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Appendix A: Test Certificate of 160 kVA, 33/0.415 kV Distribution Transformer



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NOTIFICATION OF THE OWNER	Customer CED Standards IEC : 60076											
	Application DISTRIBUTION TRANSFORMER											
	Serial No 1/13/UU16030014 Kooling ONAN Phase Three Date 2/15/2013											
100371	NAUIIgs HV Voltage (V) 33000 IV Voltage (V) 415 Canasity (IVA) 160 Duty Continuous											
	Vector G	ge (v) 3 oup D	vn11 Freat	quency (Hz) 50			Type of Unit Hermetically Sealed					
	Tapping (HV)						Guaranteed temperature rise (°C)					
	Step% 2.5 Range			- 2.5 % to -7.5 %			Top Oil 55 Winding				60	
TEST	S CONDUC	CTED		gung þaða vegdu veði kiði kver Sim gjú þá kiði Jorð Armanian sjór			*******				สสรรรณสมัยงของระบบคลามมี	
1. RA?	ΓΙΟ AND V	ECTOR GR	OUP TEST									
	HV/LV (3	3/0.415 kV)			-							
	TAP VOI		GES (kV)	CA	4L,,			/IEASURED RATIO				
	NO.		LV	RA	TIO		<u>A - B</u> 9 - N	B - h -	C n		C n R	
	1	33.825	0.4150	141.1	68	in a subsection of the subsect	141.300	141.2	200	14	1.300	
	2(Nor)	33.000	0.4150	137.7	2.5	outurnonarootka	137.800	137.8	300	13	7.800	
	3	32.175	0.4150	134.2	82	alan ang ang ang ang ang ang ang ang ang a	134.400	134.4	00	13	4.400	
	4	31.330	0.4150	130.8	-37 96		127.400	130.9	500 500	13	7.500	
	Detected	Vector Group)				0 0 0	Dyn11				
2. DC	RESISTAN	ICE TEST (a	t 26.00 °C	C)	00,000	antiidaa witso kuunci koku		0.500 http://www.www.com/sources/articles/	10.000-0.000-0.000-0.000	1.7 STORY OF STORY STORY STORY STORY STORY	174977777777777777777777777777777777777	
	HV (33 kV) - WINDING RESISTANCE (in Ohms)											
	TAP NO. <u>University of Moratuwa, Sra Lanka</u> Avg. Resistance											
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	LV (0.415 kV) - WINDING SISTAN CEWI 116 Highreshc. 1k											
1	- 9.310000			b - c 9 290000		n a trentske och all te opraets	C - 8 9 3 90000			Avg. Resistance 9.3300		
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3. NO r	LOAD TES	51	nen en	1	agan an a	and Second Second Second	annaan, en annaa eann an annaach dheise eis	110-1-22:05-82.40-10-20.07-10-00-00-1-20-10-0-0-25-10-			www.gov.com/www.astrocommunicae.est.com/www.com/astro	
Į,	Measured N	o Load Loss (W)		392	Me	asured No Loa	d Current	(%)	0.41		
4. LOA	ND TEST				00000000000000000000000000000000000000			****	narry procession and the		menonomine common common control and the second	
	Measured T	ap position				2011/2010/1012/0749/4/200	Principa	ıl Tap	nga daga pada kata kata kata kata kata kata kata k	****		
	Measured L	oad loss at 7:	<u> </u>	2417		Impedance Voltage at 75 ° ((%)	4.27		
Ļ	Efficiency	at 1.0 p.f. at	full load (%)	l	98.27	underschanter	Efficiency at	0.8 p.f. at fu	ll load	(%)	97.85	
5. SEP	ARATE - S	SOURCE VO	LTAGE WITI h	HSTAND T	EST 60	Sa.		Pasced				
_	LV to HV	wdgs and Eart	h	3 kV f	for 60	Se	ic :	Passed				
6. IND	UCED OV	ER VOLTAG	E WITHSTA	ND TEST								
1	At 2 X	Rated Volta	ge at 120 Hz	for 50	Sec	~ 1	0 6	Passed				
7. INS	ULATION	RESISTANC	CE TEST (at 2	6.00 °C)	I HV to	<u>n Giş</u> Farth	ja Ohm		IV t	o Forth		
		>2			11 V 10 . >2	L'att die				>2		
8. OIL	DIELECT	RIC STREN	GTH TEST (N	lineral oil f	free of PCB)		nggalag ang pang kanalakan dan kana pada kanan kana					
	Across 2.	5 mm gap)				0 6	59kV				
9. TAN	Oil leaks	JRE TEST						Not Detected				
Manaş	er Testing	: For LTL	Transformers	(Pvt) Lim	ited (-	5)(minto	~			2/15/2013	
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