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L[3]: -	0	Observation 31-00:00	Y- Kappa 23.10	ChipRate 16.520	21.717	BlowFlow	ChipLevel4	T-upperExt- 2 358.282	T-lowerExt- 2 329.545	1.443	WhiteFlow- 4 599.253	4	329.432	Upper-HeatT- 3 303.099	4	WeakLiquorF	BlackFlow- 2 1319.039	WeakWashF	SteamHeatF- 3 54.612	T-Top-Chips- 4 252.077	SulphidityL- 4 NaN
	1	31-01:00	27.60	16.810	79.022			351.050	329.067	1.549	537.201		330.823	304.879		665.975	1297.317	241.182	46.603	251.406	29.11
	3	31-02:00 31-03:00	23.19	16.709 16.478	79.562 81.011	1329.407 1 1334.877	239.161 213.527	350.022 350.938	329.260 331.142	1.600	549.611 623.362		329.140 328.875	303.383 302.254		677.534 767.853	1327.072 1324.461	237.272 239.478	51.795 54.846	251.335 250.312	NaN 29.02
	4	31-04:00	22.90	15.618	93.244	1334.168	243.131	351.640	332.709	NaN 	638.672		328.352	300.954	183.929	888.448	1343.424	215.372	54.186	249.916	29.01
	319	10-16:00	23.75	12.667	93.450			347.286	310.970	1.523	513.956	61.141	330.117	304.006	148.174	1027.201	1357.271	381.643	45.264	252.947	30.86
	320 321	9-19:00 9-20:00	19.80	12.558 12.550	94.352 90.842			399.135 373.633	319.576 314.591	1.451	570.058 549.306		330.848 330.226	304.616 304.686		906.962 887.125	1311.177 1319.226	25.494 0.638	50.528 45.549	252.092 252.438	30.70 NaN
	322 323	9-21:00 9-22:00	24.32 25.75	13.083 13.417	88.910 85.451	1192.879 1 1186.342		364.081 356.289	308.559 310.482	1.523 1.474	504.852 497.375	61.054	327.346 328.092	304.363 304.093		804.423 828.328	1320.225 1320.848	0.000 1.276	43.725 43.840	253.176 253.216	31.13 NaN
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[4]:   [4]:	df.hea	eservation	Y- Kappa	hipRate	BF- CMratio	BlowFlow	ChipLevel4	T-upperExt-	T-lowerExt- 2	JCZAA \	WhiteFlow-	SteamFlow- I	_ower-HeatT-	Upper-HeatT-	ChipMass-	WeakLiquorF	BlackFlow-	WeakWashF	SteamHeatF-	T-Top-Chips-	SulphidityL-
	0	31-00:00	23.10	16.520		1177.607	169.805	358.282	329.545	1.443	599.253	67.122	329.432	303.099	175.964	1127.197	1319.039	257.325	54.612	252.077	NaN
		31-01:00 31-02:00	27.60	16.810 16.709		1328.360 1329.407	341.327 239.161	351.050 350.022	329.067 329.260	1.549	537.201 549.611	61.304	330.823 329.140	304.879 303.383	163.202 164.013	665.975 677.534	1297.317 1327.072	241.182	46.603 51.795	251.406 251.335	29.11 NaN
		31-03:00 31-04:00	23.60 22.90	16.478 15.618		1334.877 1334.168	213.527 243.131	350.938 351.640	331.142 332.709	1.604 NaN	623.362 638.672	68.496 70.022	328.875 328.352	302.254 300.954	181.487 183.929	767.853 888.448	1324.461 1343.424	239.478 215.372	54.846 54.186	250.312 249.916	29.02 29.01
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		ered_df = d	df[df['Y	-Kappa'] :	> 25]																
6]:		Observation	Y-	ChipRate	BF-	BlowFlow	ChipLevel4	T-upperExt-	T-lowerExt-	UCZAA	WhiteFlow-		Lower-HeatT-	Upper-HeatT-		WeakLiquorF	BlackFlow-	WeakWashF		T-Top-Chips-	SulphidityL-
_	1	31-01:00	27.60	16.810	79.022	2 1328.360		351.050	329.067	1.549	537.201	4	330.823	304.879		665.975	1297.317	241.182	46.603	251.406	29.110
	12 13	31-11:00 31-12:00	26.62 27.20	15.467 16.083	84.447 82.839		386.971 366.855	349.392 350.094	321.021 327.439	1.428 1.486	531.250 527.893		330.284 330.023	303.248 302.883		799.947 771.158	1299.782 1299.974	118.901 153.647	46.597 47.175	251.721 251.767	NaN 30.180
	15 40	31-14:00 1-15:00	25.40 27.10	16.425 13.558		1197.775 1175.417		350.765 339.168	329.799 318.386	1.635 1.360	585.011 480.184		329.773 318.228	302.884 294.850		756.154 744.659	1300.037 996.046	401.418 118.899	54.628 41.985	251.009 253.450	30.410 NaN
	64	2-15:00	25.40	16.958	74.405	5 1230.776	295.522	350.216	322.740	1.471	540.151	52.962	318.913	295.843	146.914	727.366	1052.879	476.150	43.701	252.097	NaN
	80 121	3-07:00 5-00:00	26.50 25.56	16.300 14.900	75.411 84.953	1 1229.199 3 1289.167		352.871 358.028	325.690 326.809	1.416 1.265	531.174 568.074		319.990 320.797	296.154 296.457		701.273 860.372	1026.333 1014.646	259.773 149.973	42.596 43.781	250.775 252.652	31.910 31.796
