แบบควบคุม
ฉบับที่ 1

TRANSFORMER SPECIFICATION

315 kVA. 3Ph. 50 Hz.

33000 - 400/230 V. Dyn 11

HERMETICALLY SEAL TYPE

88/99 หมู่ 12 ซ. สุนทรวิภาค ถ.บางพลี - ตำหรุ 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

Asia Trafo Co., Ltd

SPECIFICATION OF OIL IMMERSED TRANSFORMER

แบบควบคุม
ฉบับที่ 1

TECHNICAL DATA FOR 315 kVA, 33000-400 V. Dyn11

No.	Description		Unit	Guaranteed Value	
1	Manufacture's name		-	ASIA TRAFO 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	315	
6	Number of phase		-	3	
7	Rated frequency		Hz	50	
8	Rated high voltage		V	33000	
9	Rated low voltage		V	400	
10	Conection symbol		-	Dyn11	
11	Rated high current		A	5.51	
12	Rated low current		A	454.66	
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	40	
20	Max. temperature rise of winding, at full load		°C	65	
21	Max. temperature rise of top oil, at full load		°C	60	
22	Class of insulation		-	A (105°C)	
23	Noise level		dB(A)	≤ 64	
24	No-load current & Tolerance		% & %	2.42 % & +30%	
25	Short-circuit impedence at 75°C & Tolerance		% & %	4.00 & ±10	
26	No-load loss		W	800	
27	Load loss at 75°C		W	3900	
28	Efficiency at 75°C	: Full load unity power factor	%	98.53	
		: Full load 0.8 power factor	%	98.17	
		: 3/4 load unity power factor	%	98.75	
		: 3/4 load 0.8 power factor	%	98.44	
		: 1/2 load unity power factor	%	98.89	
		: 1/2 load 0.8 power factor	%	98.61	
29	Voltage regulation at	: Unity power factor	%	1.31	
		: 0.8 power factor	%	1.04	
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	170	30
	Power-frequency test voltage, 1 min		kV, r.m.s	70	10
	Construction of winding		-	Layer winding	Layer winding
31	**Core**				
	Core silicon steel grade		-	Cold rolled grain oriented electrical steel	

Rev	Date	Prepared by	Checked by	Approved by	Signature
02	7/8/2563	วรกานต	กิตติ	กิตติ	

Asia Trafo Co., Ltd

แบบควบคุม ฉบับที่ 1

SPECIFICATION OF OIL IMMERSED TRANSFORMER

TECHNICAL DATA FOR 315 kVA, 33000-400 V. Dyn11

No.	Description	Unit	Guaranteed Value	
32	**Transformer oil**	-		
	Type of oil	-	Mineral oil (None PCB)	
	Oil dielectric breakdown	kV	≥55	
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	170	30
	Low-frequency dry 1-minute test voltage	kV, r.m.s.	70	10
	Low-frequency wet 10 second test voltage	kV, r.m.s.	70	10
	Protection class	-	30NF	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(35.95mm^2)	4
35	**Pressure relief value**			
	Operating pressure	kg / cm2	0.45	
	Flow rate at 1.03 Kg/cm2	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

