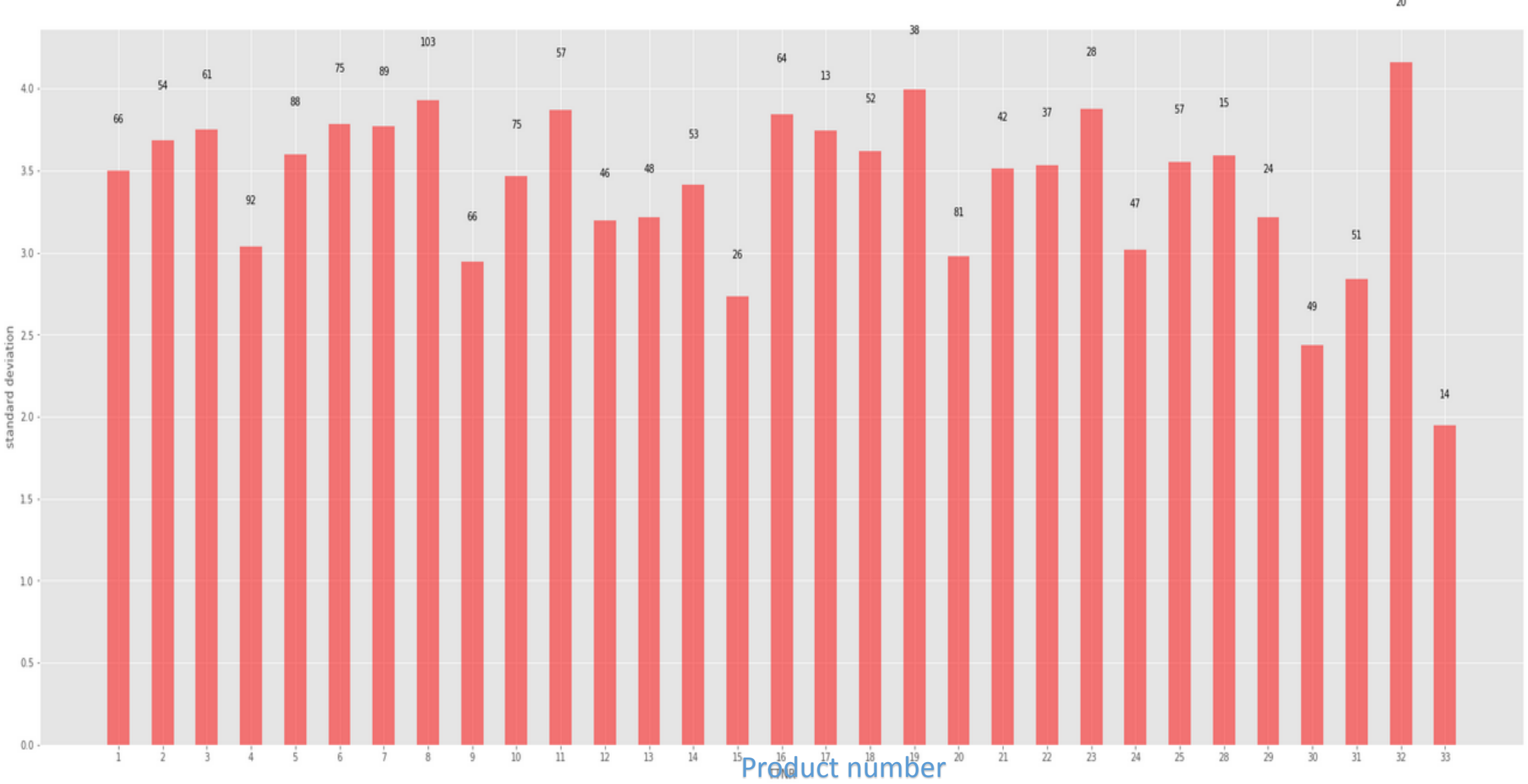
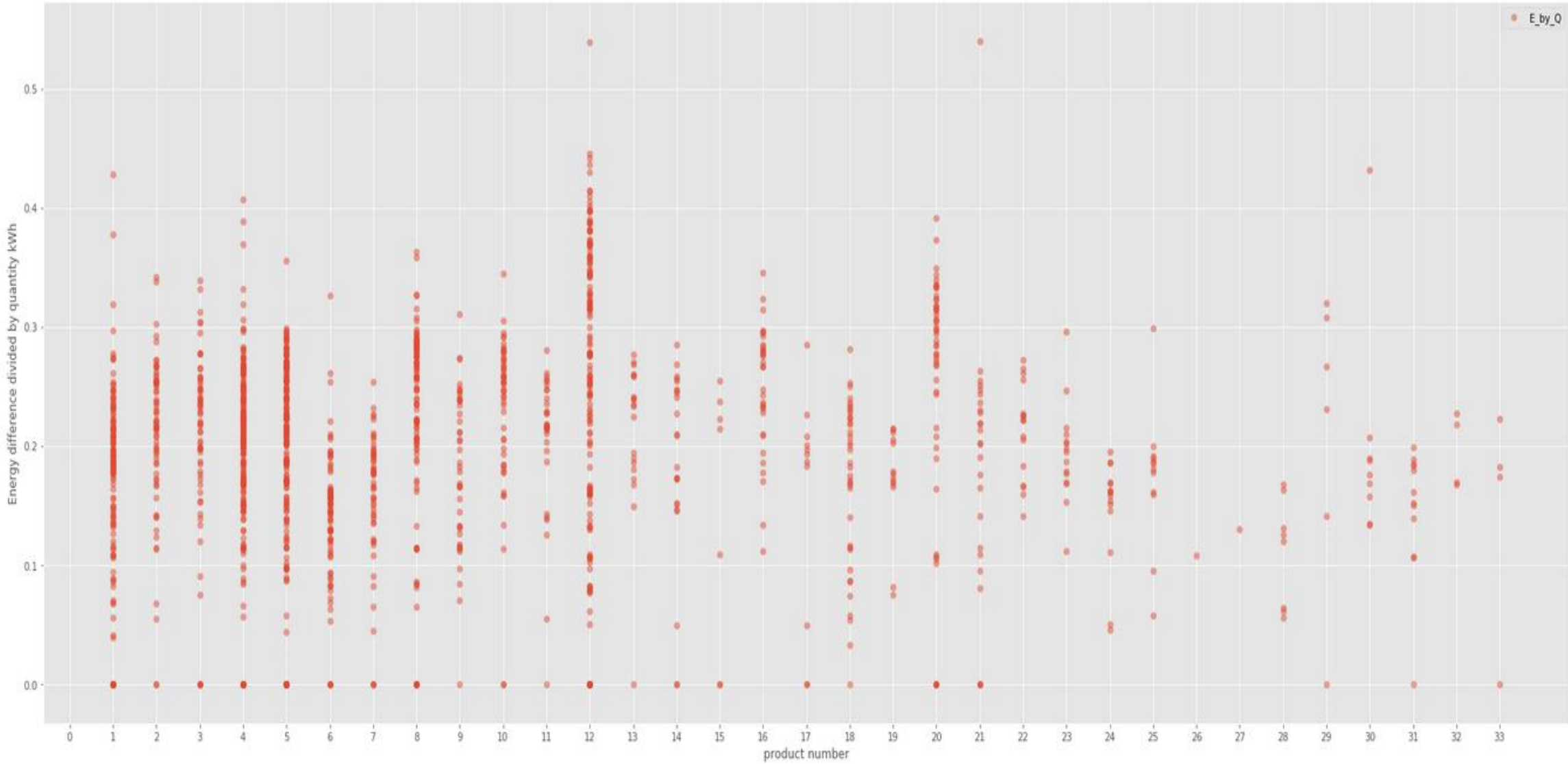
	Product_No.	total_batch_No.	Process_no.	TTNR_val	mean_std_var	tstamp_freq.(for taking standard deviation average)
0	1	147	116	1038408484	3.499361	66
1	2	76	115	1038307052	3.687031	54
2	3	65	116	1038307052	3.748806	61
3	4	223	115	1038305585	3.037534	92
4	5	209	116	1038305585	3.599447	88
5	6	87	115	1038408318	3.784277	75
6	7	57	116	1038408318	3.767607	89
7	8	123	115	1038408484	3.931050	103
8	9	45	115	1038305594	2.946903	66
9	10	57	115	1038407804	3.466607	75
10	11	33	116	1038305594	3.869327	57
11	12	178	116	1038407804	3.195714	46
12	13	22	115	1038407806	3.214714	48
13	14	23	116	1038407806	3.415000	53
14	15	9	115	1038408272	2.734177	26
15	16	34	115	1038408104	3.842309	64
16	17	13	116	1038408272	3.744968	13
17	18	45	116	1038408104	3.617736	52
18	19	15	115	1038407334	3.998288	38
19	20	54	115	F005V16903	2.974625	81
20	21	29	116	1038407334	3.511807	42
21	22	19	115	1038408462	3.532863	37
22	23	20	116	1038408462	3.876992	28
23	24	16	115	1038407754	3.018433	47
24	25	14	116	1038407754	3.552008	57
25	26	2	115	1038305588	NaN	0
26	27	2	116	1038305588	NaN	0
27	28	10	115	1038407332	3.592221	15
28	29	6	116	1038407332	3.215084	24
29	30	9	115	1038408840	2.438879	49
30	31	12	116	1038408840	2.841175	51
31	32	5	115	1038305359	4.157919	20
32	33	5	116	1038305359	1.944616	14

