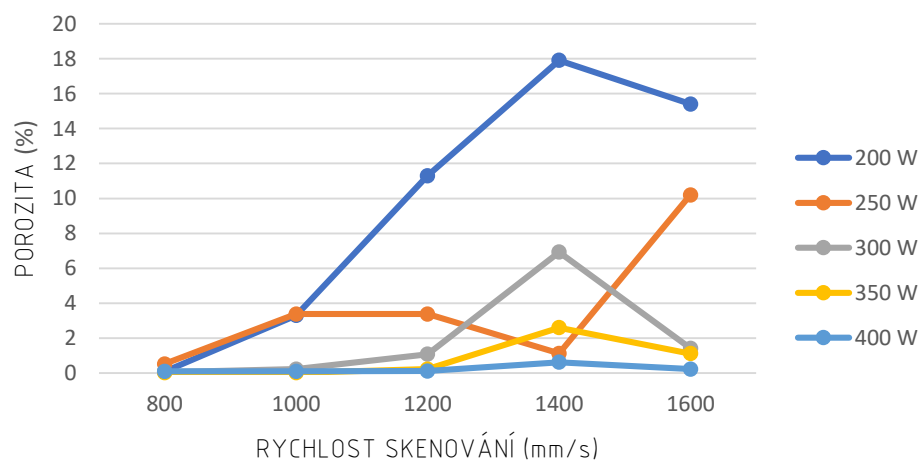
1600



ČÍSLO VZORKU

OBJEMOVÁ
HUSTOTA
ENERGIE (J/mm³)

POROZITA (%)

VZDÁLENOST ŠRAF 70 μm VZDÁLENOST ŠRAF 90 μm VZDÁLENOST ŠRAF 110 μm 

Test report

Customer : Doc. L. Pantelejev, Ph.D.
 Test standard : CSN EN ISO 6892-1
 Material : Maraging steel 1.2709 (SLM)
 Specimen type : DIN 50125, Form C, 8x40mm
 Tester : Ing. Josef Zapletal, Ph.D.
 Note :
 Machine data : Zwick Z250, Loadcell: 150 kN, Extensometer: MultiXtens
 Pre-load : 2 MPa Speed in the yield range : 0,00025 1/s
 Speed, E-Modulus : 0,00007 1/s Test speed : 0,0005 1/s
 Speed, yield point : 0,00025 1/s

Test results:

Legend	Specimen ID	d ₀ mm	L ₀ mm	m _E GPa	R _{p0.2} MPa	F _m N	R _m MPa	R _B MPa	A _p %	A %	Z %
	1.2709-F7-E-01-001	7,997	40,02	160,74	815	56171	1118	627	2,3	13,0	59,8
	1.2709-F7-E-01-002	7,997	39,99	163,77	757	56405	1123	678	2,6	11,5	53,7
	1.2709-F7-E-01-012	8,002	39,99	164,04	773	57637	1146	647	3,5	14,9	61,6
	1.2709-F7-E-01-003	7,991	39,99	173,34	791	56441	1125	702	2,3	11,8	51,6
	1.2709-F7-E-01-004	8,000	40,00	142,86	786	56709	1128	766	2,8	11,1	52,0
	1.2709-F7-E-01-005	8,002	40,01	152,92	798	56649	1126	720	2,3	10,8	55,1
	1.2709-F7-E-01-006	8,000	40,00	150,87	770	56700	1128	769	2,6	9,5	39,9
	1.2709-F7-E-01-007	7,995	40,00	167,52	757	52658	1049	952	1,2	1,8	6,3
	1.2709-F7-E-01-008	8,008	40,00	160,47	776	57286	1137	711	2,7	11,6	55,7
	1.2709-F7-E-01-009	8,002	39,99	165,95	780	56856	1131	619	2,5	14,1	64,0
	1.2709-F7-E-01-0010	7,999	40,00	163,70	751	57678	1148	681	3,3	13,6	59,0
	1.2709-F7-E-01-0011	8,004	39,99	170,03	806	56892	1131	659	2,5	13,7	57,8

Series graph:

