Verification of Flicker Emission

(According to 61400-21-1 Appendix B)

Sn:	3 MVA	Manufacturer:	DEWETRON	The Procedure uses a simulated signal generated by the software itself with the formula module with a sampling rate of 200 kS/s. The Pst,fic (I1_fluc_fic_Pst_30/50/70/85) values are read 10 min after the filter is settled.
Un:	12 kV	Device:	DEWE2/3	
In:	144 A	Software:	OXYGEN 6.2	
Software Input (Nominal Value Tab. B.1 in 61400-21-1)				
Un	**6.928 kV**	Line-Neutral) = 1/sqrt(3)*12 kV		
Skfic	**20 MVA**	Single Phase = 1/3*3*20 MVA		

fm (Hz)	**Current fluctuation ΔI/I for 50 Hz systems - Tab. B2**											
	ψ k = 30°			ψ k = 50°			ψ k = 70°			ψ k = 85°		
	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)
0.5	8.03	0.101	2.03	10.40	0.101	2.03	17.86	0.101	2.02	49.54	0.101	2.02
1.5	3.62	0.100	2.01	4.68	0.100	2.00	8.03	0.100	2.00	21.92	0.100	2.00
8.8	0.83	0.101	2.03	1.06	0.101	2.01	1.71	0.100	2.00	3.19	0.100	2.00
20	2.29	0.101	2.02	2.77	0.101	2.02	3.75	0.100	2.01	4.73	0.100	2.00
25	3.34	0.102	2.04	3.90	0.101	2.03	4.89	0.101	2.01	5.69	0.100	2.00
33.3	6.65	0.102	2.04	7.33	0.102	2.03	8.29	0.101	2.02	8.88	0.100	2.01

fm (Hz)	**Current fluctuation ΔI/I for 60 Hz systems - Tab. B3**											
	ψ k = 30°			ψ k = 50°			ψ k = 70°			ψ k = 85°		
	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)
0.5	8.47	0.101	2.03	10.97	0.101	2.02	18.83	0.101	2.02	52.25	0.101	2.01
1.5	3.81	0.100	2.00	4.94	0.100	2.00	8.47	0.100	2.00	23.27	0.100	1.99
8.8	1.07	0.101	2.02	1.37	0.101	2.02	2.25	0.100	2.00	4.55	0.100	2.00
20	3.21	0.101	2.02	3.96	0.101	2.02	5.64	0.100	2.01	7.71	0.100	2.00
25	4.76	0.101	2.03	5.73	0.101	2.03	7.64	0.100	2.01	9.49	0.100	2.00
33.3	8.19	0.102	2.03	9.40	0.101	2.02	11.35	0.101	2.01	12.76	0.100	2.00
40	13.73	0.101	2.03	15.13	0.101	2.02	17.11	0.101	2.01	18.34	0.100	2.00
Setpoint: Pst,fic = 0.1 / c(ψk) = 2.0 ± 5%												

Software Input (Nominal Value Tab. B.1 in 61400-21-1)			
Un	**6.928**	**kV**	Line-Neutral) = 1/sqrt(3)*12 kV
Skfic	**50**	**MVA**	Single Phase = 1/3*3*50 MVA

fm (Hz)	**Current fluctuation ΔI/I for 50 Hz systems - Tab. B3**											
	ψ k = 30°			ψ k = 50°			ψ k = 70°			ψ k = 85°		
	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)
0.5	7.89	0.040	2.00	10.46	0.040	1.99	18.92	0.040	1.99	62.93	0.040	1.99
1.5	3.56	0.040	2.00	4.71	0.040	1.99	8.50	0.040	1.99	27.46	0.040	1.99
8.8	0.82	0.040	2.00	1.07	0.040	2.00	1.79	0.040	2.00	3.44	0.040	1.99
20	2.25	0.040	2.00	2.78	0.040	2.00	3.83	0.040	2.00	4.81	0.040	1.99
25	3.28	0.040	2.00	3.90	0.040	2.00	4.97	0.040	2.00	5.74	0.040	1.99
33.3	6.53	0.040	2.01	7.30	0.040	2.01	8.34	0.040	2.01	8.91	0.040	2.00
Setpoint: Pst,fic = 0.04 / c(ψk) = 2.0 ± 5%												

fm (Hz)	**Current fluctuation ΔI/I for 60 Hz systems - Tab. B3**											
	ψ k = 30°			ψ k = 50°			ψ k = 70°			ψ k = 85°		
	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)	ΔI/I (%)	Pst,fic	c(ψk)
0.5	8.32	0.039	1.96	11.03	0.039	1.95	19.94	0.039	1.95	66.42	0.039	1.95
1.5	3.75	0.039	1.95	4.96	0.039	1.95	8.97	0.039	1.95	29.27	0.039	1.95
8.8	1.05	0.039	1.96	1.38	0.039	1.96	2.37	0.039	1.96	5.01	0.039	1.95
20	3.16	0.039	1.96	3.97	0.039	1.96	5.81	0.039	1.96	7.90	0.039	1.95
25	4.68	0.039	1.96	5.73	0.039	1.96	7.80	0.039	1.96	9.63	0.039	1.95
33.3	8.04	0.039	1.97	9.38	0.039	1.97	11.48	0.039	1.96	12.84	0.039	1.96
40	13.47	0.039	1.96	15.07	0.039	1.96	17.22	0.039	1.96	18.40	0.039	1.95
Setpoint: Pst,fic = 0.04 / c(ψk) = 2.0 ± 5%												

Performed on: 08.07.2022

Result: Pass