



河南新太行电源有限公司(国营 755 厂)

河南省新乡市北外环东段牧野工业园区 河南新太行电源有限公司

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Factory Profile



Henan New Taihang Power Source Co.,Ltd(State-owned Factory No.755) is reorganized by Xinxiang Taihang Power Source(Group) Co.,Ltd(including Xinxiang Taihang Power Source Co.,Ltd and Xinxiang Bada Power Source Co.,Ltd), which belong to state-owned holding company. The factory was established in the year 1965.It was the frist alkaline storage battery development and production base set up during the “first-five year plan” in China.Now the company is the Large Class 1 enterprise. State Grade 1measuring unit,High-tech enterprise.50-Key enterprise of Henan Province. 100 enterprise of national electronics components supplier, National Weapon and Equipment development&Research Unit, Security classification-2 Unit, Director of Alkaline storage Battery&Power Source in China.

It has a provincial technical center. It passed ISO-9002 quality system certificate ,ISO9001-2000 and GJB9001A-2001 quality system certificate identification in 1997. The company has 12 production lines of various batteries, of them, 3 lines are suitable to the military standards,

The annual output can be up 200 million Ah.

The company has 4 branch companies, including Military battery company, Civilian battery company,Lithium battery company and Lead-acid company and 10 plants. The main product are Ni-Cd ,Ni-MH, Ag-Zn, Ni-Fe, Valve-regulated Lead-acid battery,Lithium-ion battery andchargers.

Since 1998,the company has aquired licenses of communication, broadcasting&TV, Power Stations,CRCC,etc.

Over these years,the company has awarded many excellent products prizes from the state,ministry and province. GNZ100,GNZ150-(2) and GNZ300 Alkaline storage battery awarded the state silver prize.More than 60 research projects have got achievement prizes from state, ministry and province. The company has undertaken many project for the state“863 plan” national equipment and has made outstanding contribution to China’s modernization and defense.

Taihang batteries enjoy great reputation in the fields of army, railways,power industry,telecommunication and broadcasting-TV. The batteries are exported to many countries,such as South-East Asia, Mid-east, Europe and Africa.

河南新太行电源有限公司（国营第七五五厂）是由新乡太行电源（集团）有限责任公司（含新乡太行电源股份有限公司、新乡八达电源有限公司）改制重组而成，属国有控股企业。该厂始建于1956年，是我国“一五”期间兴建的第一个研制和生产各类碱性蓄电池专业基地。公司属国家大型一类企业、国家一级计量合格企业、高新技术企业、河南省50家重点企业、全国电子元器件百强企业、国防武器装备科研生产单位、二级保密认证单位、中国物理与化学电源行业协会副理事长单位。

公司占地26.2万平方米，拥有固定资产2.04亿元。公司建有一个省级技术中心。1997年7月通过ISO9002质量体系认证，2004年4月通过ISO9001-2000及国军标GJB9001A-2001质量体系认证。公司拥有12条各类蓄电池生产线，其中有3条贯彻国家军用标准生产线，年生产能力达2亿安时。

公司下属军品公司、民品公司、铅酸公司、锂电公司等4个子公司及10个分厂，专业生产各类蓄电池及专用设备。主要产品分为：镉镍、氢镍、锌银、铁镍、阀控式密封铅酸蓄电池、锂离子电池、充电器及碱性蓄电池专用设备共八大系列500多个品种。1998年以来，公司各类蓄电池先后取得通信、广电、电力、发电、CRCC等入网证和国家生产许可证、通

过 CE、UL 国际认证和泰尔、安标认证。

历年来，公司有 50 余种产品获国家、部、省优质产品称号，其中 GNZ100、GNZ150-2、GNZ300 碱性蓄电池荣获国家银质奖。60 多项科研成果获得国家、部、省级科技成果奖。公司曾在国家“863”计划、多项国家重点工程建设项目中承担产品研制与生产；在多项国防装备型号工程、国家基础应用与预研等项目中承担课题工作，为国家现代化建设、国防科技化建设做出了突出贡献。