	123 151	5-02:00 6-06:00	25.30 26.02	15.225 15.800	82.030 79.293	1280.837 3 1291.149	312.879 271.419	358.944 355.922	327.582 323.014	1.335 1.623	615.580 537.862		321.206 320.845	296.893 293.856		965.018 1099.121	1043.596 1128.464	213.414 220.444	49.987 45.761	251.192 251.543	30.595 NaN
	167	6-22:00	25.10	15.075	80.024	1281.051	343.214	354.905	325.323	1.377	618.276	59.783	320.077	295.551	157.611	901.062	1069.602	309.348	46.209	250.821	30.370
	168 179	6-23:00 7-10:00	25.52 25.41	16.008 13.070	77.070 NaN			355.149 351.172	325.669 322.353	1.462 1.224	619.954 542.846		320.280 318.711	295.959 295.300		878.072 863.891	1069.102 1091.979	264.774 43.288	46.030 48.221	250.724 252.042	NaN 30.180
	193 239	8-00:00 9-22:00	26.10 25.75	15.083 13.417	78.098 85.451			366.604 356.289	332.953 310.482	1.534 1.474	524.180 497.375		327.433 328.092	298.459 304.093		797.404 828.328	1176.439 1320.848	497.742 1.276	46.377 43.840	250.287 253.216	NaN NaN
	303	31-01:00	27.60	16.810	79.022	2 1328.360	341.327	351.050	329.067	1.549	537.201	60.012	330.823	304.879	163.202	665.975	1297.317	241.182	46.603	251.406	29.110
	313 323	31-11:00 9-22:00	25.75	15.467		7 1334.255 1 1186.342		349.392 356.289	321.021	1.428	531.250 497.375		330.284 328.092	303.248 304.093		799.947 828.328	1299.782 1320.848		46.597 43.840	251.721 253.216	NaN NaN
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	T-low UCZAA White AAWhi AA-Wo ChipM Steam Lower Upper ChipM WeakL Black WeakW	Level4 DerExt-2 WerExt-2 A DeFlow-4 iteSt-4 Dod-4 Moisture-4 mFlow-4 r-HeatT-3 r-HeatT-3 Mass-4 LiquorF KFlow-2 WashF	1 2 25 1 151 1 1 2 2 1 1 2																		
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	T-low UCZAA White AAWhit AA-Wo ChipM Steam Lower Upper ChipM WeakL Black Weakw Steam T-Top Sulph dtype df-df df.isi Obser ChipR BlowF ChipR BlowF ChipR BlowF ChipR BlowF ChipM BlowF ChipM Steam Lower Upper ChipM WeakL Black Weakw Steam T-Top Sulph dtype Calc df.de:  count mean std min 25% 75%	Level4 DerExt-2 WerExt-2 A Deflow-4 Deflow-4 Moisture-4 MFlow-4 Moisture-4 MFlow-2 WashF MHeatT-3 D-Chips-4 Deflow-2 Merext-2 A Deflow-4 Deflow-4 Deflow-4 DerExt-2 Deflow-4 DerExt-2 Deflow-4 DerExt-2 Deflow-4 DerExt-2 Deflow-4 DerExt-2 Deflow-4 DerExt-3 D-Chips-4 Deflow-4 DerExt-3 D-Chips-4 Deflow-4 DerExt-3 D-Chips-4 Deflow-4 DerExt-3 D-Chips-4 Deflow-4 Deflow-2 Deflow-2 Deflow-4 Deflow-4 Deflow-4 Deflow-4 Deflow-6 Deflow	1 2 2 2 5 1 151 1 1 1 1 1 1 1 1 1 1 1 1	mary s  Rate BF-C  000 141.0  277 86.8  403 7.4  000 68.6  000 81.0  000 86.9	Mratio  00000 1  42078 12  47316  45000 9  87000 11  50000 12  42000 12	BlowFlow 41.000000 241.878766 72.414829 954.092000 94.181000 276.082000	141.000000 267.190312 80.965627 0.000000 219.669000 276.955000 332.497000	2 141.000000 356.841801 9.924441 340.222000 350.155000	2 141.000000 1 324.062270 7.850917 287.705000 321.295000 325.690000 329.403000	1.497695 0.103568 1.182000 1.437000 1.500000	4 0 141.000000 5 593.977879 8 67.695750 0 405.111000 0 540.558000	4 141.000000 6.144872 0.080408 5.890000 6.093000 6.140000 6.199000	4 141.000000 67.072582 5.508386 51.192000 62.809000 67.678000 71.649000	HeatT-3  141.000000  325.484702  4.586752  318.821000  321.448000  323.430000  329.851000	HeatT-3  141.000000  300.425092  4.506755  293.312000  296.667000  299.020000  304.135000	4 We 141.000000 1 162.551035 8 14.200656 1 113.922000 4 153.147000 7	41.000000 64.687546 24.824316 93.856000 71.158000 65.018000	141.000000 1169.562624 151.937463 838.948000 1026.333000 1144.876000	NeakWashF  141.000000  271.164106  159.624109  0.000000  149.973000  282.044000  392.864000	3 141.000000 14 49.509894 25 4.648990 35.510000 24 46.603000 25	41.000000 14 <sup>2</sup> 51.274057 30 1.266735 0 48.390000 29 50.312000 30 51.406000 30