



Asia Trafo Co., Ltd

SPECIFICATION OF OIL IMMERSSED TRANSFORMER

แบบควบคุม

ฉบับที่.....¹

TRANSFORMER SPECIFICATION

250 kVA. 3Ph. 50 Hz.

22000 - 416/240 V. Dyn 11

HERMETICALLY SEAL TYPE

88/99 หมู่ 12 ซ.สุนทรวิภาต ถ.บางพลี - ตำหนุ ต.บางปลา อ.บางพลี จ.สมุทรปราการ 10540 Tel. (02) 346-0980-7 Fax. (02) 346-0978-9

88/99 Moo.12 Soi sunthonwipark Bangplee -tumroo Road Bangpra Bangplee samuthprakarn 10540 Tel. (02) 346-0980-7 Fax. (02) 346-0978-9

SPEC NO.

S-TR250-SC-22000-416/240

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S-TR250-22000-416 Rev 00



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SPECIFICATION OF OIL IMMERSED TRANSFORMER

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ฉบับที่... 1

TECHNICAL DATA FOR 250 kVA, 22000-416 V. Dyn11

No.	Description	Unit	Guaranteed Value		
1	Manufacture's name	-	ASIA TRAF0 CO.,LTD.		
2	Country of origin	-	Thailand		
3	Applied standard	-	IEC 60076		
4	Type of Transformer	-	Hermetically seal type (Corrugate fins)		
5	Rated power	kVA	250		
6	Number of phase	-	3		
7	Rated frequency	Hz	50		
8	Rated high voltage	V	22000		
9	Rated low voltage	V	416		
10	Conection symbol	-	Dyn11		
11	Rated high current	A	6.56		
12	Rated low current	A	346.97		
13	Primary tapping :	-	Off-circuit tap changer		
14	Number of steps of high voltage tapping	Step	4 Steps 5 Position		
15	Percent of rated voltage of each tapping	%	±2 x 2.5%		
16	Type of oil preservation system	-	Completely oil fill system		
17	Operation duty	-	Continuous operation		
18	Cooling System	-	ONAN		
19	Ambient	°C	50		
20	Max. temperature rise of winding, at full load	°C	55		
21	Max. temperature rise of top oil, at full load	°C	50		
22	Class of insulation	-	A (105°C)		
23	Noise level	dB(A)	≤ 50		
24	No-load current & Tolerance	% & %	0.862 % & +30%		
25	Short-circuit impedance at 75°C & Tolerance	% & %	4.00 & ±10		
26	No-load loss	W	360		
27	Load loss at 75°C	W	2750		
28	Efficiency at 75°C	: Full load unity power factor	%	98.77	
		: Full load 0.8 power factor	%	98.47	
		: 3/4 load unity power factor	%	98.99	
		: 3/4 load 0.8 power factor	%	98.74	
		: 1/2 load unity power factor	%	99.17	
		: 1/2 load 0.8 power factor	%	98.96	
29	Voltage regulation at	: Unity power factor	%	1.17	
		: 0.8 power factor	%	0.93	
30	Winding		HV.Winding	LV.Winding	
	Material of winding		Copper	Copper	
	Insulation material of wire		Polyvinyl formal	Kraft paper	
	Full-wave impulse withstand voltage, or BIL		kV, peak	125	30
	Power-frequency test voltage, 1 min		kV, r.m.s	50	10
31	Core		Layer winding		
	Core silicon steel grade		Layer winding		
Cold rolled grain oriented electrical steel					
Rev	Date	Prepared by	Checked by	Approved by	Signature
00	3/8/2563	สมชาย	กิตติ	กิตติ	สมชาย ธรรม
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Asia Trafo Co., Ltd