“太行”牌蓄电池在军队、铁路、电力、通讯、广电等领域享有盛誉，而且远销东南亚、中东、欧州等国家和地区。

The nickel-iron storage battery has a nickel oxide-hydroxide anode and iron cathode,with an electrolyte of potassium hydroxide.the active material are packed in perforated pockets.it is a very robust battery which can be tolerant of abuse (overcharge,overdischarge) and can have very long life (2000cycles)even if so treated, it is often used in backup situations where it can be continuously charged and can last for more than 20 years. nickel-iron storage battery have the properties of green ,environmentally friendly to nature ,high capacity, rigid construction, long service life,no corrosive gas during operation,high reliability to operation,etc. They are widely used as DC power supply for mine tranctor、USP、EPS、wind and solar power systems、electrical vehicles and boats,etc.

铁镍蓄电池由正极活性物质氢氧化镍和负极活性物质铁，分别包在穿孔钢带中构成，电解液为氢氧化钾。它坚固耐用，能承受过充过放。寿命长，使用循环可达 2000 次。它在备用状态下持续充电可达 20 年。铁镍电池具有绿色环保，坚固耐用，容量大，使用寿命长，工作时不产生腐蚀性气体，可靠性高等特点，产品适用于矿山机车牵引、UPS、EPS 等直流备用电源、风能，太阳能系统上和电动车辆，船舶等领域。



1.Date sheet of nickel-iron rechargeable battery

铁镍蓄电池选型表

Models	Nominal Voltage (V)	Nominal capacity (AH)	External dimension (mm)			Terminal	Container Material
			Length	width	Height		
TN10-(2)	1.2	10	85	39	126	M5	ABS
TN30-(2)	1.2	30	145	54	248	M10×1	ABS
TN40-(2)	1.2	40	145	54	248	M10×1	ABS
TN45-(2)	1.2	45	142	67	223	M10×1	ABS
TN50-(2)	1.2	50	142	67	223	M10×1	ABS
TN60-(2)	1.2	60	136	51	368	M10×1	PP
TN80-(2)	1.2	80	139	79	362	M10×1	ABS
TN100-(2)	1.2	100	141	80	365	M16	ABS
TN150-(2)	1.2	150	167	162	343	M20	ABS
TN200-(2)	1.2	200	167	162	343	M20	ABS
TN250-(2)	1.2	250	277	139	420	M16	PP
TN300-(2)	1.2	300	277	139	450	M16	PP
TN350-(2)	1.2	350	277	139	450	M16	PP
TN400-(2)	1.2	400	176	161	535	M20×1.5	ABS
TN450-(2)	1.2	450	291	174	505	M20×1.5	ABS
TN500-(2)	1.2	500	291	174	505	M20×1.5	ABS
TN600-(2)	1.2	600	291	174	505	M20×1.5	ABS
TN700-(2)	1.2	700	399	184	562	M20×1.5	ABS
TN800-(2)	1.2	800	399	184	562	M20×1.5	ABS
TN1000-(2)	1.2	1000	399	184	572	M20×1.5	ABS