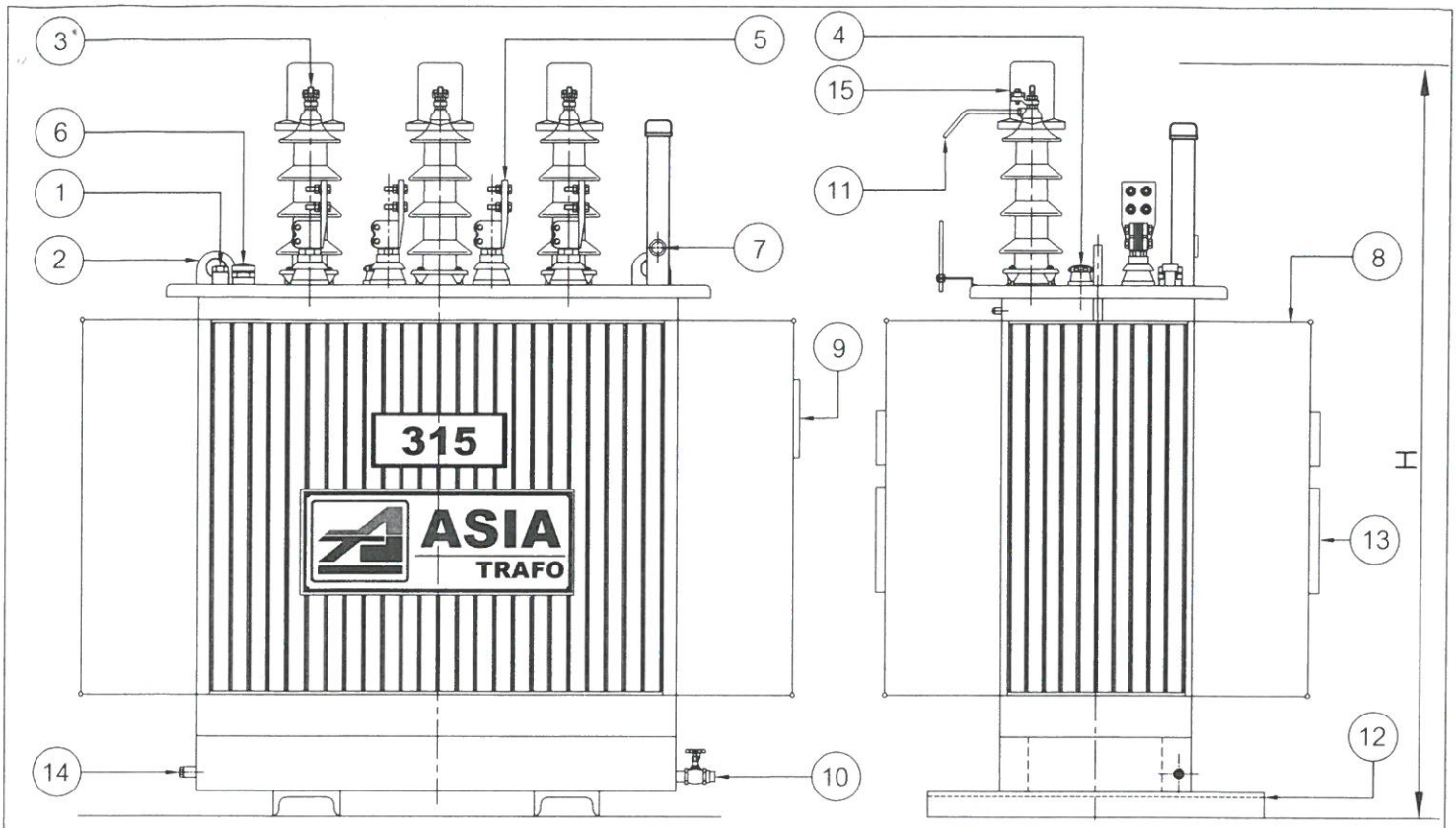
Routine test

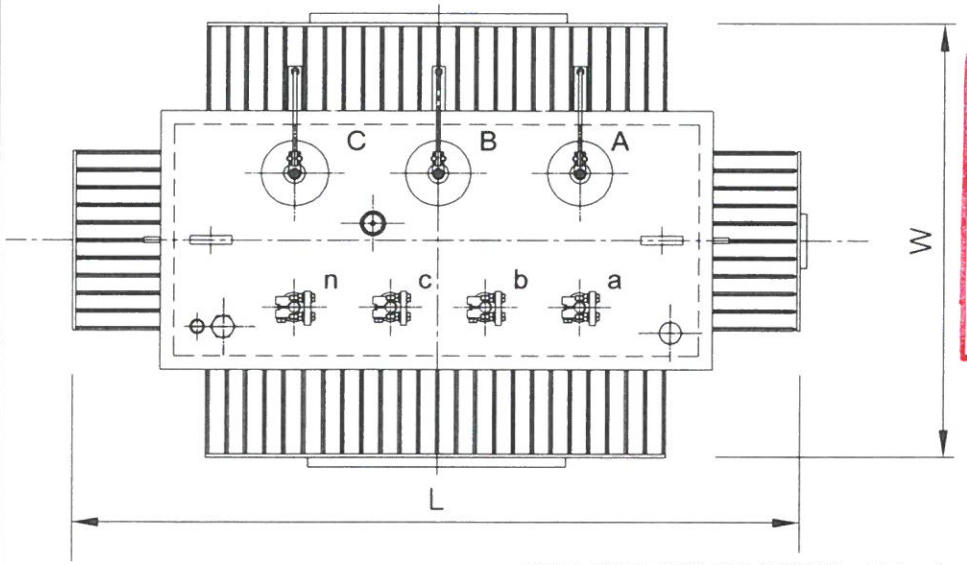
- ■ Measurement of voltage ratio and check of phase displacement
- ■ Insulation resistance test
- ■ Measurement of winding resistance
- ■ Separated source voltage withstand test
- ■ Induce over voltage withstand test
- ■ Measurement of no-load loss and exciting current
- ■ Measurement of short circuit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

■ with □ without

Rev	Date	Prepared by	Checked by	Approved by	Signature
02	7/8/2563	วรกานต	กิตติ	กิตติ	

แบบต้นฉบับ





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ฉบับที่.....1.....

PRELIMINARY DRAWING : This drawing is for estimate only,showing approximate dimensions. It should not be referred to as the final drawing.

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	1
5.	LV.Bushing with terminal connectors	4
6.	Pressure relief device	1
7.	Oil level	1
8.	Corrugated fins	4
9.	Nameplate with connection diagram	1
10.	Oil drain valve	1
11.	Arcing Horn	3
12.	Sub base	2
13.	Manufactory plate	1
14.	Earth terminal	1
15.	Bird Guard Cap	3

แบบต้นฉบับ

ASIA TRAFO CO.,LTD.

Project :

Title :

OUTLINE DRAWING

OIL IMMERSED TRANSFORMER

315 kVA 3Ph 50Hz 33000 - 400/230 V.

Dimension in millimeters			Weight	Oil
H	L	W	kgs	Litres
1640	1580	790	1460	430

SPEC NO. S-TR315-33000-400/230

Signature			Date
Drawn	By		7/8/63
Checked	By		7/8/63
Approved	By		7/8/63