

# Transformer Condition Assessment TCA

®

Date : 3/3/2022

Location : C.T. Termochil  
Bank & Phase : Tap-3  
Serial Number : 81231642  
Manufacturer : Siemens  
Date Mfgd : 01/01/2017  
Size (MVA) : 125  
Rating kV: 505/13.8

Report Number :  
Fluid volume : 46600  
Fluid type : Mineral Oil  
Preservation :  
Cooling : ONAN/ONAF  
Core & coil wt. :

Sample Date : 2/9/2022 1/27/2021 1/30/2020  
Laboratory No. : 5119893 5115804 5113163  
Container No. :  
Temperature : 79.9 67.1 74.1

## ASTM D3612-C

H2	Hydrogen	(ppm) :	8	10	0	5
CH4	Methane	(ppm) :	12	8	9	6
C2H6	Ethane	(ppm) :	0	0	0	1
C2H4	Ethylene	(ppm) :	0	0	0	0
C2H2	Acetylene	(ppm) :	0	0	0	0
CO	Carbon monoxide	(ppm) :	406	355	307	259
CO2	Carbon dioxide	(ppm) :	3906	5474	4238	3727
N2	Nitrogen	(ppm) :	32269	66517	76523	33869
O2	Oxygen	(ppm) :	10819	16116	21129	8163

Total (ppm) : 47420 88480 102206 46030  
TDCG (ppm) : 426 373 316 271  
SHL (%) : 11.30 10.95 12.35 11.34  
ETCG (% in blanket) : 0.80 0.36 0.25 0.51

## ASTM 6786

Particles	5 to 15 um :	22820	31795	37220	2315475
Particles	15 to 25 um :	1295	800	735	700
Particles	25 to 50 um :	700	365	275	510
Particles	50 to 100 um :	170	40	15	40
Particles	> 100 um :	35	5	0	10

D1533	Moisture	(ppm) :	8	5	7	10
D1816	Dielectric BV	(kV) :	59.9	59.6	45.1	55.2
D974	Acid Number	(mg KOH/g) :	<0.02	<0.02	<0.02	<0.02
D971	Interfacial Tension	(mN/m) :	42.3	49.4	45.9	46.7
D1500	Color Number	(ASTM) :	<1.0	<0.5	<0.5	<0.5
D924	Power Factor	(% @25C) :				
D2668	Oxidation Inhibitor	(%) :	0.266	0.234	0.212	0.216

## ASTM D5837

5 HMF	5 hydroxymethyl-2-furaldehyde	(ppm) :	<10 ppb	<10 ppb	<10 ppb	<10 ppb
2 FAL	2 furaldehyde	(ppm) :	12 ppb	<10 ppb	<10 ppb	<10 ppb
2 ACF	2 acetyl furan	(ppm) :	<10 ppb	<10 ppb	<10 ppb	<10 ppb
5 MEF	5 methyl-2-furaldehyde	(ppm) :	<10 ppb	<10 ppb	<10 ppb	<10 ppb
2 FOL	2 furfural	(ppm) :	<10 ppb	<10 ppb	<10 ppb	<10 ppb

Estimated DP : 957 >1000 >1000 >1000

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P.O. Number:

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TCA Assessment :  
Sampling Interval : Retest in one year.  
Operating Procedure : Continue normal operation. (PF@100 = 0.14)

Comments : No abnormal gas generation is indicated. (Specific GR = 0.8749)  
Field Comments : Fluid condition is within acceptable in-service parameters. Paper condition is "as new".

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Bank & Phase :	Tap-3	Report Number :	
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Manufacturer :	Siemens	Fluid type :	Mineral Oil
Date Mfgd :	01/01/2017	Preservation :	
Size (MVA) :	125	Cooling :	ONAN/ONAF
Rating kV :	505/13.8	Core & coil wt. :	
		P.O. Number:	

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Approved by:



Michelle Kutzleb, PhD  
Director of Operations