2.Characteristics 特性

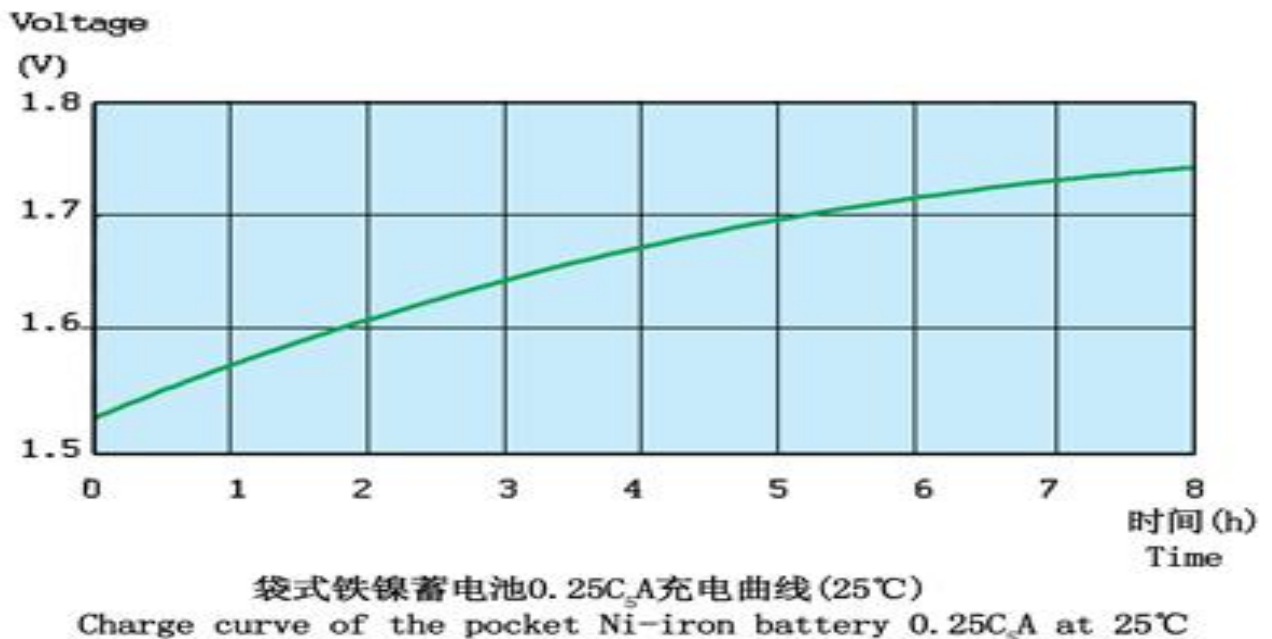
Deep discharge: deep discharge does not reduce life significantly 深放电: 深放电不会显著降低寿命
SELF-DISCHARGE RATE: 15-20%/month 自放电: 15-20%/月
SPECIFIC ENERGY 30 -40Wh/kg 比能量: 30 -40Wh/kg
ENERGY DENSITY 30Wh/L 能量密度: 30Wh/L
LIFE EXPECTANCY: More than 20 years 预期寿命: 大于 20 年
TEMPERATURE RANGE : -20°C- +60°C 温度范围: -20°C- +60°C

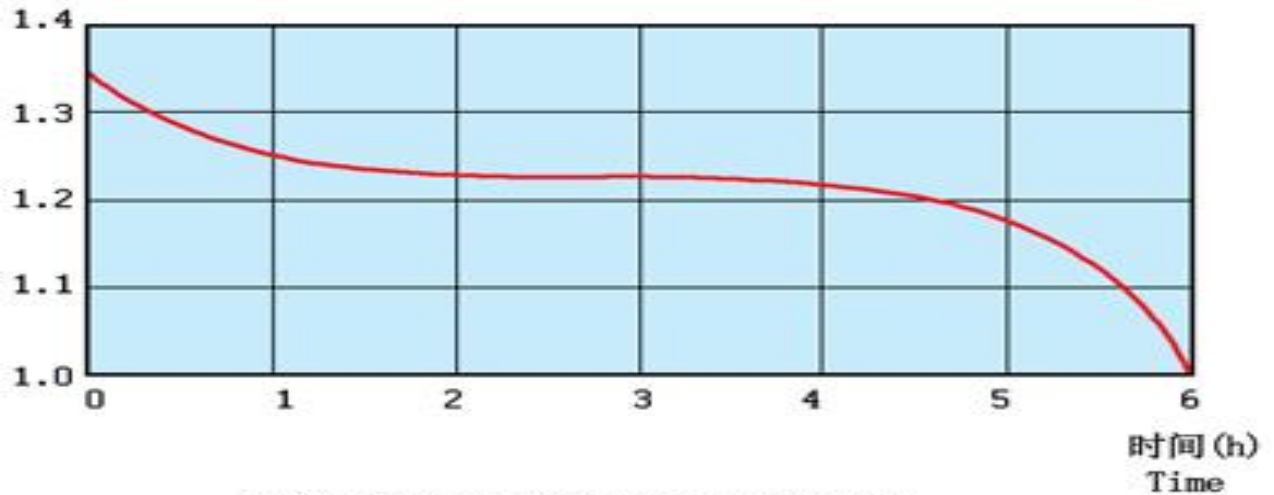
.Cycle times

TN series batteries have various depth of discharge (range from low depth of discharge to 100% depth of discharge), cycle times is dependent on the depth of discharge .the lower the depth of discharge, the more the cycle times. The low depth of discharge can make TN series batteries cycle up to a thousand times, otherwise, the deep depth of discharge can only keep batteries in a hundred cycle times .please refer to chart 3(cycle times related to the differnet depth of discharge)