SPECIFICATION OF OIL IMMERSED TRANSFORMER

แบบควบคุม

แบบที่ 1

TECHNICAL DATA FOR 250 kVA, 22000-416 V. Dyn11

No.	Description	Unit	Guaranteed Value	
32	Transformer oil	-	Mineral oil (None PCB) ≥55	
	Type of oil	-		
	Oil dielectric breakdown	kV		
33	Bushings		HV.Bushing	LV.Bushing
	Applied standard	-	DIN 42531	DIN 42530
	Rated current	A	250	630
	Full-wave impulse withstand voltage, or BIL	kV, peak	125	30
	Low-frequency dry 1-minute test voltage	kV, r.m.s.	50	10
	Low-frequency wet 10 second test voltage	kV, r.m.s.	50	10
	Protection class	-	20NF	1N
	Color of glazing	-	Brown	Brown
Stud thread size (Dia)	mm.	12	20	
34	Terminal connectors		HV.Terminal	LV.Terminal
	Diameter range	mm.	Clamp (7.5-12.6)	PAD 20 mm.
	Number of circuit	-	1(35.95 mm ²)	4
35	Pressure relief value			
	Operating pressure	kg / cm ²	0.45	
	Flow rate at 1.03 Kg/cm ²	cc / sec	165200	
36	Color of tank	-	Gray (RAL 7036)	

Accessories

- HV & LV Bushing with terminal connectors
- Name plate with connection diagram
- Arcing horn
- Bird guard cap
- Off-circuit tap changer
- Thermometer pocket
- Oil drain and sampling valve
- Earthing terminal
- Lifting eyes on the cover
- Lifting lugs
- Oil level gauge
- Pressure relief device
- Buchholz relay with alarm&trip contacts
- Dehydrating breather with silica gel
- Other ... Factory standard

Routine test

- Measurement of voltage ratio and check of phase displacement
- Insulation resistance test
- Measurement of winding resistance
- Separated source voltage withstand test
- Induce over voltage withstand test
- Measurement of no-load loss and exciting current
- Measurement of short circuit impedance and load loss
- Oil dielectric strength test

Type tests

- Temperature - rise test (IEC 60076-2)
- Full wave lightning impulse test (IEC 60076-1 and IEC 60076-3)
- Measurement of no-load loss and current at 90% and 110 % Of rated voltage (IEC 60076-1)