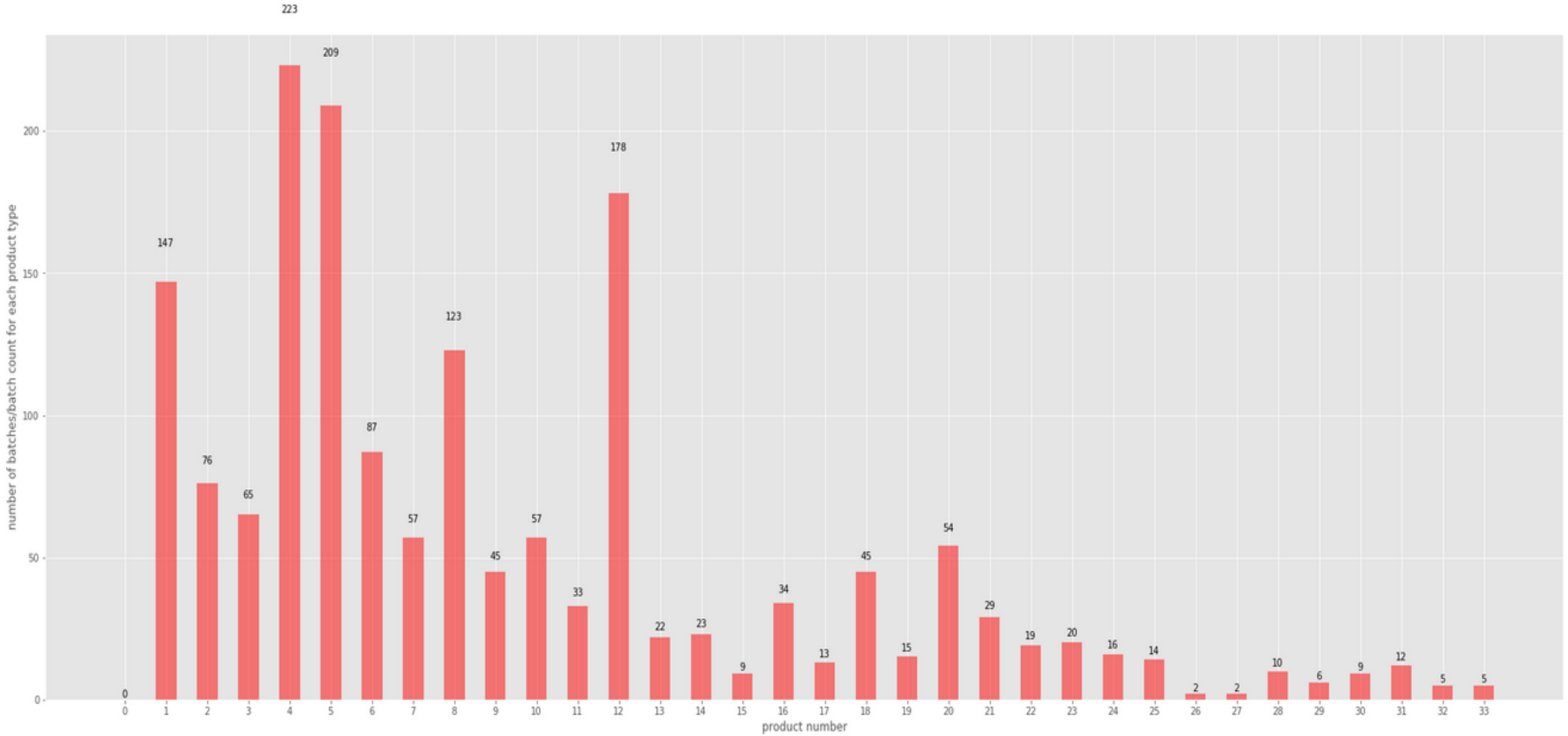
Details of product number for SMT 5 machine.



Product number and the corresponding “mean standard Deviation of Power” from the mean value. (Label showing is the value of maximum time-range among the batch for particular TTNR)



Spread of E/Q for each product number.



Count of batches corresponding to each product number.

OBSERVATION

- Product number 4 is better among all the other products (also it is produced more and also for long duration as batch size and time-range is more).
- Product number 12 and 5 is also showing better output and less deviation.