3.Charge and discharge curves of nickel-iron rechargeable battery





袋式铁镍蓄电池0.2C₅A放电曲线(25℃)

Discharge curve of the pocket Ni-iron battery 0.2C₅A at 25℃

Discharge data of fully-charged battery (20℃±5℃)

Discharge to final voltage 1.14V/c

放电数据 (20℃±5℃)

放电到终止电压 1.14V/只

model	5h	10h	18h	20h	1d 24h	2d 48h	3d 72h	4d 96h	5d 120h	6d 144h	7d 168h	8d 192h	9d 216h	10d 240h
TN10-(2)	1.76	0.92	0.52	0.48	0.40	0.21	0.14	0.11	0.09	0.07	0.06	0.06	0.05	0.05
TN30-(2)	5.28	2.76	1.57	1.44	1.21	0.63	0.43	0.32	0.26	0.22	0.19	0.17	0.16	0.14
TN40-(2)	7.04	3.68	2.09	1.92	1.62	0.84	0.57	0.43	0.35	0.29	0.26	0.23	0.21	0.19
TN50-(2)	8.80	4.60	2.61	2.40	2.02	1.05	0.71	0.54	0.43	0.37	0.32	0.29	0.26	0.24
TN60-(2)	10.6	5.52	3.13	2.88	2.43	1.26	0.85	0.64	0.52	0.44	0.39	0.34	0.31	0.29
TN70-(2)	12.3	6.44	3.66	3.36	2.83	1.47	0.99	0.75	0.61	0.52	0.45	0.40	0.36	0.33
TN80-(2)	14.1	7.36	4.18	3.84	3.23	1.68	1.13	0.86	0.69	0.59	0.51	0.46	0.41	0.38
TN90-(2)	15.8	8.28	4.70	4.32	3.64	1.89	1.28	0.97	0.78	0.66	0.58	0.52	0.47	0.43
TN100-(2)	17.6	9.20	5.22	4.80	4.04	2.10	1.42	1.07	0.87	0.74	0.64	0.57	0.52	0.48
TN120-(2)	21.1	11.0	6.27	5.76	4.85	2.53	1.70	1.29	1.04	0.88	0.77	0.69	0.62	0.57
TN150-(2)	26.4	13.8	7.83	7.20	6.06	3.16	2.13	1.61	1.30	1.10	0.96	0.86	0.78	0.71
TN200-(2)	35.2	18.4	10.4	9.60	8.08	4.21	2.83	2.15	1.73	1.47	1.29	1.15	1.04	0.95
TN250-(2)	44.0	23.0	13.1	12.0	10.1	5.26	3.54	2.68	2.17	1.84	1.61	1.43	1.30	1.19
TN300-(2)	52.8	27.6	15.7	14.4	12.1	6.31	4.25	3.22	2.60	2.21	1.93	1.72	1.56	1.43
TN350-(2)	61.6	32.2	18.3	16.8	14.1	7.36	4.96	3.76	3.03	2.58	2.25	2.01	1.81	1.66
TN400-(2)	70.4	36.8	20.9	19.2	16.2	8.42	5.67	4.29	3.47	2.94	2.57	2.29	2.07	1.90
TN450-(2)	88.0	46.0	26.1	24.0	20.2	10.5	7.08	5.36	4.33	3.68	3.21	2.86	2.59	2.38
TN600-(2)	106	55.2	31.3	28.8	24.3	12.6	8.50	6.44	5.20	4.42	3.86	3.44	3.11	2.85
TN700-(2)	123	64.4	36.6	33.6	28.3	14.7	9.92	7.51	6.07	5.15	4.50	4.01	3.63	3.33
TN800-(2)	141	73.6	41.8	38.4	32.3	16.8	11.3	8.58	6.93	5.89	5.14	4.58	4.15	3.80
TN900-(2)	158	82.8	47.0	43.2	36.4	18.9	12.8	9.66	7.80	6.63	5.79	5.16	4.67	4.28
TN1000-(2)	176	92.0	52.2	48.0	40.4	21.0	14.2	10.7	8.67	7.36	6.43	5.73	5.19	4.75