Special tests

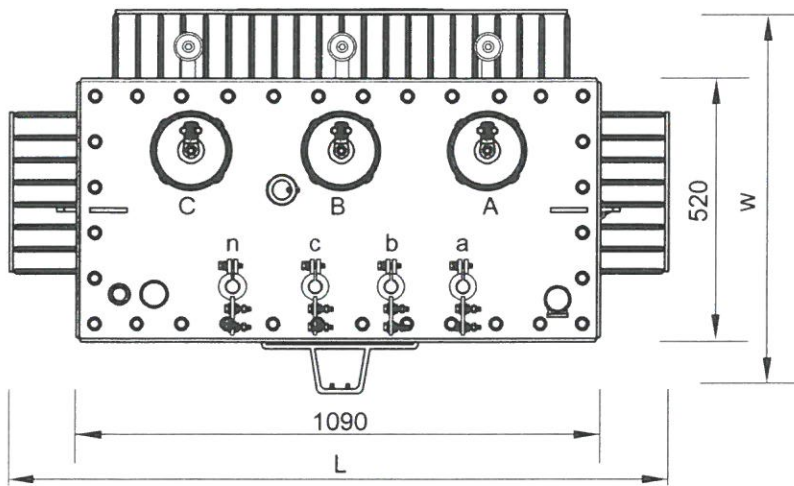
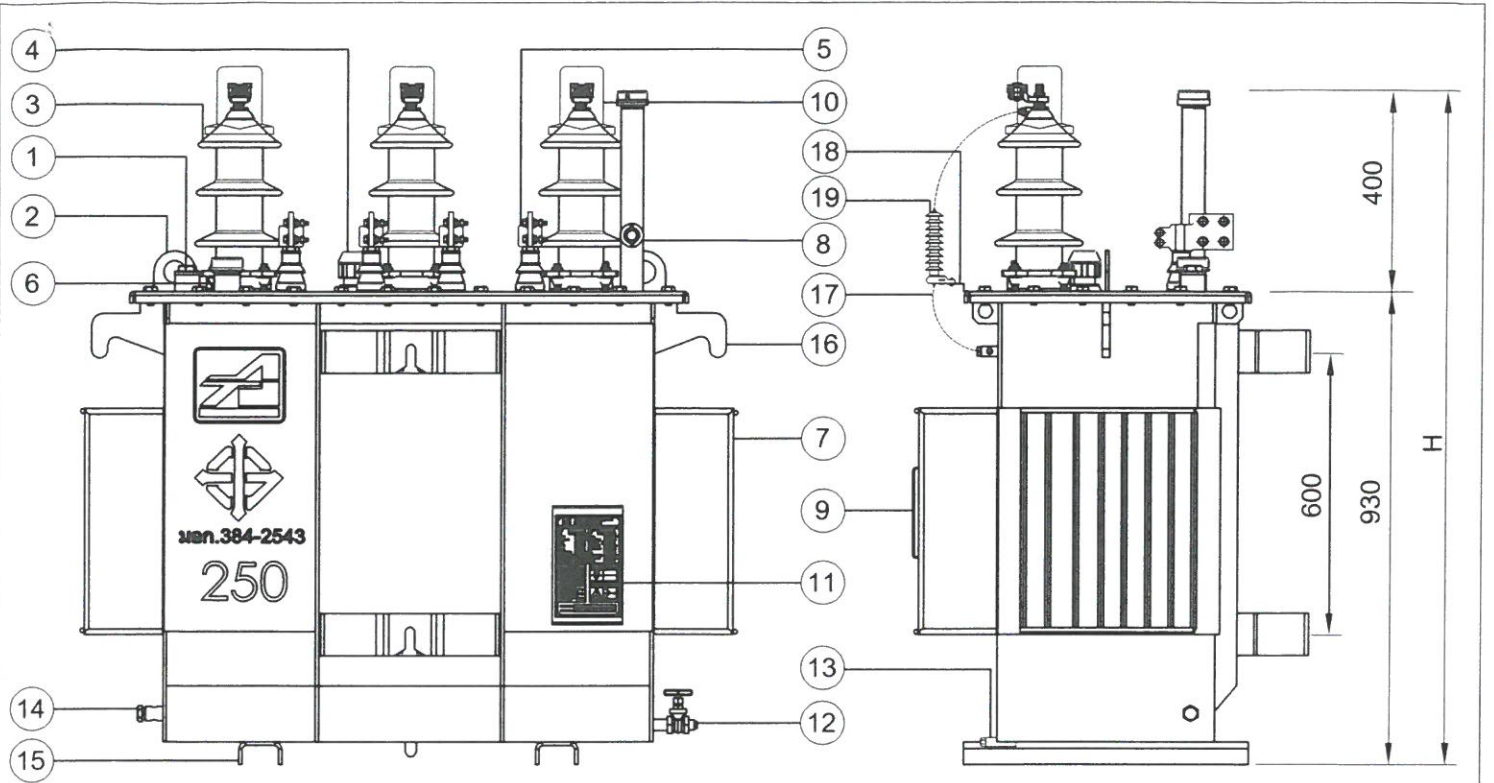
- Short-circuit withstand test (IEC 60076-5)

with

without

Rev	Date	Prepared by	Checked by	Approved by	Signature
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แบบควบคุม
ฉบับที่.....1.....

แบบต้นฉบับ

LIST OF PART		
No.	PART NAME	Qty
1.	Thermometer pocket	1
2.	Lifting eye for cover	2
3.	HV.Bushing with terminal connectors	3
4.	Off load tap changer (ALUMINIUM)	1
5.	LV.Bushing with terminal connectors	4
6.	Pressure relief device	1
7.	Corrugated fins	3
8.	Oil level	1
9.	Manufactory plate	1
10.	Bird guard cap	3
11.	Nameplate with connection diagram	1
12.	Oil drain valve	1
13.	Sludge Drain Plug	1
14.	Earth terminal	1
15.	Sub base	2
16.	Lifting Lugs For Tank	2
17.	Flexible copper insulated ground lead	3
18.	Bracket for surge arrester	3
19.	Surge arrester (Polymer housing type)	3



ASIA TRAFKO CO., LTD.

Project :

Title : **OUTLINE DRAWING**
OIL IMMERSED TRANSFORMER
250 kVA 3Ph 50Hz 22000 - 416/240 V.
TYPE : HERMETICALLY SEALED TANK

Dimension in millimeters			Weight	Oil
H	L	W	kgs	Litres
1330	1370	750	1170	300

SPEC No. S-TR250-SC-22000-416/240

Signature		Date
Drawn By	<i>[Signature]</i>	4/8/63
Checked By	<i>[Signature]</i>	4/8/63
Approved By	<i>[Signature]</i>	4/9/63