Discharge data of fully-charged battery (20°C ± 5°C)

放电数据 (20°C ± 5°C)

Discharge to final voltage 1.10V/c

放电到终止电压 1.10V/只

model	5h	10h	18h	20h	1d 24h	2d 48h	3d 72h	4d 96h	5d 120h	6d 144h	7d 168h	8d 192h	9d 216h	10d 240h
TN10-(2)	1.80	0.94	0.53	0.50	0.43	0.21	0.14	0.11	0.09	0.08	0.07	0.06	0.05	0.05
TN30-(2)	5.40	2.82	1.60	1.49	1.28	0.64	0.43	0.33	0.27	0.23	0.20	0.18	0.16	0.15
TN40-(2)	7.20	3.76	2.13	1.98	1.70	0.86	0.58	0.44	0.35	0.30	0.26	0.23	0.21	0.19
TN50-(2)	9.00	4.70	2.67	2.48	2.13	1.07	0.72	0.55	0.44	0.38	0.33	0.29	0.26	0.24
TN60-(2)	10.8	5.64	3.20	2.97	2.55	1.29	0.87	0.66	0.53	0.45	0.39	0.35	0.32	0.29
TN70-(2)	12.6	6.58	3.73	3.47	2.98	1.50	1.01	0.77	0.62	0.53	0.46	0.41	0.37	0.34
TN80-(2)	14.4	7.52	4.27	3.96	3.40	1.72	1.16	0.88	0.71	0.60	0.52	0.47	0.42	0.39
TN90-(2)	16.2	8.46	4.80	4.46	3.83	1.93	1.30	0.98	0.80	0.68	0.59	0.53	0.48	0.44
TN100-(2)	18.0	9.40	5.33	4.95	4.25	2.15	1.44	1.09	0.88	0.75	0.65	0.58	0.53	0.48
TN120-(2)	21.6	11.3	6.40	5.94	5.10	2.58	1.73	1.31	1.06	0.90	0.79	0.70	0.63	0.58
TN150-(2)	27.0	14.1	8.00	7.43	6.38	3.22	2.17	1.64	1.33	1.13	0.98	0.88	0.79	0.73
TN200-(2)	36.0	18.8	10.7	9.90	8.50	4.29	2.89	2.19	1.77	1.50	1.31	1.17	1.06	0.97
TN250-(2)	45.0	23.5	13.3	12.4	10.6	5.36	3.61	2.73	2.21	1.88	1.64	1.46	1.32	1.21
TN300-(2)	54.0	28.2	16.0	14.9	12.8	6.44	4.33	3.28	2.65	2.25	1.96	1.75	1.58	1.45
TN350-(2)	63.0	32.9	18.7	17.3	14.9	7.51	5.06	3.83	3.09	2.63	2.29	2.04	1.85	1.69
TN400-(2)	72.0	37.6	21.3	19.8	17.0	8.58	5.78	4.38	3.53	3.00	2.62	2.33	2.11	1.93
TN500-(2)	90.0	47.0	26.7	24.8	21.3	10.7	7.22	5.47	4.42	3.75	3.27	2.92	2.64	2.42
TN600-(2)	108	56.4	32.0	29.7	25.5	12.9	8.67	6.56	5.30	4.50	3.93	3.50	3.17	2.90
TN700-(2)	126	65.8	37.3	34.7	29.8	15.0	10.1	7.66	6.18	5.25	4.58	4.08	3.69	3.38
TN800-(2)	144	75.2	42.7	39.6	34.0	17.2	11.6	8.75	7.07	6.00	5.24	4.67	4.22	3.87
TN900-(2)	162	84.6	48.0	44.6	38.3	19.3	13.0	9.84	7.95	6.75	5.89	5.25	4.75	4.35
TN1000-(2)	180	94.0	53.3	49.5	42.5	21.5	14.4	10.9	8.83	7.50	6.55	5.83	5.28	4.83

Discharge data of fully-charged battery (20°C ± 5°C)

放电数据 (20°C ± 5°C)

Discharge to final voltage 1.05V/c

放电到终止电压 1.05V/只

model	5h	10h	18h	20h	1d 24h	2d 48h	3d 72h	4d 96h	5d 120h	6d 144h	7d 168h	8d 192h	9d 216h	10d 240h
TN10-(2)	1.84	0.96	0.54	0.51	0.43	0.22	0.15	0.11	0.09	0.08	0.07	0.06	0.05	0.05
TN30-(2)	5.52	2.88	1.63	1.52	1.29	0.65	0.44	0.33	0.27	0.23	0.20	0.18	0.16	0.15
TN40-(2)	7.36	3.84	2.18	2.02	1.72	0.87	0.58	0.44	0.36	0.31	0.27	0.24	0.21	0.20
TN50-(2)	9.20	4.80	2.72	2.53	2.15	1.08	0.73	0.55	0.45	0.38	0.33	0.30	0.27	0.25
TN60-(2)	11.0	5.76	3.27	3.03	2.58	1.30	0.88	0.66	0.54	0.46	0.40	0.36	0.32	0.30
TN70-(2)	12.9	6.72	3.81	3.54	3.00	1.52	1.02	0.77	0.63	0.53	0.47	0.42	0.38	0.34
TN80-(2)	14.7	7.68	4.36	4.04	3.43	1.73	1.17	0.88	0.72	0.61	0.53	0.48	0.43	0.39
TN90-(2)	16.6	8.64	4.90	4.55	3.86	1.95	1.31	0.99	0.81	0.69	0.60	0.53	0.48	0.44
TN100-(2)	18.4	9.6	5.44	5.05	4.29	2.17	1.46	1.10	0.90	0.76	0.67	0.59	0.54	0.49
TN120-(2)	22.1	11.5	6.53	6.06	5.15	2.60	1.75	1.33	1.08	0.92	0.80	0.71	0.64	0.59
TN150-(2)	27.6	14.4	8.17	7.58	6.44	3.25	2.19	1.66	1.35	1.15	1.00	0.89	0.81	0.74

TN200-(2)	36.8	19.2	10.9	10.1	8.58	4.33	2.92	2.21	1.80	1.53	1.33	1.19	1.07	0.98
TN250-(2)	46.0	24.0	13.6	12.6	10.7	5.42	3.65	2.76	2.25	1.91	1.67	1.48	1.34	1.23
TN300-(2)	55.2	28.8	16.3	15.2	12.9	6.50	4.38	3.31	2.70	2.29	2.00	1.78	1.61	1.48
TN350-(2)	64.4	33.6	19.1	17.7	15.0	7.58	5.10	3.86	3.15	2.67	2.33	2.08	1.88	1.72
TN400-(2)	73.6	38.4	21.8	20.2	17.2	8.67	5.83	4.42	3.60	3.06	2.67	2.38	2.15	1.97
TN500-(2)	92.0	48.0	27.2	25.3	21.5	10.8	7.29	5.52	4.50	3.82	3.33	2.97	2.69	2.46
TN600-(2)	110	57.6	32.7	30.3	25.8	13.0	8.75	6.63	5.40	4.58	4.00	3.56	3.22	2.95
TN700-(2)	129	67.2	38.1	35.4	30.0	15.2	10.2	7.73	6.30	5.35	4.67	4.16	3.76	3.44
TN800-(2)	147	76.8	43.6	40.4	34.3	17.3	11.7	8.83	7.20	6.11	5.33	4.75	4.30	3.93
TN900-(2)	166	86.4	49.0	45.5	38.6	19.5	13.1	9.9	8.10	6.88	6.00	5.34	4.83	4.43
TN1000-(2)	184	96.0	54.4	50.5	42.9	21.7	14.6	11.0	9.00	7.64	6.67	5.94	5.37	4.92

Discharge data of fully-charged battery (20°C ± 5°C)

放电数据 (20°C ± 5°C)

Discharge to final voltage 1.0V/c

放电到终止电压 1.0V/只

model	5h	10h	18h	20h	1d	2d	3d	4d	5d	6d	7d	8d	9d	10d
	5h	10h	18h	20h	24h	48h	72h	96h	120h	144h	168h	192h	216h	240h
TN10-(2)	2.00	1.01	0.56	0.52	0.43	0.22	0.15	0.11	0.09	0.08	0.07	0.06	0.05	0.05
TN30-(2)	6.00	3.03	1.69	1.55	1.30	0.66	0.45	0.34	0.28	0.23	0.20	0.18	0.16	0.15
TN40-(2)	8.00	4.04	2.26	2.06	1.73	0.88	0.59	0.45	0.37	0.31	0.27	0.24	0.22	0.20
TN50-(2)	10.0	5.05	2.82	2.58	2.17	1.09	0.74	0.56	0.46	0.39	0.34	0.30	0.27	0.25
TN60-(2)	12.0	6.06	3.38	3.09	2.60	1.31	0.89	0.68	0.55	0.47	0.41	0.36	0.33	0.30
TN70-(2)	14.0	7.07	3.95	3.61	3.03	1.53	1.04	0.79	0.64	0.54	0.48	0.42	0.38	0.35
TN80-(2)	16.0	8.08	4.51	4.12	3.47	1.75	1.19	0.90	0.73	0.62	0.54	0.48	0.44	0.40
TN90-(2)	18.0	9.09	5.08	4.64	3.90	1.97	1.34	1.01	0.83	0.70	0.61	0.54	0.49	0.45
TN100-(2)	20.0	10.1	5.64	5.15	4.33	2.19	1.49	1.13	0.92	0.78	0.68	0.60	0.55	0.50
TN120-(2)	24.0	12.1	6.77	6.18	5.20	2.63	1.78	1.35	1.10	0.93	0.81	0.73	0.66	0.60
TN150-(2)	30.0	15.2	8.46	7.73	6.50	3.28	2.23	1.69	1.38	1.17	1.02	0.91	0.82	0.75
TN200-(2)	40.0	20.2	11.3	10.3	8.67	4.38	2.97	2.25	1.83	1.56	1.36	1.21	1.09	1.00
TN250-(2)	50.0	25.3	14.1	12.9	10.8	5.47	3.72	2.81	2.29	1.94	1.70	1.51	1.37	1.25
TN300-(2)	60.0	30.3	16.9	15.5	13.0	6.56	4.46	3.38	2.75	2.33	2.04	1.81	1.64	1.50
TN350-(2)	70.0	35.4	19.7	18.0	15.2	7.66	5.20	3.94	3.21	2.72	2.38	2.11	1.91	1.75
TN400-(2)	80.0	40.4	22.6	20.6	17.3	8.75	5.94	4.50	3.67	3.11	2.71	2.42	2.19	2.00
TN500-(2)	100	50.5	28.2	25.8	21.7	10.9	7.43	5.63	4.58	3.89	3.39	3.02	2.73	2.50
TN600-(2)	120	60.6	33.8	30.9	26.0	13.1	8.92	6.75	5.50	4.67	4.07	3.63	3.28	3.00
TN700-(2)	140	70.7	39.5	36.1	30.3	15.3	10.4	7.88	6.42	5.44	4.75	4.23	3.82	3.50
TN800-(2)	160	80.8	45.1	41.2	34.7	17.5	11.9	9.00	7.33	6.22	5.43	4.83	4.37	4.00
TN900-(2)	180	90.9	50.8	46.4	39.0	19.7	13.4	10.1	8.25	7.00	6.11	5.44	4.92	4.50
TN1000-(2)	200	101	56.4	51.5	43.3	21.9	14.9	11.3	9.17	7.78	6.79	6.04	5.46	5.00